CITY OF RANCHO CORDOVA

CITY COUNCIL MEETING
Monday, April 21, 2025

5:30 PM – Regular Meeting
David B. Roberts Council Chambers

City Hall
2729 Prospect Park Drive, Rancho Cordova

How to Observe or Listen to the Meeting:

- Online via Zoom: https://cityofranchocordova.zoom.us/j/81630466928
  Webinar ID: 816 3046 6928
- By phone: +1 669 900 6833 or +1 253 215 8782
  Webinar ID: 816 3046 6928

Public Comment

Members of the public who wish to address the City Council may do so in person during the meeting by completing and submitting a Speaker Card to the City Clerk.

Members of the public who wish to provide public comment via email will need to submit comments to CityClerk@cityofranchocordova.org no later than 2:00 p.m. on Monday, April 21, 2025. Written comments received no later than 2:00 p.m. will be distributed to the Council, filed in the record, and will not be read aloud. All comments submitted later than 2:00 p.m. will be distributed to the Council.

If you have questions related to the City Council Meeting, please contact the City Clerk's Office at (916) 851-8720 before Monday, April 21, 2025, at 2:00 p.m.

AGENDA

1. REGULAR MEETING - CALL TO ORDER/ROLL CALL

Council Members Linda Budge, Garrett Gatewood, Joe Little, David Sander, and Mayor Siri Pulipati

2. METRO CABLE TV TELEVISION ANNOUNCEMENT

The Clerk will announce the meetings video recording and playback schedules.

3. PLEDGE OF ALLEGIANCE

The Mayor will call on someone in attendance to lead the Pledge.

4. INVOCATION

Ruby Smallwood with the Sacramento Sheriff's Chaplaincy will give the invocation.

5. PRESENTATIONS

5.1. Presentation of Proclamation to Project Sentinel in Recognition of Fair Housing Month.

5.2. Sacramento Area Council of Governments (SACOG) Long Range Transportation Plan Presentation.

6. PUBLIC COMMENT

Members of the public wishing to address the Council for any matter not on the agenda may do so at this time by completing and submitting a Speaker Card to the City Clerk.

For items on the agenda, speakers will be called by the Mayor at the point on the agenda when the item will be heard. Speakers are encouraged to keep comments to three minutes or less and to state name and community of residence.

Under the provisions of the California Government Code, the City Council is prohibited from discussing or taking immediate action on any item not on the agenda unless it can be demonstrated to be of an emergency nature or the need to take immediate action arose after the posting of the agenda.

7. COUNCIL REPORTS

8. CITY MANAGER'S REPORT

9. CONSENT CALENDAR ITEMS - ROLL CALL VOTE

9.1. **Subject:** Meeting Minutes from the Regular City Council Meeting of April 7, 2025.
Recommendation: Adopt the minutes.

9.2. **Subject:** Second Reading of an Ordinance Amending Section 9.85.070 of the Rancho Cordova Municipal Code to Enhance the Penalty for Camping in Violation of Section 9.85.030 of the Rancho Cordova Municipal Code.
Recommendation: Waive the second reading and adopt the Ordinance.

9.3. **Subject:** Second Reading of an Ordinance Amending Section 8.05.010 of the Rancho Cordova Municipal Code to Require Veterinarians Located within the City of Rancho Cordova to Submit Rabies Vaccine Certificates to the Animal Services Manager within Thirty (30) Days of Administering the Vaccine.
Recommendation: Waive the second reading and adopt the Ordinance.

9.4. **Subject:** Second Reading of an Ordinance Adding Chapter 12.13, Sections 12.13.010-12.13.080, Street and Sidewalk Obstructions to the Rancho Cordova Municipal Code.
Recommendation: Waive the second reading and adopt the Ordinance.

9.5. **Subject:** A Resolution Authorizing the City Manager to Execute Contract No. 2025-51 in an Amount not to Exceed $1,104,007.00 with Sierra Nevada Construction, Inc. for the Anatolia Surface Treatment Project.
Recommendation: Adopt the Resolution.

9.6. **Subject:** A Resolution Authorizing the City Manager to Execute Contract Change Order 2024-68-4 with Martin General Engineering, Inc., to Increase the Contract Amount from $2,289,509.70 to an Amount not to Exceed $2,463,447.29 for Construction of the Chase Drive American River Parkway Connection Project.
Recommendation: Adopt the Resolution.

9.7. **Subject:** A Resolution Acknowledging the Termination of a Community Theater Project in Partnership with Phoenix Production Company, doing Business as Rise Up Theatre and Rescinding Resolution No. 23-2024.
Recommendation: Receive and file this report documenting the notice from Rise Up Theatre to terminate their agreement with the City regarding the development of a community theater, and adopt a Resolution, rescinding Resolution No. 23-2024 which approved the forgivable loan agreement with Rise Up Theatre for the construction of a 99-seat multi-use performing arts facility.

9.8. **Subject:** A Resolution Approving the Increase to the Contract with Outside Counsel Sanders Roberts for Employment Litigation to an Amount not to Exceed $325,000.
Recommendation: Adopt the Resolution approving a contract amendment to increase the existing contract with outside counsel Sanders Roberts to an amount not to exceed $325,000 for employment litigation for the City as may be assigned by the City Attorney in consultation with the City Manager, in a form approved by the City Attorney.

10. CONSENT PUBLIC HEARING ITEMS

None.

11. PUBLIC HEARING ITEMS

11.1. **Subject:** Mills Crossing - Specific Plan Amendment, Major Design Review, and Tentative Subdivision Map (Environmental Impact Report (SCH #2023010102) Prepared Pursuant to the California Environmental Quality Act) - Project No. PLND-0524-0098 - Located at 10153 Folsom Boulevard; APN: 076-0020-019, -020, -021, and -022

Recommendation:

1. Adopt a Resolution certifying the Mills Crossing Environmental Impact Report and adopting the Mitigation Monitoring Report Program and CEQA Findings; and
2. Introduce and waive the first reading of an Ordinance adopting the Specific Plan Amendment with associated exhibit and track changes, subject to the findings contained in the Ordinance; and
3. Adopt a Resolution approving a Tentative Subdivision Map and a Major Design Review with associated exhibits, subject to the findings contained in the Resolution.

12. REGULAR CALENDAR ITEMS

12.1. **Subject:** Economic Development Strategic Plan Update.
Recommendation: Receive presentation and provide feedback and direction to staff on frequency of future updates from the Economic Development Department.

13. COUNCIL REQUESTS FOR FUTURE AGENDA ITEMS

14. ADJOURN TO CLOSED SESSION

Mayor Pulipati will adjourn the meeting to closed session.

15. CLOSED SESSION - CALL TO ORDER/ROLL CALL

Council Members Linda Budge, Garrett Gatewood, Joe Little, David Sander, and Mayor Siri Pulipati

16. CLOSED SESSION

Council will meet in closed session to discuss the following item:

16.1. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (pursuant to California Government Code Section 54956.9(d)(1)). Delisa Verdun vs. City of Rancho Cordova, and DOES 1 through 10, inclusive. Sacramento Superior Court Case No. 24CV019484.

17. OPEN SESSION - REPORT FROM CLOSED SESSION

The City Attorney will report on action taken in closed session.

18. ADJOURNMENT

ADDITIONAL INFORMATION

Special Meetings listed below are subject to change/cancellation without further notice.

Unless the Council adopts a motion to extend the meeting, any item that is not initiated before 11:00 p.m. will be continued to the next day at 5:30 p.m. or scheduled on the next regular meeting agenda of the Council.

Public documents related to items on the open session portion of this agenda, which are distributed to the City Council less than 72 hours prior to the meeting, shall be available for public inspection at the time the documents are distributed to the Council. Documents are available for inspection at the City Clerk's office located in Rancho Cordova City Hall.

The agenda items are accessible on the City’s website at www.cityofranchocordova.org on Thursdays or Fridays prior to the Regular City Council Meeting.

UPCOMING MEETINGS

April 29, 2025	5:30 PM Special Meeting/Work Session
May 13, 2025	5:30 PM Special Meeting/Work Session
May 19, 2025	5:30 PM Regular Meeting
May 27, 2025	5:30 Pm Special Meeting/Work Session
June 2, 2025	4:00 PM Special Meeting/5:30 PM Regular Meeting
June 16, 2025	5:30 PM Regular Meeting
June 24, 2025	5:30 PM Special Meeting/Work Session
July 7, 2025	4:00 PM Special Meeting/5:30 PM Regular Meeting

If you have any technical questions related to the agenda items, please contact City Hall at (916) 851-8700.

The Rancho Cordova City Council meeting will be videotaped in its entirety and will be cablecast without interruption on Metro Cable 14, the Government Affairs Channel on the Comcast and Direct TV U-Verse Systems. Closed Captioning will be available on the playback cablecast. A DVD copy is available from the City Clerk's Department and a webcast of this meeting will be available for viewing via video streaming from the City's website within 48 hours of adjournment of this meeting.

In compliance with the Americans with Disabilities Act, if you need a disability-related modification or accommodation, including auxiliary aids or services, to participate in this meeting, please contact the City Clerk's Office at (916) 851-8720 at least 48 hours prior to the meeting.

CERTIFICATION OF POSTING OF AGENDA

I, Stacy Leitner, City Clerk for the City of Rancho Cordova, declare that the foregoing agenda for the April 21, 2025, Regular Meeting of the Rancho Cordova City Council was posted and available for review on April 17, 2025, at City Hall of the City of Rancho Cordova, 2729 Prospect Park Drive, Rancho Cordova, California, 95670. The agenda is also available on the city website at www.cityofranchocordova.org.

Signed April 17, 2025, at Rancho Cordova, California.

Stacy Leitner

Stacy Leitner, CMC
City Clerk

CITY OF RANCHO CORDOVA

CITY COUNCIL MEETING
Monday, April 7, 2025

4:00 PM - Special Meeting - Cancelled
5:30 PM – Regular Meeting
David B. Roberts Council Chambers

City Hall
2729 Prospect Park Drive, Rancho Cordova

DRAFT MINUTES

1. REGULAR MEETING - CALL TO ORDER/ROLL CALL

Mayor Pulipati called the Regular meeting to order in the David B. Roberts Council Chambers at 5:34 p.m.

Council Members Present: Linda Budge, Garrett Gatewood, Joe Little (arrived at 5:48 p.m.), David Sander (arrived at 5:38 p.m.), and Mayor Siri Pulipati

Council Members Absent: None

Staff Members Present: Rachel Duhe, Stacy Leitner, Adam Lindgren, Persephonie Riley, and Micah Runner

2. METRO CABLE TV TELEVISION ANNOUNCEMENT

The City Clerk read the meetings recordings and playback schedule.

3. PLEDGE OF ALLEGIANCE

Don Littlefield led the pledge.

4. INVOCATION

Deacon Walt Little with St. John Vianney Catholic Church gave the invocation.

5. PRESENTATIONS

5.1. Presentation of Proclamation in Honor of the 250th Anniversary of the Battles of Lexington and Concord.

Mayor Pulipati opened the public comment period. The following individuals addressed the Council or submitted public comment via email:

1. Larry Leroy Ladd

Mayor Pulipati closed the public comment period.

5.2. Council Member Linda Budge's Birthday on April 11, 2025.

6. PUBLIC COMMENT

Mayor Pulipati opened the public comment period. The following individuals addressed the Council or submitted public comment via email:

1. Larry Leroy Ladd
2. Bonnie Penrose
3. Branda Gustin
4. Mark Berry

Mayor Pulipati closed the public comment period.

7. COUNCIL REPORTS

Council reported on events since the last meeting.

8. CITY MANAGER'S REPORT

City Manager Micah Runner gave his report.

9. CONSENT CALENDAR ITEMS - ROLL CALL VOTE

Mayor Pulipati opened the public comment period. Seeing no speakers, Mayor Pulipati closed the public comment period.

ACTION: Motion to approve items 9.1 through 9.7 by Budge second by Sander; Motion passed with a 5:0 vote

9.1. **Subject:** Meeting Minutes from the Regular City Council Meeting of March 17, 2025.
Recommendation: Adopt the minutes.

9.2. **Subject:** Second Reading of an Ordinance of the City of Rancho Cordova Levying a Special Tax within the City of Rancho Cordova The Preserve Community Facilities District No. 2025-1.
Recommendation: Waive the second reading and adopt the Ordinance.

9.3. **Subject:** An Ordinance Amending Section 9.85.070 of the Rancho Cordova Municipal Code to Enhance the Penalty for Camping in Violation of Section 9.85.030 of the Rancho Cordova Municipal Code.
Recommendation: Waive the first reading and introduce the Ordinance.

9.4. **Subject:** An Ordinance Amending Section 8.05.010 of the Rancho Cordova Municipal Code to Require Veterinarians Located within the City of Rancho Cordova to Submit Rabies Vaccine Certificates to the Animal Services Manager within Thirty (30) Days of Administering the Vaccine.
Recommendation: Waive the first reading and introduce the Ordinance.

9.5. **Subject:** An Ordinance Adding Chapter 12.13, Sections 12.13.010-12.13.080, Street and Sidewalk Obstructions to the Rancho Cordova Municipal Code.

Recommendation: Waive the first reading and introduce the Ordinance.

9.7. **Subject:** A Resolution Authorizing the City Manager to Execute an Amendment to the Reimbursement Agreement, Contract No. 2022-148-1, in an Amount of $337,900, between the City of Rancho Cordova and Alta Vista, LLC for the Design and Installation of the Traffic Signal at Zinfandel Drive and Baroque Drive Intersection.
Recommendation: Adopt the Resolution.

10. CONSENT PUBLIC HEARING ITEMS - ROLL CALL VOTE

None.

11. PUBLIC HEARING ITEMS

None.

12. REGULAR CALENDAR ITEMS

12.1. **Subject:** Fiscal Year 2025-26 Community Enhancement & Investment Fund Grant Applications.
Recommendation: Staff to introduce and provide an update on the Fiscal Year 2025-26 Community Enhancement & Investment Fund grant applications received for Council consideration.

Mayor Pulipati opened the public comment period. Seeing no speakers, Mayor Pulipati closed the public comment period.

ACTION: Input was received regarding Fiscal Year 2025-26 Community Enhancement & Investment Fund Grant Applications.

12.2. **Subject:** Homeless Outreach Team Update and Discussion
Recommendation: Receive information.

Mayor Pulipati opened the public comment period. The following individuals addressed the Council or submitted public comment via email:

1. Larry Leroy Ladd

Mayor Pulipati closed the public comment period.

ACTION: Input was received regarding the Homeless Outreach Team Update and Discussion.

12.3. **Subject:** City Council Strategic Framework and Citywide Goals
Recommendation: Staff recommends that the City Council approve by motion, the Strategic Framework incorporating a new citywide vision statement, five strategic focus areas and new citywide goals.

Mayor Pulipati opened the public comment period. Seeing no speakers, Mayor Pulipati closed the public comment period.

ACTION: Motion to approve item 12.3 by Budge second by Sander; Motion passed with a 5:0 vote

13. COUNCIL REQUESTS FOR FUTURE AGENDA ITEMS

None.

14. ADJOURN TO CLOSED SESSION

Mayor Pulipati adjourned the meeting to closed session at 8:12 p.m.

15. CLOSED SESSION - CALL TO ORDER/ROLL CALL

Mayor Pulipati called the closed session to order at 8:13 p.m.

Council Members Present: Linda Budge, Garrett Gatewood, Joe Little, David Sander,and Mayor Siri Pulipati

Council Members Absent: None

Staff Members Present: Adam Lindgren and Micah Runner

16. CLOSED SESSION

City Council met in closed session to discuss the following items:

16.1. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (pursuant to California Government Code Section 54956.9(d)(1)) Veniamin Fursov Vs. City of Rancho Cordova; County of Sacramento; April Lynn Stevenson; Ryan Earl Taylor; and DOES 1 through 50 Inclusive. Sacramento Superior Court Case Number 34-2019-00249715.

16.2. CONFERENCE WITH REAL PROPERTY NEGOTIATORS: Pursuant to Government Code Section 54956.8: Property: 10801 White Rock Road, Rancho Cordova APN: 072-0610-091-0000. City Negotiators: Micah Runner, City Manager, and Adam U. Lindgren, City Attorney. Negotiating Parties: Brooks Erickson. Under Negotiation: Price and Terms of Payment.

16.3. CONFERENCE WITH REAL PROPERTY NEGOTIATORS: Pursuant to Government Code Section 54956.8: Properties: 10455 Investment Circle APN 057-0212-008-0000. City Negotiators: Micah Runner, City Manager, and Adam U. Lindgren, City Attorney. Negotiating Parties: Center of Praise Ministries, Inc. Under Negotiation: Price and Terms of Payment.

16.4. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (pursuant to California Government Code Section 54956.9(d)(1)) DPML Bear Hollow, LLC, a Delaware limited liability company and DPML Stonecreek, LLC, a Delaware limited liability company v. City of Rancho Cordova, City Council of Rancho Cordova, and DOES 1 through 25, inclusive. Sacramento Superior Court Case No. 23WM000122.

17. OPEN SESSION - REPORT FROM CLOSED SESSION

City Attorney Adam Lindgren reported that staff was given direction and no reportable action was taken in closed session.

18. ADJOURNMENT

Mayor Pulipati adjourned the meeting at 9:13 p.m.

_____
Stacy Leitner, CMC
City Clerk

MEMORANDUM

ITEM 9.2.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Russell Ducharme, Neighborhood Services Manager

SUBJECT: **SECOND READING OF AN ORDINANCE AMENDING SECTION 9.85.070 OF THE RANCHO CORDOVA MUNICIPAL CODE TO ENHANCE THE PENALTY FOR CAMPING IN VIOLATION OF SECTION 9.85.030 OF THE RANCHO CORDOVA MUNICIPAL CODE**

RECOMMENDATION

Waive the second reading and adopt the Ordinance.

RESULT OF RECOMMENDED ACTION

If approved, the Ordinance would enhance the penalty for a first-time violation of the City's prohibition of unlawful camping to a misdemeanor. Such a result would ensure that Rancho Cordova's penalties for unlawful camping align with those of nearby jurisdictions such as Elk Grove, Citrus Heights, and Sacramento County, ensuring that the City has adequate tools to deter and remediate illegal camping within the City.

BACKGROUND

In *City of Grants Pass v. Johnson*, decided on June 28, 2024, the U.S. Supreme Court overturned the leading Ninth Circuit precedent, Martin v. City of Boise (2019) 920 F.3d 584, 602. Boise had held that "the Eighth Amendment prohibits the imposition of criminal penalties for sitting, sleeping, or lying outside on public property for homeless individuals who cannot obtain shelter." This prompted local jurisdictions in California to only enforce illegal camping prohibitions if there were "practically available" shelter beds at the time of enforcement. This requirement of "practically available" shelter beds made enforcement of local anti-camping ordinances difficult for cities across the Western United States, particularly with respect to camping by service-resistant unhoused individuals.

With the *Grants Pass* decision, cities were given the opportunity to update their enforcement tools and practices with respect to unlawful camping, which can pose challenges in maintaining public health, safety, and welfare, particularly in regulating the use of public spaces to prevent hazards and ensure accessibility for all members of the community.

The City's combination of services and enforcement of its camping ordinance enacted in 2024 are working to reduce illegal camping within the City. Nevertheless, illegal camping remains a significant issue and risk in communities across the region. Nearby jurisdictions have adopted stronger penalties than Rancho Cordova initially provided for in its camping ordinance. These

nearby jurisdictions have created a misdemeanor for a first offense of unlawful camping. By contrast, the City initially adopted a scheme of graduated penalties that established infractions for a first and second offense within a 12-month period.

On April 7, 2025 the City Council waived the first reading and passed to a second reading of the Ordinance.

DISCUSSION

The proposed amendment to Rancho Cordova's camping ordinance would align Rancho Cordova's penalties for unlawful camping with those of nearby jurisdictions to ensure even enforcement of unlawful camping bans across the greater Sacramento area. The proposed change is also in line with many jurisdictions in the wider region, such as the Counties of San Joaquin (Sec. 6-3702, 6-3703) and Yolo (Sec. 6-13.03), which similarly offer enforcement schemes providing that all violations of camping bans are a misdemeanor regardless of prior offenses.

The proposed changes would not alter any other aspects of the City's camping ordinance, which was carefully drafted to be consistent with the *Grants Pass* decision by regulating the act of camping and storing personal property rather than the status of individuals. While the ordinance does not target the status of being homeless, in implementing the ordinance with respect to unhoused individuals, enforcement officers will continue to attempt to inform such individuals of the prohibition against camping and give them an opportunity to comply with the ordinance before taking any enforcement action, ensuring a compassionate and fair approach.

FISCAL IMPACT AND FUNDING SOURCE

There will be no direct fiscal impact to the City.

ATTACHMENT(S)

1. Ordinance
2. Proposed Amendments
3. Proposed Amendments – Redline Version

CITY OF RANCHO CORDOVA

ORDINANCE NO. XX-2025

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA AMENDING SECTION 9.85.070 OF TITLE 9, CHAPTER 9.85 OF THE MUNICIPAL CODE, "VIOLATION – PENALTY"

WHEREAS, unlawful camping on public and private property poses risks to public health, safety, and welfare, particularly in relation to the regulation of the use of public property to prevent hazards and ensure all City residents have access to the City's public spaces; and

WHEREAS, the City Council finds that the Supreme Court's June 28, 2024, decision in *City of Grants Pass v. Johnson*, 603 U.S. 520 (2024), gives cities the opportunity to update their enforcement tools and practices with respect to unlawful camping and storage of personal property in public places; and

WHEREAS, the City Council approved Ordinance 9-2024 in 2024 adopting Chapter 9.85 of the Rancho Cordova Municipal Code, and thereby amending the City's prohibition on unpermitted camping on public and private property and enhancing the City's enforcement tools against unlawful camping, in line with the *Grants Pass* decision and regardless of the housed or unhoused status of any individuals against which enforcement is directed; and

WHEREAS, as originally adopted in 2024, the City's amended camping ordinance introduced a scheme of progressive penalties in which a first offense is considered an infraction punishable by a fine of $100.00, a second offense within a 12-month period is considered an infraction punishable by a fine of $200.00, and a third offense within a 12-month period is considered a misdemeanor publishable by a fine not to exceed $500.00; and

WHEREAS, many neighboring jurisdictions establish a misdemeanor for a first offense in violation of those jurisdictions' unlawful camping ordinances; and

WHEREAS, the City of Rancho Cordova intends to ensure that its penalties for unlawful camping align with those of nearby jurisdictions.

THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA DOES ORDAIN AS FOLLOWS:

Section 1

Section 9.85.070 ("VIOLATION - PENALTY") of Title 9, Chapter 9.85 of the Rancho Cordova Municipal Code is hereby amended as follows:

A. Any person who violates the provisions of this chapter shall be guilty of a misdemeanor which may be enforced by the District Attorney or City Attorney.

B. These remedies shall be in addition to any other remedy authorized by law, including civil actions, and administrative penalties pursuant to RCMC 1.01.190.

C. All remedies prescribed under this chapter are cumulative and the election of one or more remedies does not bar the city from the pursuit of any other remedy to enforce this chapter.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Siri Pulipati, Mayor

ATTEST:

_____
Stacy Leitner, CMC
City Clerk

9.85.070 Violation – Penalty.

A. Any person who violates the provisions of this chapter shall be guilty of a misdemeanor which may be enforced by the District Attorney or City Attorney.

B. These remedies shall be in addition to any other remedy authorized by law, including civil actions, and administrative penalties pursuant to RCMC 1.01.190.

C. All remedies prescribed under this chapter are cumulative and the election of one or more remedies does not bar the city from the pursuit of any other remedy to enforce this chapter. [Ord. 9-2024 § 3].

9.85.070 Violation – Penalty.

~~A. Any person who violates any provision in this chapter is guilty of an infraction, punishable by a $100.00 fine.~~

~~B. Any person cited for a second violation of the same section within a 12-month period is guilty of an infraction, punishable by a $200.00 fine.~~

~~C. Any person found in violation of any section of this chapter for the third time within a 12-month period is guilty of a misdemeanor, punishable by a fine not to exceed $500.00, or imprisonment not to exceed six months.~~

A. Any person who violates the provisions of this chapter shall be guilty of a misdemeanor which may be enforced by the District Attorney or City Attorney.

B~~D~~. These remedies shall be in addition to any other remedy authorized by law, including ~~In addition to any other remedy allowed by law, any person who violates a provision of this chapter is subject to criminal sanctions,~~ civil actions, and administrative penalties pursuant to RCMC 1.01.190.

C~~E~~. All remedies prescribed under this chapter are cumulative and the election of one or more remedies does not bar the city from the pursuit of any other remedy to enforce this chapter. [Ord. 9-2024 § 3].

MEMORANDUM

ITEM 9.3.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Russell Ducharme, Neighborhood Services Manager

SUBJECT: **SECOND READING OF AN ORDINANCE AMENDING SECTION 8.05.010 OF THE RANCHO CORDOVA MUNICIPAL CODE TO REQUIRE VETERINARIANS LOCATED WITHIN THE CITY OF RANCHO CORDOVA TO SUBMIT RABIES VACCINE CERTIFICATES TO THE ANIMAL SERVICES MANAGER WITHIN THIRTY (30) DAYS OF ADMINISTERING THE VACCINE**

RECOMMENDATION

Waive the second reading and adopt the Ordinance.

RESULT OF RECOMMENDED ACTION

If approved, the Ordinance would ensure the Rancho Cordova Animal Services Division is compliant with state-mandated rabies control reporting requirements, while also centralizing rabies vaccine records for pets throughout the City of Rancho Cordova in the interest of protecting public health and safety.

BACKGROUND

Although rare, rabies is a serious pathogen that can infect the brains of both people and animals. Individuals infected with the rabies virus who fail to receive the proper treatment are likely to die from the infection.[1] However, prevention and mitigation efforts, such as mandating rabies vaccination for pets, have reduced rabies infection rates for humans and animals within California. For 2023, the California Department of Public Health reported a total of 202 cases of rabies in animals across the State.[2] Additionally, Sacramento County reported a total of 12 cases of rabies in animals in the same year.[3]

Although Rancho Cordova Municipal Code Section 8.05.010 requires every dog and cat to have a medically current vaccination with an anti-rabies vaccine approved by the California Department of Public Health, veterinarians in Rancho Cordova are not required to submit rabies

[1] *Rabies*, WORLD HEALTH ORGANIZATION, https://www.who.int/news-room/fact-sheets/detail/rabies#:~:text=Rabies%20infects%20mammals%2C%20including%20dogs,rabies%20is%20virtually%20100%25%20fatal (last visited Jun. 25, 2024).

[2] *Reported Animal Rabies Data*, CALIFORNIA DEPARTMENT OF PUBLIC HEALTH - VETERINARY PUBLIC HEALTH SECTION, Feb. 20, 2024, https://www.cdph.ca.gov/Programs/CID/DCDC/pages/reportedanimalrabies.aspx.

[3] *Id.*

vaccine certificates to the Rancho Cordova Department of Animal Services.[4] Currently, the only way for the City to obtain these records is through voluntary self-reporting by residents. Requiring veterinarians to submit rabies vaccine certificates would enhance the City's ability to respond to outbreaks of, and exposures to, rabies. Furthermore, in January 2024 the State designated Sacramento County as a "Rabies Area." As explained below, State law requires local animal services authorities in declared "Rabies Areas" to make rabies control reports to State officials, outlining strategies and efforts to mitigate the potential risk to the public.

Mandating veterinarians to submit rabies vaccine certificates to the Rancho Cordova Department of Animal Services will assist Animal Services to comply with County and State regulations; and support public health monitoring initiatives.

County and State Regulations to Prevent Rabies

In January 2024, the California Department of Public Health designated Sacramento County as an official "Rabies Area" in accordance with the California Health and Safety Code, § 121585 and § 121690.[5] California Code of Regulations, § 2606.04, subd. (4) requires all local animal services authorities in declared "Rabies Areas" to make rabies control activities reports to the Department of Public Health.[6] These reports must include prevention and control plans, and can showcase any risk reduction efforts made by local officials.[7] Currently, the City makes annual reports to County officials using the "Local Rabies Control Activities, Annual Report" form. The form requests information on: (1) the total amount of rabies vaccines and licenses issued by the City, (2) the total amount of animal bites reported to Animal Services, and (3) data on the amount of animals who that were designated to be quarantined.

Several cities in California have already extended existing rabies vaccine ordinances to mandating veterinarians and authorized personnel to deliver vaccination certificates to local authorities. Sacramento City Code Section 9.44.640 requires licensed veterinarians, practicing in the City of Sacramento, to deliver rabies vaccination forms to the animal care services manager within thirty-one (31) days of administering the rabies vaccination.[8] Additionally, the City of San Francisco Health Code Section 41.18(c) requires "every veterinarian who vaccinates … any dog with anti-rabies vaccine … [to] notify the licensing authority when such animal is vaccinated within thirty (30) days."[9] The County of Sacramento, Code of Ordinances Section 8.20.040(e) does not require veterinarians to directly submit copies of rabies certificates to Animal Control; however, the County does encourage pet owners to self-submit vaccination certificates to the department for record keeping reasoning.[10] The County mandates pet owners maintain a certificate of vaccination. Furthermore, when requested by a

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[4] RANCHO CORDOVA, CAL., MUN. CODE § 8.05.010.

[5] Declaration Of Rabies Areas, CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/DeclarationofRabiesAreas.pdf (lasted visited Jun. 25, 2024).

[6] Cal. Code Regs. tit. 17, § 2606.

[7] *Id.*

[8] SACRAMENTO, CAL., CODE ORDINANCES tit. 9, art. VII, § 9.44.640.

[9] SAN FRANCISCO, CAL., HEALTH CODE art. I, § 41.18(c).

[10] SACRAMENTO COUNTY, CAL., CODE OF ORDINANCES tit. 8, Ch. 8.20, § 8.20.040(e).

public or peace officer within the course and scope of an investigation, owners must present the certificate to the requesting officer.[11]

The California State legislature maintains an active interest in ensuring that local governing bodies provide data on rabies control programs. In February 2024, State Senator Janet Nguyen introduced SB 1358, which would require the State Department of Public Health to collect specific rabies control program data from each city and county.[12] The proposed bill authorizes the Department of Public Health to collect data on the number of public rabies vaccinations administered within each city and county, to have access to animal bite and quarantine data, and to request "any other data deemed necessary by the department."[13] Although the proposed legislation has not made progress since its introduction, it is clear the legislature remains interested in addressing the issue of rabies vaccinations.

Protection and Monitoring of Public Health

It is the duty of Animal Services officials to reassure the public on measures in preventing the transmission of the rabies virus. Reinforcing rabies vaccination efforts and recordkeeping can reduce fear and concerns about rabies transmission, promoting community safety and well-being.

The City of Rancho Cordova's Department of Animal Services authorities will be able to better monitor the vaccination status of registered pets in the community, which is crucial in preventing the spread of rabies. Additionally, City Animal Control would be better able to respond to potential outbreaks or exposures to rabies if they have access to centralized data of vaccinated pets in the community.

California Health and Safety Code, Section 121690, subd. (b)(1) permits city, county, or city and county to "specify the means by which a dog's owner is required to provide proof of the dog's rabies vaccination." Additionally, several cities require a submission of proof of rabies vaccinations for owners to be issued a pet license, regardless of whether the vaccination was issued within the city/county. For example, San Diego County Code of Regulatory Ordinances Section 62.620, subd. (c) requires proof of rabies vaccination to be issued a pet license. Data is unavailable on whether requiring pet owners to register their pets' rabies vaccination would have a substantial effect in ensuring the City meets its public health obligations.

On April 7, 2025 the City Council waived the first reading and passed to a second reading of the Ordinance.

FISCAL IMPACT AND FUNDING SOURCE

Estimating the potential fiscal impact is difficult because the current compliance rate is unknown. After implementation of the Ordinance, Animal Services authorities will monitor whether this amended code contributes to a higher revenue or burdens a cost to the City or private practices.

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[11] *Id.* at § 8.20.040(f).

[12] *An Act To Amend Section 121690 Of The Health And Safety Code, Relating To Rabies*.SB 1358, https://legiscan.com/CA/text/SB1358/id/2932637/California-2023-SB1358-Introduced.html (last visited Jun. 27, 2024).

[13] *Id.*

ATTACHMENT(S)

1. Ordinance
2. Proposed Amendments
3. Proposed Amendments – Redlined Version

CITY OF RANCHO CORDOVA

ORDINANCE NO. XX-2025

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA AMENDING SECTION 8.05.010 OF TITLE 8, CHAPTER 8.05 OF THE MUNICIPAL CODE "RABIES"

WHEREAS, the City Council finds California Health and Safety Code Section 121690, subd. (b)(1) assigns local governments an important role in regulating recording requirements for rabies vaccine certificates; and

WHEREAS, Rancho Cordova Municipal Code Section 8.05.010 requires every dog and cat to have a medically current vaccination with an anti-rabies vaccine approved by the Health Department; however, veterinarians in Rancho Cordova are currently not required to submit rabies vaccine certificates to the Rancho Cordova Department of Animal Services; and

WHEREAS, in January 2024, the Department of Public Health designated Sacramento County as a "Rabies Area" in accordance with the California Health and Safety Code, Section 121585 and Section 121690; and

WHEREAS, California Code of Regulations, Section 2606.04, subd. (4) requires all local animal services authorities in declared "Rabies Areas" to make "quarterly reports" to the Department of Public Health, outlining strategies and efforts to mitigate the potential risk of rabies to the public; and

WHEREAS, the City Council of Rancho Cordova recognizes the Department of Animal Services would be better able to formulate these "quarterly reports" to the Department of Public Health by extending recording requirements for veterinarians located within the City of Rancho Cordova and pet owners who vaccinated their pets outside of the City; and

WHEREAS, the City wishes to amend its rabies vaccination ordinance to require veterinarians located within the City of Rancho Cordova to submit rabies vaccine certificates to the Animal Services Manager within thirty (30) days of administering the vaccine; and

WHEREAS, the City wishes to amend its rabies vaccination ordinance to require owners of pets who were vaccinated outside of the City of Rancho Cordova, to provide a certificate to the Rancho Cordova Department of Animal Services within thirty (30) days of administering the vaccine.

THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA DOES ORDAIN AS FOLLOWS:

Section 1. Amendment of the Municipal Code.

Section 8.05.010 of Rancho Cordova Municipal Code, entitled "Vaccination – Required" is hereby amended to read as follows:

Every dog and cat shall have a medically current vaccination with an anti-rabies vaccine approved by the Health Department of the State. The vaccination shall be administered by a

veterinarian or as provided through City-recognized clinics, and a certificate of vaccination shall be issued to the owner. The certificate of rabies vaccination which accompanies the license application shall be valid if in compliance with the following immunization conditions:

A. Primary Immunization. Primary immunization shall be defined as the initial inoculation of an approved rabies vaccine administered to dogs and cats aged three months or older.

B. Minimum Age for Rabies Vaccination. The minimum age for which rabies immunization of dogs and cats shall be accepted for purposes of dog/cat-owner compliance with requirements for rabies vaccination and for purposes of issuance of dog or cat licenses is three (3) months.

C. Revaccination Intervals. Dogs and cats shall be revaccinated one year (12 months) after the primary immunization with an approved type of rabies vaccine. Dogs and cats shall be revaccinated thereafter at least once every three years (36 months) with an approved rabies vaccine.

D. If the licensed veterinarian or other authorized professional administering the vaccination is located within the City of Rancho Cordova, a copy of the certificate must be delivered to the Animal Services Manager within thirty (30) days of administering the rabies vaccination. The rabies vaccination certificate must include all information required by state law, as may be amended, including:

1. The owner's full name, address, and telephone number;
2. The breed, age, sex, and color of the animal;
3. The date of immunization;
4. The type of vaccine administered;
5. The name of the vaccine manufacturer;
6. The lot number of the vaccine used; and
7. The signature of the veterinarian administering the vaccination or his or her agent.

E. In accordance with remaining in compliance with City's Licensing Code 8.06.030, subd. (a), owners of pets who received the rabies vaccine outside the City of Rancho Cordova or through a city registered "travel rabies clinics," must provide a certificate of rabies vaccination to the Animal Service Manager of the City of Rancho Cordova within thirty (30) days of administering the rabies vaccination.

F. Exemption. In accordance with Health and Safety Code 121690, if a licensed veterinarian has recommended a pet should not receive a rabies vaccination for medical reasons, the animal shall remain quarantined pursuant to the City's Municipal Code 8.05.050, subd. (a), and Animal Services' internal policy. Quarantined decisions are in the sole discretion of Animal Services officials.

Section 2. Severability.

If any provision of this Ordinance or the application thereof to any person or circumstance, is held invalid, the remainder of the Ordinance, including the application of such part or provision to other persons or circumstances shall not be affected thereby and shall continue in full force and effect. To this end, provisions of this Ordinance are severable. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase hereof irrespective of the fact that any one or more sections, subsections,

subdivisions, paragraphs, sentences, clauses, or phrases be held unconstitutional, invalid or unenforceable.

Section 3. Effective Date

Within fifteen (15) days after adoption, a Summary of this Ordinance shall be published once in the Grapevine Independent, or the Sacramento Bee, a newspaper of general circulation printed and published in Sacramento County and circulated in the City of Rancho Cordova, in accordance with Government Code Section 36933. This Ordinance shall take effect and be enforced thirty (30) days after its inception.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Siri Pulipati, Mayor

ATTEST:

Stacy Leitner, CMC
City Clerk

8.05.010 Vaccination – Required.

Every dog and cat shall have a medically current vaccination with an anti-rabies vaccine approved by the Health Department of the state. The vaccination shall be administered by a veterinarian or as provided through city-recognized clinics, and a certificate of vaccination shall be issued to the owner.

A. The certificate of rabies vaccination which accompanies the license application shall be valid if in compliance with the following immunization conditions:

(1) Primary Immunization. Primary immunization shall be defined as the initial inoculation of an approved rabies vaccine administered to dogs and cats aged three months or older.

(2) Minimum Age for Rabies Vaccination. The minimum age for which rabies immunization of dogs and cats shall be accepted for purposes of dog/cat-owner compliance with requirements for rabies vaccination and for purposes of issuance of dog or cat licenses is three months.

(3) Revaccination Intervals. Dogs and cats shall be revaccinated one year (12 months) after the primary immunization with an approved type of rabies vaccine. Dogs and cats shall be revaccinated thereafter at least once every three years (36 months) with an approved rabies vaccine.

B. If the licensed veterinarian or other authorized professional administering the vaccination is located within the city of Rancho Cordova, a copy of the certificate must be delivered to the Animal Services Manager within thirty (30) days of administering the rabies vaccination. The rabies vaccination certificate must include all information required by state law, as may be amended, including:

1. The owner’s full name, address, and telephone number;
2. The breed, age, sex, and color of the animal;
3. The date of immunization;
4. The type of vaccine administered;
5. The name of the vaccine manufacturer;
6. The lot number of the vaccine used; and
7. The signature of the veterinarian administering the vaccination or his or her agent.

C. In accordance with remaining in compliance with City’s Licensing Code 8.06.030, subd. (a), owners of pets who received the rabies vaccine outside the City of Rancho Cordova or through a city registered “travel rabies clinics,” must provide a certificate of rabies vaccination to the Animal Service Manager of the City of Rancho Cordova within thirty (30) days of administering the rabies vaccination.

D. Exemption. In accordance with Health and Safety Code 121690, if a licensed veterinarian has recommended a pet should not receive a rabies vaccination for medical reasons, the animal shall remain quarantined pursuant to the City's Municipal Code 8.05.050, subd. (a), and Animal Services' internal policy. Quarantined decisions are in the sole discretion of Animal Services officials.

8.05.010 Vaccination – Required.

Every dog and cat shall have a medically current vaccination with an anti-rabies vaccine approved by the Health Department of the state. The vaccination shall be administered by a veterinarian or as provided through city-recognized clinics, and a certificate of vaccination shall be issued to the owner. The certificate of rabies vaccination which accompanies the license application shall be valid if in compliance with the following immunization conditions:

(A) Primary Immunization. Primary immunization shall be defined as the initial inoculation of an approved rabies vaccine administered to dogs and cats aged three months or older.

(B) Minimum Age for Rabies Vaccination. The minimum age for which rabies immunization of dogs and cats shall be accepted for purposes of dog/cat-owner compliance with requirements for rabies vaccination and for purposes of issuance of dog or cat licenses is three months.

(C) Revaccination Intervals. Dogs and cats shall be revaccinated one year (12 months) after the primary immunization with an approved type of rabies vaccine. Dogs and cats shall be revaccinated thereafter at least once every three years (36 months) with an approved rabies vaccine.

~~A. Primary Immunization. "Primary immunization" shall be defined as the initial inoculation of an approved canine rabies vaccine administered to young dogs and cats at the age of four months. [Ord. 4-2007 § 2].~~

D. If the licensed veterinarian or other authorized professional administering the vaccination is located within the city of Rancho Cordova, a copy of the certificate must be delivered to the Animal Services Manager within thirty (30) days of administering the rabies vaccination. The rabies vaccination certificate must include all information required by state law, as may be amended, including:

1. The owner's full name, address, and telephone number;
2. The breed, age, sex, and color of the animal;
3. The date of immunization;
4. The type of vaccine administered;
5. The name of the vaccine manufacturer;
6. The lot number of the vaccine used; and
7. The signature of the veterinarian administering the vaccination or his or her agent.

E. In accordance with remaining in compliance with City's Licensing Code 8.06.030, subd. (a), owners of pets who received the rabies vaccine outside the City of Rancho Cordova or through a city registered "travel rabies clinics," must provide a certificate of rabies

vaccination to the Animal Service Manager of the City of Rancho Cordova within thirty (30) days of administering the rabies vaccination.

F. Exemption. In accordance with Health and Safety Code 121690, if a licensed veterinarian has recommended a pet should not receive a rabies vaccination for medical reasons, the animal shall remain quarantined pursuant to the City's Municipal Code 8.05.050, subd. (a), and Animal Services' internal policy. Quarantined decisions are in the sole discretion of Animal Services officials.

MEMORANDUM

ITEM 9.4.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Russell Ducharme, Neighborhood Services Manager

SUBJECT: **SECOND READING OF AN ORDINANCE ADDING CHAPTER 12.13, SECTIONS 12.13.010-12.13.080, STREET AND SIDEWALK OBSTRUCTIONS TO THE RANCHO CORDOVA MUNICIPAL CODE**

RECOMMENDATION

Waive the second reading and adopt the Ordinance.

RESULT OF RECOMMENDED ACTION

If approved, the Ordinance would provide the Rancho Cordova Code Enforcement Division with additional enforcement options to prevent obstructions to streets, sidewalks and other public thoroughfares, regardless of whether drivers' sight-lines are impacted and regardless of whether the obstruction is a recreational item or unpermitted temporary obstruction.

BACKGROUND

Recreational items and other obstructions to streets, sidewalks, and other public thoroughfares can pose safety hazards: they can block sidewalks such that pedestrians or wheelchair users are unable to pass and they obstruct parking, vehicle transit, street sweeping and refuse collection crews. Such obstructions can be difficult to address when the owner of the item is unknown, and the City does not currently have a way of removing items of unknown ownership.

The Rancho Cordova Municipal Code as it is currently written has provisions prohibiting street obstructions and items that block drivers' views in specific locations:

Section 12.12.010 prohibits the "installation, setting out or maintenance of property *at any corner* formed by intersecting streets or intersection elbows within the city of Rancho Cordova any sign, hedge, shrubbery, natural growth, fence or other obstruction to the view, higher than two feet, six inches." (Emphasis added). The purpose of this ordinance is to ensure that vehicles have appropriate lines of sight to turn safely.

Section12.12.020 prohibits street obstructions, defined as "any sign, hedge, structure, natural growth, fence, or other obstruction to the view higher than two feet, six inches above the nearest pavement surface (or traveled area where no pavement exists) on *property adjacent to any private road or driveway intersecting a public street*" that obstructs drivers' lines of sight. (Emphasis added). Obstructions maintained in violation of Sections 12.12.010-020 may be deemed a nuisance by the public works director and removed at the property owner's cost.

(RCMC Section 12.12.050).

Additionally, state law makes it a misdemeanor to willfully and maliciously obstruct “the free movement of any person on any street, sidewalk, or other public place or on or in any place open to the public.” (Pen. Code, § 647c.)

An update to Title 12 of the Rancho Cordova Municipal Code to prohibit street and sidewalk obstructions without the requirement that drivers’ sight-lines be impacted would enhance the City’s enforcement options against streets, sidewalks, and other public thoroughfares. Obstructions to sidewalks, streets, and other public thoroughfares can obstruct the movement of traffic, prevent use of sidewalks by pedestrians and wheelchair users, block city services such as street sweeping and refuse collection, and pose aesthetic harms to a neighborhood. Because it is often not obvious who owns or controls an obstruction to a sidewalk or street, a Code update prohibiting such obstructions must include an option to place a 72-hour notice of removal on obstructions whose owner cannot be identified and to then remove and store the item after 72 hours.

Recreational items such as basketball hoops are often longstanding items in certain locations. Certain jurisdictions which have introduced ordinances specifically targeting basketball hoops and other recreational items for removal due to the fact that they obstruct sidewalks have implemented public information campaigns, ahead of beginning enforcement against such items, to give the public advanced notice that such items are within the scope of enforcement.

On April 7, 2025 the City Council waived the first reading and passed to a second reading of the Ordinance.

DISCUSSION

To enhance the City’s options for preventing and removing obstructions to streets, sidewalks and other public thoroughfares, the addition of Chapter 12.13, Sections 12.13.010-12.13.080- Prohibiting Street and Sidewalk Obstructions to the Rancho Cordova Municipal Code would achieve the following:

- Establish a general street, sidewalk, and public thoroughfare obstruction ordinance that prohibits any obstructions to a street, sidewalk or other public thoroughfare, regardless of whether drivers’ sight-lines are impacted, and regardless of whether the obstruction is a recreational item or temporary obstruction.

- Give the City the ability to issue a 72-hour notice of removal to the obstruction’s owner or the person in control of the obstruction, or where those individuals cannot be identified, to post the notice of removal on the obstruction itself.

- Give the City the authority to immediately remove a street or sidewalk obstruction where a threat to public health, safety, or welfare is present.

- Establish civil penalties for a violation of this Chapter.

FISCAL IMPACT AND FUNDING SOURCE

There will be no direct fiscal impact to the City. However, the City’s Code Enforcement division may assign resources to enforce the Ordinance. The Neighborhood Services Department has

determined that the ordinance will not significantly impact Code Enforcement's ability to respond to other calls.

ATTACHMENT(S)

1. Ordinance
2. Ordinance – Redlined Version

CITY OF RANCHO CORDOVA

ORDINANCE NO. XX-2025

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA ADDING SECTIONS TO TITLE 12 OF THE MUNICIPAL CODE "STREET AND SIDEWALK OBSTRUCTIONS"

WHEREAS, Title 12, Section 12.12.010, "Obstructions at public street intersections and intersection elbows," of the Rancho Cordova Municipal Code prohibits the obstruction of drivers' lines of sight due to the "installation, setting out or maintenance on property at any corner formed by intersecting streets or intersection elbows within the city of Rancho Cordova any sign, hedge, shrubbery, natural growth, fence or other obstruction to the view, higher than two feet, six inches"; and

WHEREAS, Title 12, Section 12.12.020, "Obstructions at private driveways and public streets," of the Rancho Cordova Municipal Code prohibits obstructions to drivers' lines of sight on private driveways and streets, and defines such obstructions as "any sign, hedge, structure, natural growth, fence, or other obstruction to the view higher than two feet, six inches above the nearest pavement surface (or traveled area where no pavement exists) on property adjacent to any private road or driveway intersecting a public street" that obstructs drivers' lines of sight"; and

WHEREAS, Title 12, Section 12.12.050 provides that street obstructions that are maintained in violation of Sections 12.12.010-020 may be deemed a public nuisance by the Neighborhood Services Director of the City of Rancho Cordova and removed at the property owner's cost; and

WHEREAS, obstructions to streets, sidewalks and other public thoroughfares, including recreational items such as basketball hoops, soccer goals, and skate ramps, can pose safety hazards or prevent the movement of drivers, pedestrians, wheelchair users, and City services such as street sweeping and refuse collection services; and

WHEREAS, the owners of item/s that are obstructing streets and sidewalks may be difficult to identify and the placement of 72-hour notice of removal would provide the City's Code Enforcement Department with the ability to give notice to unidentified owners that their item/s are an obstruction and will be removed by the City; and

WHEREAS, the Rancho Cordova Municipal Code's current sections pertaining to street obstructions currently do not fully prohibit all obstruction to a street, sidewalk or other public thoroughfare, regardless of whether drivers' sight-lines are impacted, and regardless of whether the obstruction is a recreational item or unpermitted temporary obstruction.

THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA DOES ORDAIN AS FOLLOWS:

Section 1. Amendment of the Municipal Code.

Chapter 12.13 "STREET AND SIDEWALK OBSTRUCTIONS", consisting of Sections 12.13.010-12.13.070, is hereby added to the Rancho Cordova Municipal Code to read as follows:

12.12.010 Obstructions at public street intersections and intersection elbows.

It is unlawful to install, set out or maintain or to allow the installation, setting out or maintenance on property at any corner formed by intersecting streets or intersection elbows within the city of Rancho Cordova any sign, hedge, shrubbery, natural growth, fence or other obstruction to the view, higher than two feet, six inches above either the nearest pavement surface or the nearest traveled roadway (where there is no pavement) within that triangular area between the street right-of-way lines and a diagonal line joining points on the street right-of-way lines 20 feet from the point of their intersection or, in the case of rounded corners, the triangular area between the tangents to the curve and a diagonal line joining points on the tangent 20 feet from the point of their intersection. In the case of intersection elbows, 40-foot lengths instead of 20-foot lengths are applicable. The tangents referred to are those at the beginning and at the end of the curve at the corner. [Ord. 11-2023 § 3 (Exh. A); Ord. 38-2007 § 1 (Exh. 1(A)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 0777 § 1, 1989, SCC 399 § 1, 1979; SCC 785 § 1, 1962].

12.12.020 Obstructions at private driveways and public streets.

It is unlawful to set out, install or maintain, or to allow the setting out, installation, or maintenance of any sign, hedge, structure, natural growth, fence, or other obstruction to the view higher than two feet, six inches above the nearest pavement surface (or traveled area where no pavement exists) on property adjacent to any private road or driveway intersecting a public street, within a triangular area formed by the edge of the driveway, the street right-of-way line, and a line connecting two points, one of which is on the right-of-way line 10 feet from the edge of the driveway, and the other of which is on the edge of the driveway 10 feet back of the right-of-way line measured perpendicular to the right-of-way line in a direction away from the street. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 399 § 2, 1979: SCC 1045 § 1, 1969: SCC 785 § 2, 1962].

12.12.030 Street right-of-way line defined.

Where the street right-of-way line is nearer to the centerline of the street than any existing sidewalk, the street right-of-way line shall be assumed to be coincidental with the back edge of the sidewalk for determining the triangular area for which this chapter controls obstructions to visibility. Where there is no sidewalk but the street right-of-way line is nearer to the centerline of the highway than any existing curb and gutter, the street right-of-way line shall be assumed to be coincidental with the back edge of the curb and gutter for determining the triangular area for which this chapter controls obstructions to visibility. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 785 § 3, 1962].

12.12.040 Exceptions.

The foregoing provisions shall not apply to the following:

A. Permanent buildings;

B. Public utility poles;

C. Trees trimmed to the trunk so as to provide a clear open space between pavement grade and a plane six feet higher, pavement grade being defined as either:

1. The nearest pavement surface; or

2. The nearest traveled roadway (where there is no pavement);

D. Saplings;

E. Fences of a type which in no way obstruct vision;

F. Supporting members of appurtenances to permanent buildings existing on October 31, 1962;

G. Official signs or signals;

H. Places where the contour of the ground is such that there can be no cross-visibility at the intersection;

I. Signs mounted so as to provide a clear, open space (except for supporting members) of 10 feet or more above the ground and whose supports do not constitute an obstruction as defined in RCMC 12.12.020;

J. Fences as may be required by the Federal Housing Administration or other home mortgage lending agency within subdivision corner lots as defined in RCMC Title 22, which have rear yards contiguous to a highway designated by the department of public works as a major highway with 100 feet of right-of-way, or designated by the department of public works as a major arterial with 80 feet of right-of-way or a frontage road;

K. Any passenger motor vehicle not to exceed six feet in height parked either temporarily or on display for sale on property zoned other than residential single-family, residential multiple-family or on other residential property. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 811 § 1 (part), 1963; SCC 785 § 4, 1962].

12.12.050 Enforcement.

A. This chapter shall be enforced by the Department of Public Works of the City. The director of the department of public works or his authorized representative may investigate violations of this chapter, give such notices as may be required to carry out this chapter, and perform such other duties in connection with the enforcement of this chapter as may be appropriate.

B. Remedies. Any obstruction maintained in violation of this chapter may be deemed a public nuisance, and upon failure to abate the same within 15 days after posting upon the premises of a notice to abate the nuisance signed by the public works director, or his authorized representative, and after sending a copy of the notice to abate by registered mail addressed to the owner of record, as shown on the most recent assessment roll of the county of Sacramento, to the address as shown on the assessment roll, the director, or his authorized representative, may enter upon the premises and remove or eliminate the obstruction. In such event, the cost to the city of the abatement of the nuisance shall be a lien upon the premises. The cost of such abatement shall, in addition, be a personal

obligation against the owner of the premises upon which the nuisance was maintained, recoverable by the city in an action before any court of competent jurisdiction. [Ord. 11-2023 § 3 (Exh. A); Ord. 38-2007 § 1 (Exh. 1(H)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 0777 § 2, 1989; SCC 785 § 5, 1962].

12.12.060 Scope.

No obstruction to cross-visibility shall be deemed to be excepted from the application of this chapter because of its being in existence at the time of the adoption hereof, unless expressly exempted by the terms of RCMC 12.12.040. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 785 § 7, 1962].

12.13.010 Definitions.

When used in this Chapter, the following words have the following meanings:

A. "City manager" means the city manager or designee.

B. "Neighborhood Services Director" means the Neighborhood Services Director or designee.

C. "Sidewalk" means the portion of the public right-of-way, including any landscaped areas, between a building or other property and the roadway, set apart for pedestrian travel by curbs, barriers, markings, or other delineation.

12.13.020 Street and Sidewalk obstructions.

A. It is unlawful to obstruct, or cause to be or obstructed, any street, sidewalk or other public thoroughfare by erecting, placing or maintaining signs, posts, structures, including recreational items such as basketball hoops, soccer goals, skate ramps, or other obstructions of any kind, except as otherwise provided in this Code.

B. Nothing in this section prevents merchants or persons who receive or deliver goods from using the sidewalk in front of the merchant's premises for the purpose of receiving or delivering goods.

12.13.040 Exception: Temporary structures.

The City manager or Neighborhood Services Director may, on proper written application, grant a temporary permit for the erection of temporary structures, obstructions, or signs on a temporary basis; provided, that the structures or signs do not in any way interfere with the use of the sidewalk by pedestrians and that the structures or signs are immediately removed when they are no longer necessary.

12.13.060- Enforcement

A. This Chapter shall be enforced by the Rancho Cordova Department of Neighborhood Services. The Neighborhood Services Director may investigate violations of this chapter, give such notices as many be required to carry out this chapter, and perform such other duties in connection with the enforcement of this Chapter as may be appropriate.

B. Remedies. The Neighborhood Services Director may remove such obstructions, as defined in this Chapter, eight (8) hours after a notice of removal is provided to the owner or person in charge of the obstructions. If the owner or person in charge of the obstruction cannot be readily identified or located for the purpose of providing such notice, the Neighborhood Services Director may place a 72-hour notice of removal on the item, and after 72-hours may remove the obstruction to a suitable location and store the obstruction at the expense of the owner or person in charge of the obstruction.

C. The Neighborhood Services Director may enforce this subsection without notice to the owner or person in control of the obstruction in the event of an immediate threat to the public health, safety, or welfare posed by the obstruction.

12.13.080 Violation-Penalty.

A. Violations of this chapter are hereby declared to be a public nuisance.

B. Any person who violates a provision of this chapter is liable for civil penalties.

C. Any person who violates a provision of this chapter is guilty of a misdemeanor.

D. All remedies prescribed under this chapter are cumulative and the election of one or more remedies does not bar the city from the pursuit of any other remedy to enforce this chapter.

12.16.010 Permit required.

It is unlawful for any person to paint or cause to be painted any house numbers on street curbs within the city of Rancho Cordova without a valid permit issued as provided in this chapter. As used in this section, the words “paint” or “cause to be painted” include any means by which house numbers are affixed or applied to a street curb, including but not limited to paint of any kind applied in any manner and decals of any type which are designed to adhere to a street curb. As used in this chapter, “person” means any natural person, firm, association, joint venture, joint stock company, partnership, club, company, corporation, business trust, or organization of any kind. [Ord. 11-2023 § 3 (Exh. A); revised during 2008 codification; Ord. 38-2007 § 1 (Exh. 1(A)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.020 Other requirements.

No permit shall be issued to any person intending to charge a fee or solicit contributions until he has obtained either a business license or a charitable solicitations permit, or both, in accordance with the requirements of this code, depending upon whether a business license or charitable solicitations permit, or both, are required. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.030 Applications.

To obtain a permit pursuant to the requirements of this chapter, an application shall be filed with the department of public works containing the following information:

A. The location or area in which the applicant intends to paint house numbers on curbs;

B. The specific days on which the applicant intends to paint curbs;

C. Such other relevant information as is determined to be necessary by the department of public works. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.040 Prior approval required.

Prior to painting house numbers, the permit holder shall obtain the written consent of an adult occupant of the abutting property. The form used for obtaining consent shall also specify the exact fee or donation which is expected to be paid. The silence of the occupant or the failure or omission of any occupant to complete or sign the form or to in any other manner indicate consent or refusal to have house numbers painted on the curb shall not constitute consent or in any way be relied on by the permit holder as indicating consent. No person other than an adult occupant who has consented in writing shall have any responsibility for payment of the fee or donation. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.050 Standards.

The department of public works shall establish standards which shall govern the appearance of house numbers on curbs and the manner in which they may be applied, including but not limited to standards relating to the size, color and location of the numbers and the materials used to apply the numbers. The standards shall be provided in writing to every person to whom a permit is issued and the permit holder shall sign a copy of the standards which includes a statement indicating that the permit holder has read and understands the standards and will follow them in applying curb numbers. The signed copy shall be retained in the department’s files relating to the applicant. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.060 Liability.

The issuance of a permit hereunder shall not be construed as imposing any responsibility or liability on the city or any of its officers or employees for claims for property damage or personal injury in any way arising out of, or relating to, the house number painting activities of the permit holder. It is unlawful for the permit holder to in any way represent or imply to anyone that the permit holder is a representative, or is acting for or on behalf of, the city or any other public agency in offering to paint house numbers on curbs. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.070 Conditions.

The issuance of a permit pursuant to this chapter shall be conditioned on compliance by the applicant with all of the provisions of this chapter and shall be subject to any special conditions which the department of public works determines to be necessary for the purpose of protecting the condition and use of city rights-of-way and the public improvements located thereon and the health, safety and general welfare of the property owners abutting on the rights-of-way on which the applicant intends to paint house numbers. Such special conditions may include, but are not limited to, limits on the hours during which the permit holder may solicit orders and the hours during which the house number painting activity may take place and a permit expiration date which shall be not later than the sixtieth day following the date on which the permit is issued. It is unlawful for the permit holder or any employee or representative of the permit holder to solicit orders or engage in house number painting activities in violation of any such special conditions. Special conditions applicable to a permit shall be specified in writing on the permit or in a written attachment thereto. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.080 Employee list.

Before issuance of any permit, the applicant shall file with the department of public works a list of the names and addresses of all persons who will be in the employ of, or act as representatives of, the permit holder for the purpose of carrying on the activities authorized by the permit. The permit holder shall notify the department of public works in writing of any additions to the list within 72 hours following the addition of any new employee or representative. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.090 Cancellation.

A permit may be cancelled by the department of public works if it is determined that the permit holder, his employees or his representatives have violated any of the requirements of this chapter or have engaged in any other conduct or activity on the basis of which it is determined that the permit should be cancelled for the protection of the public health, safety or general welfare. Notice of cancellation shall be in writing and shall specify the reasons for cancellation. The cancellation shall be effective immediately upon personal delivery to the permit holder or his authorized representative. If reasonable efforts to effect personal delivery are unsuccessful, cancellation shall be effective upon the mailing of the required notice to the permit holder’s address as specified in his application. Such mailed notice shall be effective, notwithstanding any change in the permit holder’s address, unless the permit holder has notified the department of public works in writing of any such change of address. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.100 Appeal.

The cancellation of a permit as provided in RCMC 12.16.090 shall be final on the expiration of 10 days following the effective date of the revocation unless the permit holder files a written notice of appeal with the department of public works within the 10-day period. The department of public works shall set a time at the earliest administratively convenient date for an appeal conference which shall be attended by the director of public works or his designee at which the permit holder shall be afforded an opportunity to discuss the reasons for the cancellation. The permit holder shall be afforded an opportunity to present information on his behalf in writing or oral form. Not later than the fifth day following the conclusion of such conference, the department of public works shall notify the permit holder of its decision, which shall either be that the cancellation is permanent or modified in some appropriate manner. The decision of the department of public works shall be final. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.110 Penalty.

Violation of any requirement or prohibition in this chapter is a misdemeanor and is punishable as provided in RCMC 1.01.190. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

Section 2. Severability.

If any provision of this Ordinance or the application thereof to any person or circumstance, is held invalid, the remainder of the Ordinance, including the application of such part or provision to other persons or circumstances shall not be affected thereby and shall continue in full force and effect. To this end, provisions of this Ordinance are severable. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase hereof irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses, or phrases be held unconstitutional, invalid or unenforceable.

Section 3. Effective Date

Within fifteen (15) days after adoption, a Summary of this Ordinance shall be published once in the Grapevine Independent, or the Sacramento Bee, a newspaper of general circulation printed and published in Sacramento County and circulated in the City of Rancho Cordova, in accordance with Government Code Section 36933. This Ordinance shall take effect and be enforced thirty (30) days after its inception.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Siri Pulipati, Mayor

ATTEST:

Stacy Leitner, CMC
City Clerk

CITY OF RANCHO CORDOVA

ORDINANCE NO. XX-2025

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA ADDING SECTIONS TO TITLE 12 OF THE MUNICIPAL CODE "STREET AND SIDEWALK OBSTRUCTIONS"

WHEREAS, Title 12, Section 12.12.010, "Obstructions at public street intersections and intersection elbows," of the Rancho Cordova Municipal Code prohibits the obstruction of drivers' lines of sight due to the "installation, setting out or maintenance on property at any corner formed by intersecting streets or intersection elbows within the city of Rancho Cordova any sign, hedge, shrubbery, natural growth, fence or other obstruction to the view, higher than two feet, six inches"; and

WHEREAS, Title 12, Section 12.12.020, "Obstructions at private driveways and public streets," of the Rancho Cordova Municipal Code prohibits obstructions to drivers' lines of sight on private driveways and streets, and defines such obstructions as "any sign, hedge, structure, natural growth, fence, or other obstruction to the view higher than two feet, six inches above the nearest pavement surface (or traveled area where no pavement exists) on property adjacent to any private road or driveway intersecting a public street" that obstructs drivers' lines of sight"; and

WHEREAS, Title 12, Section 12.12.050 provides that street obstructions that are maintained in violation of Sections 12.12.010-020 may be deemed a public nuisance by the Neighborhood Services Director of the City of Rancho Cordova and removed at the property owner's cost; and

WHEREAS, obstructions to streets, sidewalks and other public thoroughfares, including recreational items such as basketball hoops, soccer goals, and skate ramps, can pose safety hazards or prevent the movement of drivers, pedestrians, wheelchair users, and City services such as street sweeping and refuse collection services; and

WHEREAS, the owners of item/s that are obstructing streets and sidewalks may be difficult to identify and the placement of 72-hour notice of removal would provide the City's Code Enforcement Department with the ability to give notice to unidentified owners that their item/s are an obstruction and will be removed by the City; and

WHEREAS, the Rancho Cordova Municipal Code's current sections pertaining to street obstructions currently do not fully prohibit all obstruction to a street, sidewalk or other public thoroughfare, regardless of whether drivers' sight-lines are impacted, and regardless of whether the obstruction is a recreational item or unpermitted temporary obstruction.

THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA DOES ORDAIN AS FOLLOWS:

Section 1. Amendment of the Municipal Code.

Chapter 12.13 “STREET AND SIDEWALK OBSTRUCTIONS”, consisting of Sections 12.13.010-12.13.070, is hereby added to the Rancho Cordova Municipal Code to read as follows:

12.12.010 Obstructions at public street intersections and intersection elbows.

It is unlawful to install, set out or maintain or to allow the installation, setting out or maintenance on property at any corner formed by intersecting streets or intersection elbows within the city of Rancho Cordova any sign, hedge, shrubbery, natural growth, fence or other obstruction to the view, higher than two feet, six inches above either the nearest pavement surface or the nearest traveled roadway (where there is no pavement) within that triangular area between the street right-of-way lines and a diagonal line joining points on the street right-of-way lines 20 feet from the point of their intersection or, in the case of rounded corners, the triangular area between the tangents to the curve and a diagonal line joining points on the tangent 20 feet from the point of their intersection. In the case of intersection elbows, 40-foot lengths instead of 20-foot lengths are applicable. The tangents referred to are those at the beginning and at the end of the curve at the corner. [Ord. 11-2023 § 3 (Exh. A); Ord. 38-2007 § 1 (Exh. 1(A)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 0777 § 1, 1989, SCC 399 § 1, 1979; SCC 785 § 1, 1962].

12.12.020 Obstructions at private driveways and public streets.

It is unlawful to set out, install or maintain, or to allow the setting out, installation, or maintenance of any sign, hedge, structure, natural growth, fence, or other obstruction to the view higher than two feet, six inches above the nearest pavement surface (or traveled area where no pavement exists) on property adjacent to any private road or driveway intersecting a public street, within a triangular area formed by the edge of the driveway, the street right-of-way line, and a line connecting two points, one of which is on the right-of-way line 10 feet from the edge of the driveway, and the other of which is on the edge of the driveway 10 feet back of the right-of-way line measured perpendicular to the right-of-way line in a direction away from the street. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 399 § 2, 1979: SCC 1045 § 1, 1969: SCC 785 § 2, 1962].

12.12.030 Street right-of-way line defined.

Where the street right-of-way line is nearer to the centerline of the street than any existing sidewalk, the street right-of-way line shall be assumed to be coincidental with the back edge of the sidewalk for determining the triangular area for which this chapter controls obstructions to visibility. Where there is no sidewalk but the street right-of-way line is nearer to the centerline of the highway than any existing curb and gutter, the street right-of-way line shall be assumed to be coincidental with the back edge of the curb and gutter for determining the triangular area for which this chapter controls obstructions to visibility. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 785 § 3, 1962].

12.12.040 Exceptions.
The foregoing provisions shall not apply to the following:

A. Permanent buildings;

B. Public utility poles;

C. Trees trimmed to the trunk so as to provide a clear open space between pavement grade and a plane six feet higher, pavement grade being defined as either:

1. The nearest pavement surface; or

2. The nearest traveled roadway (where there is no pavement);

D. Saplings;

E. Fences of a type which in no way obstruct vision;

F. Supporting members of appurtenances to permanent buildings existing on October 31, 1962;

G. Official signs or signals;

H. Places where the contour of the ground is such that there can be no cross-visibility at the intersection;

I. Signs mounted so as to provide a clear, open space (except for supporting members) of 10 feet or more above the ground and whose supports do not constitute an obstruction as defined in RCMC 12.12.020;

J. Fences as may be required by the Federal Housing Administration or other home mortgage lending agency within subdivision corner lots as defined in RCMC Title 22, which have rear yards contiguous to a highway designated by the department of public works as a major highway with 100 feet of right-of-way, or designated by the department of public works as a major arterial with 80 feet of right-of-way or a frontage road;

K. Any passenger motor vehicle not to exceed six feet in height parked either temporarily or on display for sale on property zoned other than residential single-family, residential multiple-family or on other residential property. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 811 § 1 (part), 1963; SCC 785 § 4, 1962].

12.12.050 Enforcement.

A. This chapter shall be enforced by the department of public works of the city. The director of the department of public works or his authorized representative may investigate violations of this chapter, give such notices as may be required to carry out this chapter, and perform such other duties in connection with the enforcement of this chapter as may be appropriate.

B. Remedies. Any obstruction maintained in violation of this chapter may be deemed a public nuisance, and upon failure to abate the same within 15 days after posting upon the premises of a notice to abate the nuisance signed by the public works director, or his authorized representative, and after sending a copy of the notice to abate by registered mail addressed to the owner of record, as shown on the most recent assessment roll of

the county of Sacramento, to the address as shown on the assessment roll, the director, or his authorized representative, may enter upon the premises and remove or eliminate the obstruction. In such event, the cost to the city of the abatement of the nuisance shall be a lien upon the premises. The cost of such abatement shall, in addition, be a personal obligation against the owner of the premises upon which the nuisance was maintained, recoverable by the city in an action before any court of competent jurisdiction. [Ord. 11-2023 § 3 (Exh. A); Ord. 38-2007 § 1 (Exh. 1(H)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 0777 § 2, 1989; SCC 785 § 5, 1962].

12.12.060 Scope.

No obstruction to cross-visibility shall be deemed to be excepted from the application of this chapter because of its being in existence at the time of the adoption hereof, unless expressly exempted by the terms of RCMC 12.12.040. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 785 § 7, 1962].

12.13.010 Definitions.

When used in this Chapter, the following words have the following meanings:

A. "City manager" means the city manager or designee.

B. "Neighborhood Services Director" means the Neighborhood Services Director or designee.

C. "Sidewalk" means the portion of the public right-of-way, including any landscaped areas, between a building or other property and the roadway, set apart for pedestrian travel by curbs, barriers, markings, or other delineation.

12.13.020 Street and Sidewalk obstructions.

A. It is unlawful to obstruct, or cause to be or obstructed, any street, sidewalk or other public thoroughfare by erecting, placing or maintaining signs, posts, structures, including recreational items such as basketball hoops, soccer goals, skate ramps, or other obstructions of any kind, except as otherwise provided in this Code.

B. Nothing in this section prevents merchants or persons who receive or deliver goods from using the sidewalk in front of the merchant's premises for the purpose of receiving or delivering goods.

12.13.040 Exception: Temporary structures.

The City manager or Neighborhood Services Director may, on proper written application, grant a temporary permit for the erection of temporary structures, obstructions, or signs on a temporary basis; provided, that the structures or signs do not in any way interfere with the use of the sidewalk by pedestrians and that the structures or signs are immediately removed when they are no longer necessary.

12.13.060- Enforcement

A. This Chapter shall be enforced by the Rancho Cordova Department of Neighborhood Services. The Neighborhood Services Director may investigate violations of this chapter, give such notices as many be required to carry out this chapter, and perform such other duties in connection with the enforcement of this Chapter as may be appropriate.

B. Remedies. The Neighborhood Services Director may remove such obstructions, as defined in this Chapter, eight (8) hours after a notice of removal is provided to the owner or person in charge of the obstructions. If the owner or person in charge of the obstruction cannot be readily identified or located for the purpose of providing such notice, the Neighborhood Services Director may place a 72-hour notice of removal on the item, and after 72-hours may remove the obstruction to a suitable location and store the obstruction at the expense of the owner or person in charge of the obstruction.

C. The Neighborhood Services Director may enforce this subsection without notice to the owner or person in control of the obstruction in the event of an immediate threat to the public health, safety, or welfare posed by the obstruction.

12.13.080 Violation-Penalty.

A. Violations of this chapter are hereby declared to be a public nuisance.

B. Any person who violates a provision of this chapter is liable for civil penalties.

C. Any person who violates a provision of this chapter is guilty of a misdemeanor.

D. All remedies prescribed under this chapter are cumulative and the election of one or more remedies does not bar the city from the pursuit of any other remedy to enforce this chapter.

12.16.010 Permit required.

It is unlawful for any person to paint or cause to be painted any house numbers on street curbs within the city of Rancho Cordova without a valid permit issued as provided in this chapter. As used in this section, the words “paint” or “cause to be painted” include any means by which house numbers are affixed or applied to a street curb, including but not limited to paint of any kind applied in any manner and decals of any type which are designed to adhere to a street curb. As used in this chapter, “person” means any natural person, firm, association, joint venture, joint stock company, partnership, club, company, corporation, business trust, or organization of any kind. [Ord. 11-2023 § 3 (Exh. A); revised during 2008 codification; Ord. 38-2007 § 1 (Exh. 1(A)); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.020 Other requirements.

No permit shall be issued to any person intending to charge a fee or solicit contributions until he has obtained either a business license or a charitable solicitations permit, or both, in accordance with the requirements of this code, depending upon whether a business license or charitable solicitations permit, or

both, are required. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.030 Applications.

To obtain a permit pursuant to the requirements of this chapter, an application shall be filed with the department of public works containing the following information:

A. The location or area in which the applicant intends to paint house numbers on curbs;

B. The specific days on which the applicant intends to paint curbs;

C. Such other relevant information as is determined to be necessary by the department of public works. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.040 Prior approval required.

Prior to painting house numbers, the permit holder shall obtain the written consent of an adult occupant of the abutting property. The form used for obtaining consent shall also specify the exact fee or donation which is expected to be paid. The silence of the occupant or the failure or omission of any occupant to complete or sign the form or to in any other manner indicate consent or refusal to have house numbers painted on the curb shall not constitute consent or in any way be relied on by the permit holder as indicating consent. No person other than an adult occupant who has consented in writing shall have any responsibility for payment of the fee or donation. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.050 Standards.

The department of public works shall establish standards which shall govern the appearance of house numbers on curbs and the manner in which they may be applied, including but not limited to standards relating to the size, color and location of the numbers and the materials used to apply the numbers. The standards shall be provided in writing to every person to whom a permit is issued and the permit holder shall sign a copy of the standards which includes a statement indicating that the permit holder has read and understands the standards and will follow them in applying curb numbers. The signed copy shall be retained in the department’s files relating to the applicant. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.060 Liability.

The issuance of a permit hereunder shall not be construed as imposing any responsibility or liability on the city or any of its officers or employees for claims for property damage or personal injury in any way arising out of, or relating to, the house number painting activities of the permit holder. It is unlawful for the

permit holder to in any way represent or imply to anyone that the permit holder is a representative, or is acting for or on behalf of, the city or any other public agency in offering to paint house numbers on curbs. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.070 Conditions.

The issuance of a permit pursuant to this chapter shall be conditioned on compliance by the applicant with all of the provisions of this chapter and shall be subject to any special conditions which the department of public works determines to be necessary for the purpose of protecting the condition and use of city rights-of-way and the public improvements located thereon and the health, safety and general welfare of the property owners abutting on the rights-of-way on which the applicant intends to paint house numbers. Such special conditions may include, but are not limited to, limits on the hours during which the permit holder may solicit orders and the hours during which the house number painting activity may take place and a permit expiration date which shall be not later than the sixtieth day following the date on which the permit is issued. It is unlawful for the permit holder or any employee or representative of the permit holder to solicit orders or engage in house number painting activities in violation of any such special conditions. Special conditions applicable to a permit shall be specified in writing on the permit or in a written attachment thereto. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.080 Employee list.

Before issuance of any permit, the applicant shall file with the department of public works a list of the names and addresses of all persons who will be in the employ of, or act as representatives of, the permit holder for the purpose of carrying on the activities authorized by the permit. The permit holder shall notify the department of public works in writing of any additions to the list within 72 hours following the addition of any new employee or representative. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.090 Cancellation.

A permit may be cancelled by the department of public works if it is determined that the permit holder, his employees or his representatives have violated any of the requirements of this chapter or have engaged in any other conduct or activity on the basis of which it is determined that the permit should be cancelled for the protection of the public health, safety or general welfare. Notice of cancellation shall be in writing and shall specify the reasons for cancellation. The cancellation shall be effective immediately upon personal delivery to the permit holder or his authorized representative. If reasonable efforts to effect personal delivery are unsuccessful, cancellation shall be effective upon the mailing of the required notice to the permit holder’s address as specified in his application. Such mailed notice shall be effective, notwithstanding any change in the permit holder’s address, unless the permit holder has notified the department of public works in

writing of any such change of address. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.100 Appeal.

The cancellation of a permit as provided in RCMC 12.16.090 shall be final on the expiration of 10 days following the effective date of the revocation unless the permit holder files a written notice of appeal with the department of public works within the 10-day period. The department of public works shall set a time at the earliest administratively convenient date for an appeal conference which shall be attended by the director of public works or his designee at which the permit holder shall be afforded an opportunity to discuss the reasons for the cancellation. The permit holder shall be afforded an opportunity to present information on his behalf in writing or oral form. Not later than the fifth day following the conclusion of such conference, the department of public works shall notify the permit holder of its decision, which shall either be that the cancellation is permanent or modified in some appropriate manner. The decision of the department of public works shall be final. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

12.16.110 Penalty.

Violation of any requirement or prohibition in this chapter is a misdemeanor and is punishable as provided in RCMC 1.01.190. [Ord. 11-2023 § 3 (Exh. A); Ord. 21-2003 §§ 2, 4; Ord. 20-2003 §§ 2, 4; SCC 174 § 1 (part), 1974].

Section 2. Severability.

If any provision of this Ordinance or the application thereof to any person or circumstance, is held invalid, the remainder of the Ordinance, including the application of such part or provision to other persons or circumstances shall not be affected thereby and shall continue in full force and effect. To this end, provisions of this Ordinance are severable. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase hereof irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses, or phrases be held unconstitutional, invalid or unenforceable.

Section 3. Effective Date

Within fifteen (15) days after adoption, a Summary of this Ordinance shall be published once in the Grapevine Independent, or the Sacramento Bee, a newspaper of general circulation printed and published in Sacramento County and circulated in the City of Rancho Cordova, in accordance with Government Code Section 36933. This Ordinance shall take effect and be enforced thirty (30) days after its inception.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Siri Pulipati, Mayor

Attest:

Stacy Leitner, CMC
City Clerk

MEMORANDUM

ITEM 9.5.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Albert Stricker, Public Works Director
Kristine Courdy, Senior Civil Engineer

SUBJECT: **A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE CONTRACT NO. 2025-51 IN AN AMOUNT NOT TO EXCEED $1,104,007.00 WITH SIERRA NEVADA CONSTRUCTION, INC. FOR THE ANATOLIA SURFACE TREATMENT PROJECT**

RECOMMENDATION

Adopt the Resolution.

RESULT OF RECOMMENDED ACTION

Adoption of the Resolution would improve the aesthetics and road conditions for motorists, pedestrians and bicyclists in the Anatolia Community. Slurry seal projects are a preventative maintenance measure that are a cost-effective way to preserve and extend the life of the existing pavement.

BACKGROUND

The Anatolia Surface Treatment Project (Project) includes preventative maintenance to slurry seal the local roads in the Anatolia community (refer to the Project Map under Attachment 3). The project will improve the aesthetics and road conditions for motorists, pedestrians and bicyclists in the neighborhood.

Bids for the Project were solicited on the City's website and on OpenGov.com, on March 6, 2025. Bids for the project were publicly opened on March 27, 2025. A total of seven (7) bids were received. The lowest responsible and responsive bid was $1,104,007.00 from Sierra Nevada Construction, Inc. There were no Project bid alternatives and the contract award is based on the lowest, responsive and responsible bid. The Bid Summary is provided as Attachment 4.

One of the unsuccessful bidders was deemed non-responsive as they did not comply with the Sacramento County specification requirements to self-perform 30% of the work. This did not affect the contract award, therefore, staff recommends that the City Council award the construction contract to Sierra Nevada Construction, Inc. as the lowest, responsive, and responsible bidder.

The Project is expected to be under construction and completed this Summer 2025.

FISCAL IMPACT AND FUNDING SOURCE

This project is included in the City's operating and maintenance budget for Fiscal Years 2023/2024 and 2024/2025. The Project budget consists of Gas Tax funds. There is no impact to the City’s General Fund.

ATTACHMENT(S)

1. Resolution
2. Contract No. 2025-51
3. Project Map
4. Bid Summary

CITY OF RANCHO CORDOVA

RESOLUTION NO. XX-2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, AUTHORIZING THE CITY MANAGER TO EXECUTE CONTRACT NO. 2025-51 WITH SIERRA NEVADA CONSTRUCTION, INC. IN AN AMOUNT NOT TO EXCEED $1,104,007.00 TO PERFORM THE ANATOLIA SURFACE TREATMENT PROJECT

WHEREAS, the Project will include slurry sealing the Anatolia community roads to preserve and extend the life of the pavement in that neighborhood; and

WHEREAS, the City solicited bids for the Project under the requirements of the state and local laws and publicly opened bids on March 27, 2025; and

WHEREAS, the lowest responsible bidder was Sierra Nevada Construction, Inc.; and

WHEREAS, adoption of this resolution will award Contract No. 2025-51 to Sierra Nevada Construction, Inc. in an amount not to exceed $1,104,007.00 for the Anatolia Surface Treatment Project; and

WHEREAS, funding for this project consists of Gas Tax funds; and

WHEREAS, the Project was reviewed under the requirements of the California Environmental Quality Act (CEQA), and it has been determined to be exempt from further review pursuant to CEQA Regulation 15301 subsection (c) for existing facilities.

NOW, THEREFORE, BE IT HEREBY RESOLVED THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA does authorize the City Manager to execute construction Contract No. 2025-51 in an amount not to exceed $1,104,007.00 with Sierra Nevada Construction, Inc. and in a form approved by the City Attorney.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Siri Pulipati, Mayor

_____
Stacy Leitner, CMC
City Clerk

**CONSTRUCTION SERVICES AGREEMENT BETWEEN
THE CITY OF RANCHO CORDOVA AND SIERRA NEVADA CONSTRUCTION, INC.
FOR ANATOLIA SURFACE TREATMENT PROJECT**

THIS AGREEMENT made and entered into between the City of Rancho Cordova ("City") and Sierra Nevada Construction, Inc. ("Contractor") as of April 21, 2025.

W I T N E S S E T H:

WHEREAS, the City Council for the City heretofore caused plans and specifications for Anatolia Surface Treatment Project ("Project") to be prepared, and therefore did approve and adopt said plans and specifications; and

WHEREAS, the City Council for the City did cause to be published for the time and in the manner required by law, a notice inviting sealed bids for the performance of said work; and

WHEREAS, the notice was published on March 6, 2025 on the City's website and on OpenGov.com ("Notice"); and

WHEREAS, the Contractor, in response to such Notice, submitted to the City Council for the City within the time specified in said Notice, and in the manner provided for therein, a sealed bid for the performance of the Project specified in said plans and specifications, which said bid and proposal, and other bids and proposals submitted in response to said Notice, the City Council opened and canvassed in the manner provided by law; and

WHEREAS, the Contractor was the lowest responsible bidder for the performance of said Project, and said City Council for the City as a result of the canvass of said bids, did determine and declare Contractor to be the lowest responsible bidder for said Project and award to a contract therefore.

NOW THEREFORE, in consideration of the promises herein, it is mutually agreed between the parties hereto as follows:

Section 1. **CONTRACT DOCUMENTS.** The following documents are by this reference incorporated in and made a part of this Agreement: The County of Sacramento, Standard Construction Specifications dated November 2024; the Special Provisions; the contract drawings, all addenda; the Notice to Contractors; the Proposal; all required bonds; and all supplemental Agreements covering alterations, amendments, or extensions to the contract. The documents which describe the work to be performed are sometimes collectively referred to herein as the Plans and Specifications.

Section 2. **TERM.** The term of this Agreement shall begin on the date first noted above and shall end on June 30, 2026.

Section 3. **SCOPE OF WORK.** The Contractor will furnish all labor, materials, services, transportation, appliances, and mechanical workmanship required for Contract No. 2025-51, as provided for and set forth in said Plans and Specifications, or in either of them, which said Plans and Specifications are hereby referred and by such reference incorporated herein and made a part of this Agreement. All of the said work done under this Agreement shall be under the supervision of and performed to the satisfaction of the Public Works Director of the City of

Rancho Cordova who shall have the right to reject any and all materials and supplies furnished by the Contractor which do not comply with the Plans and Specifications, together with the right to require the Contractor to replace any and all work furnished by the Contractor which shall not either in workmanship or material be in strict accordance with the Plans and Specifications.

Section 4. **COMPLETION**. Said work shall be completed and ready for acceptance.

Section 5. **PAYMENT**. Attached hereto as Exhibit "A" and by reference made a part hereof, is the bid and proposal of Contractor. Said bid and proposal will contain, as required by the terms of said specifications, the full and complete schedule of the different items with the lump sums or unit prices as so specified. The City agrees in consideration of the work to be performed for the Project herein and subject to the terms and conditions thereof, to pay Contractor all sums of money which may become due to Contractor in accordance with the terms of the aforesaid bid and proposal, and this Agreement, to wit: one million, one million, one hundred and four thousand and seven dollars and zero cents ($1,104,007.00). Said sum shall be paid in accordance with Section 8 of the Standard Specifications. With respect to that portion of the above sum as is based upon the estimated quantities specified for the general scope of the work to be performed herein, actual payment will be based upon the quantities as measured upon completion. No payment made under this Agreement shall be construed to be an acceptance of defective work or improper materials.

Section 6. **PREVAILING WAGES.** To the extent required by law, Contractor and all of the Contractor's subcontractors shall comply with California Health and Safety Code Section 33422.1, and shall comply with California Labor Code Section 1770 et seq. and all regulations adopted pursuant thereto (referred to herein as, "**Prevailing Wage Laws**"), and be responsible for carrying out the requirements of such provisions. Pursuant to the provisions of Articles 1 and 2 of Chapter 1, Part 7, Division II, of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages, and not less than the general prevailing rate of per diem wages for holidays and overtime work, for each craft, classification or type of worker needed to execute the Project contemplated under this Agreement shall be paid to all workers, laborers and mechanics employed in the execution of said Project by Contractor, or by any subcontractor doing or contracting to do any part of said Project. The appropriate determination of the Director of the California Department of Industrial Relations is filed with, and available for inspection at 2729 Prospect Park Drive, Rancho Cordova, CA 95670, the office of the Clerk of the City. Contractor shall post, at each job site, a copy of such prevailing rate of per diem wages as determined by the Director for the California Department of Industrial Relations. The Contractor shall, and hereby agrees to, unconditionally indemnify, reimburse, defend, protect and hold harmless the City and its elective and appointive boards, commissions, officers, agents, attorneys, consultants and employees, and all of their respective successors and assigns, from and against any and all claims, demands, suits and actions at law or in equity, and losses, liabilities, expenses, penalties, fines, orders, judgments, injunctive or other relief, and costs and damages of every kind, nature and description (including but not limited to attorneys' fees and court costs; with counsel reasonably acceptable to the City), and administrative, enforcement or judicial proceedings, whether known or unknown, and which directly or indirectly, in whole or in part, are caused by, arise from, or relate to, or are alleged to be caused by, arise from, or relate to, the payment or requirement of payment of prevailing wages or the requirement of competitive bidding in the construction of the Project, the failure to comply with any state or federal labor laws, regulations or standards in connection with this Agreement, including but not limited to California Labor Code Section 1770 et seq. and the Prevailing Wage Laws, or any act or omission of the City or the Contractor related to this Agreement with respect to the payment or requirement of payment of prevailing wages or the

requirement of competitive bidding, whether or not any insurance policies shall have been determined to be applicable to any such claims, demands, suits, actions, losses, liabilities, expenses, penalties, fines, orders, judgments, injunctive or other relief, costs, damages, or administrative, enforcement or judicial proceedings. It is further agreed that the City does not, and shall not, waive any rights against the Contractor which they may have by reason of this indemnity and hold harmless agreement because of the acceptance by the City, or the deposit with the City by the Contractor, of any of the insurance policies described in this Agreement.

Section 7. **INSURANCE**. The Contractor shall carry and maintain for the duration of the term of this Agreement, such public liability, property damage and contractual liability, auto, worker's compensation and builders' risk insurance as required by the specifications.

Section 8. **WORKERS' COMPENSATION CERTIFICATION.** By execution of this Agreement, the Contractor certifies as follows:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

Section 9. **PERFORMANCE AND PAYMENT BONDS**. The Contractor shall, before beginning said work for the Project, file two (2) bonds with the City, each made payable to the City. These bonds shall be issued by a surety company authorized to do business in the State of California, and shall be maintained during the entire life of the Agreement at the expense of the Contractor. One bond shall be in the amount of one hundred percent (100%) of the Agreement and shall guarantee the faithful performance of the Agreement. The second bond shall be the payment bond required by California Civil Code Section 3247 et seq., and shall be in the amount of one hundred percent (100%) of the Agreement. Any alterations made in the specifications which are a part of this Agreement or in any provision of this Agreement shall not operate to release any surety from liability on any bond required hereunder and the consent to make such alterations is hereby given, and any surety on said bonds hereby waives the provisions of California Civil Code Sections 2819 and 2845.

Section 10. **INDEMNIFICATION.**

10.1 **Contractor's Performance.** Contractor shall indemnify, defend with counsel selected by the City, and hold harmless City, its officers, agents, employees and representatives from and against any and all claims, losses, liabilities or damages, demands and actions, including payment of reasonable attorney's fees, arising out of or resulting from Services performed pursuant to this Agreement caused in whole or in part by any negligent or willful act or omission of Contractor, its officers, agents, employees, or anyone directly or indirectly acting on behalf of Contractor. The foregoing obligation of Contractor shall not apply when (1) the injury, loss of life, damage to property, or violation of law arises wholly from the negligence or willful misconduct of the City or its officers, employees, agents, or volunteers and (2) the actions of Contractor or its employees, subcontractor, or agents have contributed in no part to the injury, loss of life, damage to property, or violation of law. It is understood that the duty of Contractor to indemnify and hold harmless includes the duty to defend as set forth in Section 2778 of the California Civil Code. Acceptance by City of insurance certificates and endorsements required under this Agreement does not

relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Contractor acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.

10.2 **PERS Indemnification.** In the event that Contractor or any employee, agent, or subcontractor of Contractor providing Services under this Agreement is determined by a court of competent jurisdiction of the California Public Employees Retirement System ("PERS") to be eligible for enrollment in PERS as an employee of City, Contractor shall indemnify, defend, and hold harmless City for the payment of any and all employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City, and any attorneys' fees and costs incurred by the City to enforce this Section.

10.3 **No Limitation of Liability for Indemnification.** The indemnities set forth in this Section shall not be limited by the insurance requirements set forth in the Contract.

Section 11. **NONDISCRIMINATION AND EQUAL OPPORTUNITY.** Contractor shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, marital status, sex, or sexual orientation, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Contractor under this Agreement. Contractor shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of Contractor thereby. Contractor shall include the provisions of this section in any subcontract approved by the City.

Section 12. **AMENDMENTS.** No modification or amendment of this Agreement is effective unless made in writing and signed by both the City and Contractor.

Section 13. **ASSIGNMENT AND SUBCONTRACTING.** Contractor shall not assign or transfer any interest in this Agreement without the prior written consent of the City.

Section 14. **MISCELLANEOUS PROVISIONS**.

14.1 **Successors.** This Agreement shall bind and inure to the heirs, devisees, assignees, and successors in interest of Contractor and to the successors in interest of Contractor in the same manner as if such parties had been expressly named herein. All times stated herein or in the contract documents are of the essence hereof. As used in this instrument the singular includes the plural, and the masculine includes the feminine and the neuter. This Agreement may create a possessory interest subject to property taxation, and Contractor may be subject to the payment of property taxes levied on such interest.

14.2 **Contract Administration.** This Agreement shall be administered by Kristine Courdy ("Contract Administrator"). All correspondence shall be directed to or through the Contract Administrator or his or her designee.

14.3 **Notices.** Any written notice to Consultant shall be sent to:

Nick Bacher
Sierra Nevada Construction, Inc.
PO Box 50760
Sparks, NV 89435
Email Address for insurance updates: dcarpenter@snc.biz

Any written notice to City shall be sent to:

Kristine Courdy
City of Rancho Cordova
Department of Public Works
2729 Prospect Park Drive
Rancho Cordova, CA 95670

14.4 **IRS Form W-9.** Contractor shall complete and submit Internal Revenue Service Form W-9 to the City before execution of this Agreement. The City's Finance Director shall have authority to waive this requirement.

14.5 **Governing Law and Venue.** The laws of the State of California shall govern this Agreement. Venue for any action regarding this Agreement shall be in the Superior Court of the County of Sacramento or in the United States District Court for the Eastern District of California.

14.6 **Attorneys' Fees.** If a Party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provisions of this Agreement, the prevailing Party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that Party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

14.7 **Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

14.8 **No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.

14.9 **Survival.** The obligations of this Agreement, which by their nature would continue beyond the term or expiration of this Agreement, including without limitation obligations regarding indemnification shall survive the term or expiration of this Agreement.

14.10 **Entire Agreement.** This Agreement, including the terms of payment attached hereto and incorporated herein as Exhibit A, and the Contract Documents as referenced above in Section 1, of this Agreement, represents the entire and integrated Agreement between City and Contractor and supersedes all prior negotiations, representations, and Agreements regarding the subject matter of this Agreement, either written or oral.

IN WITNESS WHEREOF, the City Council and Contractor have caused this Agreement to be executed as of the day and year first above written.

CITY OF RANCHO CORDOVA:	CONTRACTOR:
Micah Runner, City Manager	**Marc T. Markwell,** Secretary/Treasurer
Date	Date

Attest:

Stacy Leitner, CMC, City Clerk

Date

Approved as to Form:

Adam U. Lindgren, City Attorney

Date

Last revised June 23, 2022

Exhibit A

See Attached Bid Proposal

City of Rancho Cordova

Public Works

Albert Stricker, Director of Public Works

2729 Prospect Park Drive, Rancho Cordova, CA 95670

[SIERRA NEVADA CONSTRUCTION, INC.] RESPONSE DOCUMENT REPORT

IFB No. TBD

City of Rancho Cordova Surface Treatment Project - Anatolia

RESPONSE DEADLINE: March 27, 2025 at 3:00 pm

Report Generated: Thursday, March 27, 2025

Sierra Nevada Construction, Inc. Response

CONTACT INFORMATION

Company:
Sierra Nevada Construction, Inc.

Email:
bids@snc.biz

Contact:
Chief Estimator

Address:
P.O. Box 50760
Sparks, NV 89435

Phone:
N/A

Website:
www.snc.biz

Submission Date:
Mar 27, 2025 2:28 PM (Pacific Time)

[SIERRA NEVADA CONSTRUCTION, INC.] RESPONSE DOCUMENT REPORT
IFB No. TBD
City of Rancho Cordova Surface Treatment Project - Anatolia

ADDENDA CONFIRMATION

No addenda issued

QUESTIONNAIRE

1. Project Contact*

Pass

Please provide the following regarding the point of contact for your submittal:

- Full Name (First and Last)
- Title
- Phone Number
- Email

Kevin L. Robertson

President

775-355-0420

bids@snc.biz

2. Contractor's License*

Any person or entity submitting a bid on this project to engage in the business or act in the capacity of a contractor shall be licensed as a contractor in accordance with the provisions of Division 3, Chapter 9 of the California Business and Professions Code. A bid submitted to the City by a contractor who is not licensed as set forth above shall be considered non-responsive and shall be rejected by the City.

Before awarding the contract for this project, the City must verify that the contractor was properly licensed when the contractor submitted his/her bid on this project. In order for the City to verify the license status of a contractor, the contractor, at the time he/she submits his/her bid for the project, shall provide the City his/her contractor's license information.

No bid submitted to the City shall be invalidated by the failure of the bidder to be licensed in accordance with the laws of this state. However, at the time the contract is awarded, the contractor shall be properly licensed in accordance with the laws of this state. The first payment for work or material under any contract shall not be made unless and until the Registrar of Contractors verifies to the City that the records of the Contractors' State License Board indicate that the contractor was properly licensed at the time the contract was awarded. Any bidder or contractor not so licensed shall be subject to all legal penalties imposed by law, including, but not limited to, any appropriate disciplinary action by the Contractors' State License Board. Failure of the bidder to obtain proper and adequate licensing for an award of a contract shall constitute a failure to execute the contract and shall result in the forfeiture of the security of the bidder.

Please enter the California Contractor's License Number for your company.

593393
Click to Verify *Value will be copied to clipboard*

3. DIR Registration*

Enter your California Department of Industrial Relations (DIR) Contractor Registration Number.

Please Note:
If the City is unable to confirm that the bidder/contractor's DIR registration is current, the City must disqualify the bidder, as required by Labor Code section 1725.5."

1000000163
Click to Verify *Value will be copied to clipboard*

4. Equal Employment Opportunity Certification*

This certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to

the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

Bidder shall confirm whether or not Bidder, and any proposed subcontractors, have participated in previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, have filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filling requirements.

Bidder and/or a Proposed Subcontractors Have Participated

5. Public Contract Code Section 10285.1 Statement*

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder shall declare under penalty of perjury under the laws of the State of California that the bidder "*HAS*" or "*HAS NOT*" been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

Note: The bidder must select "has" or "has not". The above Statement is part of the Proposal. Submitting this Proposal shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

HAS NOT

6. Public Contract Code Section 10162*

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:
Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

No

7. Public Contract Code 10232 Statement*

In conformance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Proposal. Submitting this Proposal thereof shall also constitute signature of this Statement and Questionnaire. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Confirmed

8. Subcontractors?*

Will you be using subcontractors for this project?

In compliance with the provisions of Section 4100-4114 of the Public Contracts Code of the State of California, and any amendments thereof, each Bidder shall set forth below the name and location of the place of business of each Subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work or improvement to be performed under these specifications in excess of one-half of one percent (0.5%) of the prime Contractor’s total bid or ten thousand dollars ($10,000.00) whichever is greater. The prime Contractor shall list the portion of the work which will be done by such Subcontractor.

If the Contractor fails to specify a Subcontractor for any portion of the work to be performed under the Contract, the Contractor shall be deemed to have agreed to perform such portion itself, and the Contractor shall not be permitted to subcontract that portion of the work except under the conditions allowed by applicable law.

Yes

SUBCONTRACTORS*
You have indicated that you will be using subcontractors for this project. Please download the attached form, complete it, and upload it back here as part of your submittal.

- Subcontracting_Form.pdf

Subcontractors_List.pdf

9. Years of Experience Under Current Business Name*
Please state the number of years for which the Bidder has been engaged in the contracting of business under its current name.

37

10. Years of Similar Experience*
Please state the number of years of experience the Bidder has in work of a nature similar to that noted in this Bid.

37

11. Failure to Complete Work Satisfactorily*
Has the Bidder, as a Contractor, ever failed to satisfactorily complete a Contract awarded to it?

No

12. Completed Contracts*

Provide information for at least three (3) contracts that have been satisfactorily completed by the Bidder in the last three (3) years.

For each contract, provide the following:

- Year
- Type of Work
- Contract Amount
- Owner/Agency for Whom Work Was Performed

See Attached in Additional Information

13. Equipment List*

Provide a list of plant and equipment owned by the Bidder, which is definitely available for use on the proposed work as required.

For each item, please provide:

- Quantity
- Name, Type and Capacity
- Condition
- Location
- A document with the equipment list can also be attached under the "Additional Information" question towards the end of this submittal. Please add “See Attachment in Additional Information” to the Response below.

See Attached in Additional Information

14. Bid Bond*

Please download the below documents, complete, and upload.

- Bid_Bond.pdf

Bid_Bond.pdf

15. IRAN Contracting Affidavit*

Please download the below documents, complete, and upload.

- Iran_Contracting_Act_of_201...

Iran_Contracting_Act_of_2010_Compliance_Affidavit.pdf

16. Non-Collusion Affidavit*

NON-COLLUSION AFFIDAVIT
(Title 23 United States Code Section 112 and
Public Contract Code Section 7106)

To the CITY of RANCHO CORDOVA
DEPARTMENT OF PUBLIC WORKS

The bidder confirms that they are the party making the foregoing bid and declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Confirmed

17. Debarment and Suspension*

The bidder, under penalty of perjury, certifies that he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this, provide an answer of "NO" here and provide clarification in the following question.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility.

NOTE: Providing false information may result in criminal prosecution or administrative sanctions. Your answer here is considered part of your proposal and submittal of proposal shall constitute certification of any statements made here.

No

18. Is the Contractor or any sub-contractors proposing to use any vehicle and/or equipment subject to California Air Resources Board (CARB) In-Use Off-Road Diesel-Fueled Fleets Regulations (§ 2449 General Requirements)?*

Yes

UPLOAD CARB CERTIFICATE OF REPORTED COMPLIANCE*
CARB_-_Truck_&_Bus_Regulation_EXP_12.31.25_-_SNC_Leasing_Company.pdf

CARB_-_Truck_&_Bus_Regulation_EXP_12.31.25_-_SNC.pdf

DOORS_ID_-_Off-Road_Diesel_Vehicle_Regulation_EXP_2.28.26.pdf

Subcontractors_Certificates_&_DIR.pdf

19. Additional Information

For any additional information requested or required by any of your previously provided answers please upload that additional documentation here.

Equipment_Listing.pdf
Experience_Statement.pdf

20. Submittal Confirmation*

The party submitting on behalf of the Company noted on the submittal is authorized to submit on behalf of said Company and has provided any authorization showing such if required by this Bid.

In accordance with the Business and Professions Code, the party submitting does hereby, under Penalty of Perjury, certify that the following contractor's license information is true and correct.

Confirmed

PRICE TABLES

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
1	Mobilization	1	LS	$100,000.00	$100,000.00
2	Traffic Control Plan	1	LS	$105,662.75	$105,662.75
3	Pavement Surface Preparation	35	LM	$5,000.00	$175,000.00

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
4	Grind and Replace AC Repair (4")	8,800	SF	$8.05	$70,840.00
5	Type 1 Slurry Seal - Residential	2,120,000	SF	$0.18	$381,600.00
6	Type 2 Slurry Seal - Residential Collectors	630,000	SF	$0.19	$119,700.00
7	Thermoplastic Striping Median Striping w/ Double Markers: Detail 22	645	LF	$2.05	$1,322.25
8	Thermoplastic Striping Median Striping w/ Single Markers: Detail 26B	285	LF	$1.85	$527.25
9	Thermoplastic Striping Bike Lane Line: Detail 39	13,650	LF	$1.05	$14,332.50
10	Thermoplastic Striping Bike Lane Line Intersection: Detail 39A	1,375	LF	$0.80	$1,100.00
11	Thermoplastic Striping Channelizing Line w/ Markers: Detail 38	980	LF	$2.05	$2,009.00
12	Thermoplastic Striping Channelizing Line: Detail 38A	205	LF	$2.05	$420.25
13	Thermoplastic Striping Lane Line w/ Markers: Detail 9	3,285	LF	$0.80	$2,628.00
14	Thermoplastic Striping Lane Line w/ Markers: Detail 2	830	LF	$0.80	$664.00
15	Thermoplastic Striping Right Edge Line 27B (4-inches)	1,850	LF	$0.80	$1,480.00
16	Thermoplastic Markings	12,200	SF	$10.00	$122,000.00
17	Left Edge Median Pavement Markers: Detail 26A	2,740	LF	$0.40	$1,096.00
18	Blue Raised Pavement Markers	200	EA	$5.75	$1,150.00
19	Rumble Strips	3	EA	$825.00	$2,475.00

[SIERRA NEVADA CONSTRUCTION, INC.] RESPONSE DOCUMENT REPORT
IFB No. TBD
City of Rancho Cordova Surface Treatment Project - Anatolia

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
TOTAL					$1,104,007.00

DESIGNATION OF SUBCONTRACTORS

In compliance with the provisions of Section 4100-4114 of the Public Contracts Code of the State of California, and any amendments thereof, each Bidder shall set forth below the name and location of the place of business of each Subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work or improvement to be performed under these specifications in excess of one-half of one percent (0.5%) of the prime Contractor's total bid or ten thousand dollars ($10,000.00) whichever is greater. The prime Contractor shall list the portion of the work which will be done by such Subcontractor.

If the Contractor fails to specify a Subcontractor for any portion of the work to be performed under the Contract, the Contractor shall be deemed to have agreed to perform such portion itself, and the Contractor shall not be permitted to subcontract that portion of the work except under the conditions allowed by applicable law. Please complete the following form for each Subcontractor:

SUBCONTRACTOR (Name)	SUBCONTRACTOR (Location)	SUBCONTRACTOR (License Number)	SUBCONTRACTOR DIR #	DIR EXPIRATION	PORTION OF WORK	ESTIMATED DOLLAR AMOUNT
Global Road Sealing, Inc.	10641 Sycamore Ave Stanton, CA 90680	757584	1000007714	6/30/25	Crack Treatment	$157,500.00
Central Valley Engineering & Asphalt, Inc.	216 Kenroy Lane Roseville, CA 95678	773404	1000001249	6/30/25	TC (Partial) AC Repair	$76,100.00
Central Striping Service, Inc.	3489 Luyung Drive Rancho Cordova, CA 95742	403896	1000006499	6/30/27	Mob (partial), TC (partial), Removal & Install Striping, markings, markers, & rumble strips	$167,824.00

Sierra Nevada Construction, Inc.
Contractor's Name (Printed)

March 27, 2025
Date

Bidder's Signature

Kevin L. Robertson
Bidder's Name (Printed)

President
Bidder's Title

RANCHO CORDOVA CALIFORNIA

Exhibit A

Accompanying this proposal is Bidder's Bond

(NOTICE: INSERT THE WORDS "CASH ($ _____)," "CASHIER'S CHECK," "CERTIFIED CHECK," OR "BIDDER'S BOND," AS THE CASE MAY BE.)

in amount equal to at least ten percent (10%) of the total of the bid.

The names of all persons interested in the foregoing proposal as principals are as follows:

IMPORTANT NOTICE: *If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing the firm; if bidder or other interested person is an individual, state first and last names in full.*

Sierra Nevada Construction, Inc. - a Nevada corporation

See Attached for listed officers

Licensed in conformance with an act providing for the registration of Contractors.

License No. 593393 Classification(s) A, General Engineering

ADDENDA

This Proposal is submitted with respect to the changes to the contract included in addenda number/s

_____

(Fill in addenda numbers if addenda have been received and insert, in this Proposal, any Engineer's Estimate sheets that were received as part of the addenda.)

By my signature on this proposal I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232 and 10285.1 are true and correct and that the bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this proposal I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112, and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulations, Part 29 Debarment and Suspension Certification are true and correct.

Date: March 27, 2025

Sign Here

Sierra Nevada Construction, Inc.

Kevin L. Robertson, President

Signature and Title of Bidder

Business Address P.O. Box 50760, Sparks, Nevada 89435

Place of Business 2055 East Greg Street, Sparks, Nevada 89431

Place of Residence Reno, Nevada

SNC



SIERRA NEVADA CONSTRUCTION, INC

Mail PO Box 50760
Sparks, NV 89435-0760

Yard 2055 East Greg Street
Sparks, NV 89431

Phone 775.355.0420
Fax 775.355.0535

NV lic. 25565 CA lic. 593393

SIERRA NEVADA CONSTRUCTION, INC.

State of Incorporation – Nevada
Incorporated: 3/2/88

CORPORATE OFFICERS

State of Incorporation – Nevada

NAME	TITLE	BUSINESS ADDRESS	PLACE OF RESIDENCE
Kevin L. Robertson	President	P.O. Box 50760 Sparks, NV 89435-0760 (775) 355-0420	Reno, Nevada
Craig D. Holt	Vice President	P.O. Box 50760 Sparks, NV 89435-0760 (775) 355-0420	Reno, Nevada
Marc T. Markwell	Secretary/Treasurer	P.O. Box 50760 Sparks, NV 89435-0760 (775) 355-0420	Reno, Nevada

Exhibit A

CITY RANCHO CORDOVA - DEPARTMENT OF PUBLIC WORKS

BIDDER'S BOND

We, Sierra Nevada Construction, Inc.

as Principal, and

Liberty Mutual Insurance Company

as Surety are bound unto the City of Rancho Cordova, State of California, hereafter referred to as "Obligee", in the penal sum of ten percent (10%) of the total amount of the bid of the Principal submitted to the Obligee for the work described below, for the payment of which sum we bind ourselves, jointly and severally,

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS, the Principal is submitted to the Obligee, for The work to be performed consists of

furnishing all labor, materials, and equipment surface treatment project in the Anatonia neighborhood of the City of Rancho Cordova and other incidental work to be completed within the limits of work shown on the plans.

(Copy here the exact description of work, including location as it appears on the proposal)

for which bids are to be opened at City of Rancho Cordova, CA on March 27, 2025

(Insert place where bids will be opened) *(Insert date of bid opening)*

NOW, THEREFORE, if the Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in conformance with the bid, and files two bonds with the Obligee, one to guarantee faithful performance of the contract and the other to guarantee payment for labor and materials as provided by law, then this obligation shall be null and void; otherwise, it shall remain in full force.

In the event a suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

Dated: March 10, 2025.

Sierra Nevada Construction, Inc.

2055 East Greg Street, Sparks, NV 89431

Kevin L. Robertson, *Principal* President

Liberty Mutual Insurance Company

Surety

By *Attorney-in-fact* Andrea Cantlon, Attorney-In-Fact

Exhibit A

CERTIFICATE OF ACKNOWLEDGEMENT

State of ~~California~~ Nevada, City ~~Rancho Cordova~~ Reno

On this 10th day of Mrach in the year 2025 before me Shelly Demaray, personally appeared Andrea Cantlon, personally known to me (or to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument as the attorney-in-fact of Liberty Mutual Insurance Company, and acknowledged to me that he (she) subscribed the name of the said company thereto as surety, and his (her) own name as attorney-in-fact.

Attorney-in-fact

(SEAL)

Shelly Demaray

Notary Public

SHELLY DEMARAY
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 22-8289-02 - Expires January 10, 2026

STATE OF Nevada]

COUNTY OF Washoe

On 03/27/25, before me, Darcia A. Carpenter
(here insert name of notary),

personally appeared Kevin L. Robertson
(name(s) of Signer(s))

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Darcia A. Carpent (SEAL)

DARCIA A. CARPENTER
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 96-3487-2 - Expires Aug 1, 2027

This area for Official Notarial Seal

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

☐ INDIVIDUAL
☐ CORPORATE OFFICER
_____
TITLE(S)
☐ PARTNER(S) ☐ LIMITED ☐ GENERAL
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER: _____

SIGNER IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES)

DESCRIPTION OF ATTACHED DOCUMENT

_____
TITLE OF TYPE OF DOCUMENT

_____
NUMBER OF PAGES

_____
DATE OF DOCUMENT

_____
SIGNER(S) OTHER THAN NAMED ABOVE

ID-1232 (REV. 5/09)

ALL-PURPOSE ACKNOWLEDGEMENT

Exhibit A

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8207614-976312**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Andrea Cantlon, Carey Morgan, Dena VanDeVanter, Nicholas D. Rossi, Patricia Owen, Shelly Demaray, Teri L. Nowak, Teri L. Wood

all of the city of Reno state of NV each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of April, 2022.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 8th day of April, 2022 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed the seals of said Companies this 10th day of March, 2025.

By: _____
Renee C. Llewellyn, Assistant Secretary

LMS-12873 LMIC OCIC WAIC Multi Co 02/21

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

Exhibit A

IRAN CONTRACTING ACT OF 2010 COMPLIANCE AFFIDAVIT

(California Public Contract Code Sections 2200-2208)

The California Legislature adopted the Iran Contracting Act of 2010 to respond to policies of Iran in a uniform fashion (PCC § 2201(q)). The Iran Contracting Act prohibits bidders engaged in investment activities in Iran from bidding on, submitting proposals for, or entering into or renewing contracts with public entities for goods and services of one million dollars ($1,000,000) or more (PCC § 2203(a)). A bidder who "engages in investment activities in Iran" is defined as either:

1. A bidder providing goods or services of twenty million dollars ($20,000,000) or more in the energy sector of Iran, including provision of oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; **or**
2. A bidder that is a financial institution (as that term is defined in 50 U.S.C. § 1701) that extends twenty million dollars ($20,000,000) or more in credit to another person, for 45 days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created by the California Department of General Services (DGS) pursuant to PCC § 2203(b) as a person engaging in the investment activities in Iran.

The bidder shall certify that at the time of submitting a bid for new contract or renewal of an existing contract, the bidder is **not** identified on the DGS list of ineligible businesses or persons and that the bidder is **not** engaged in investment activities in Iran in violation of the Iran Contracting Act of 2010.

California law establishes penalties for providing false certifications, including civil penalties equal to the greater of $250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts (PCC § 2205).

To comply with the Iran Contracting Act of 2010, the bidder shall provide its vendor or financial institution name, and City Business Tax Registration Certificate (BRTC) if available, in completing **ONE** of the options shown below.

OPTION #1: CERTIFICATION

I, the official named below, certify that I am duly authorized to execute this certification on behalf of the bidder or financial institution identified below, and that the bidder or financial institution identified below is **not** on the current DGS list of persons engaged in investment activities in Iran and is **not** a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person or vendor, for 45 days or more, if that other person or vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current DSG list of persons engaged in investment activities in Iran.

Vendor Name/Financial Institution (printed)		*BTRC (or n/a)*
Sierra Nevada Construction, Inc.		1659922
By (Authorized Signature)		
Print Name and Title of Person Signing		
Kevin L. Robertson, President		
Date Executed	*City Approval (Signature)*	*(Print Name)*
3/27/25		

OPTION #2: EXEMPTION

Pursuant to PCC § 2203(c) and (d), a public entity may permit a bidder or financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enter into, or renew, a contract for goods and services. If the bidder or financial institution identified below has obtained an exemption from the certification requirement under the Iran Contracting Act of 2010, the bidder or financial institution shall complete and sign below and attach documentation demonstrating the exemption approval.

Vendor Name/Financial Institution (printed)		*BTRC (or n/a)*
By (Authorized Signature)		
Print Name and Title of Person Signing		
Date Executed	*City Approval (Signature)*	*(Print Name)*

Exhibit A



CALIFORNIA
AIR RESOURCES BOARD

Certificate of Reported Compliance With:

Truck and Bus Regulation

Issued to: SNC Leasing Company, LLC.

This certificate confirms that the fleet owner has attested under penalty of perjury that the statements and information they provided to the California Air Resources Board (CARB) are true, accurate, and complete regarding all relevant vehicles in the fleet required to show compliance. CARB hereby finds that the fleet listed has reported compliance with:

Title 13 CCR 2025 (Truck and Bus Regulation)

If CARB subsequently finds that the statements and information that have been provided are not true, accurate, and complete, this certificate shall be effectively revoked and the fleet subject to noncompliance penalties.

This certificate is valid until December 31, 2025

Printed on 2025-01-29

51 Vehicles

TRUCRS Fleet Identification

35205

Jack Kitowski
Division Chief, Mobile Source Control
Division California Air Resources Board

To verify the authenticity of this certificate, visit
www.arb.ca.gov/msprog/onrdiesel/tblookup.php

Exhibit A



CALIFORNIA
AIR RESOURCES BOARD

Certificate of Reported Compliance With:

Truck and Bus Regulation

Issued to: Sierra Nevada Construction Inc.

This certificate confirms that the fleet owner has attested under penalty of perjury that the statements and information they provided to the California Air Resources Board (CARB) are true, accurate, and complete regarding all relevant vehicles in the fleet required to show compliance. CARB hereby finds that the fleet listed has reported compliance with:

Title 13 CCR 2025 (Truck and Bus Regulation)

If CARB subsequently finds that the statements and information that have been provided are not true, accurate, and complete, this certificate shall be effectively revoked and the fleet subject to noncompliance penalties.

This certificate is valid until December 31, 2025

Printed on 2025-01-29

30 Vehicles

TRUCRS Fleet Identification

35196

Jack Kitowski

Jack Kitowski
Division Chief, Mobile Source Control
Division California Air Resources Board

To verify the authenticity of this certificate, visit
www.arb.ca.gov/msprog/onrdiesel/tblookup.php

California Environmental Protection Agency

Air Resources Board

January 1, 2025

CERTIFICATE OF REPORTED COMPLIANCE
OFF-ROAD DIESEL VEHICLE REGULATION

is issued to

SIERRA NEVADA CONSTRUCTION, INC.

This certificate indicates that the fleet listed above has reported off-road diesel vehicles to the California Air Resources Board and has certified they are in compliance with title 13 CCR, section 2449. All applicable vehicles owned by the individual, company, or agency must be reported and labeled, as specified in Section 2449, with all possible completeness, else this certificate is null and void. **Certificate expires 2/28/2026**

Jack Kitowski
Chief, Mobile Source Control Division
California Air Resources Board

Off-road Diesel Fleet Identification

1877

To verify the authenticity of this certificate, enter this number at
http://www.arb.ca.gov/doors/compliance_cert1.html



California Environmental Protection Agency

Air Resources Board

January 1, 2025

CERTIFICATE OF REPORTED COMPLIANCE
OFF-ROAD DIESEL VEHICLE REGULATION

is issued to

CENTRAL VALLEY ENGINEERING & ASPHALT, INC

This certificate indicates that the fleet listed above has reported off-road diesel vehicles to the California Air Resources Board and has certified they are in compliance with title 13 CCR, section 2449. All applicable vehicles owned by the individual, company, or agency must be reported and labeled, as specified in Section 2449, with all possible completeness, else this certificate is null and void. **Certificate expires 2/28/2026**

Jack Kitowski
Chief, Mobile Source Control Division
California Air Resources Board

Off-road Diesel Fleet Identification

7535

To verify the authenticity of this certificate, enter this number at
http://www.arb.ca.gov/doors/compliance_cert1.html



California Environmental Protection Agency

Air Resources Board

January 1, 2025

CERTIFICATE OF REPORTED COMPLIANCE
OFF-ROAD DIESEL VEHICLE REGULATION

is issued to

GLOBAL ROAD SEALING, INC.

***No vehicles reported.|**

This certificate indicates that the fleet listed above has reported off-road diesel vehicles to the California Air Resources Board and has certified they are in compliance with title 13 CCR, section 2449. All applicable vehicles owned by the individual, company, or agency must be reported and labeled, as specified in Section 2449, with all possible completeness, else this certificate is null and void. **Certificate expires 2/28/2026**

Jack Kitowski
Chief, Mobile Source Control Division
California Air Resources Board

Off-road Diesel Fleet Identification

237609

To verify the authenticity of this certificate, enter this number at
http://www.arb.ca.gov/doors/compliance_cert1.html



California Environmental Protection Agency

Air Resources Board

January 1, 2025

CERTIFICATE OF REPORTED COMPLIANCE
OFF-ROAD DIESEL VEHICLE REGULATION

is issued to

CENTRAL STRIPING SERVICE, INC.

This certificate indicates that the fleet listed above has reported off-road diesel vehicles to the California Air Resources Board and has certified they are in compliance with title 13 CCR, section 2449. All applicable vehicles owned by the individual, company, or agency must be reported and labeled, as specified in Section 2449, with all possible completeness, else this certificate is null and void. **Certificate expires 2/28/2026**

Jack Kitowski
Chief, Mobile Source Control Division
California Air Resources Board

Off-road Diesel Fleet Identification

5975

To verify the authenticity of this certificate, enter this number at
http://www.arb.ca.gov/doors/compliance_cert1.html

CA

DIR State of California Department of Industrial Relations EST. 1927

eCPR Public Search Log in

Public Works Support

Contractors

Projects

Register

Home > Customer Account Lookup > GLOBAL ROAD SEALING, INC.; GRSI

GLOBAL ROAD SEALING, INC.; GRSI

Customer Account Lookup

Name

GLOBAL ROAD SEALING, INC.; GRSI

Customer Account

GLOBAL ROAD SEALING, INC.; GRSI

Type

Contractor

Website

(empty)

Exhibit A

Email

grs@globalroadsealing.com

Address 1

10641 Sycamore Ave

Address_2

City

Stanton

State

CA

Zip

90680

Contractor Status

DIR Approved

CSLB

757584

Legal Name

GLOBAL ROAD SEALING, INC.

Business Structure

-- None --

Business Phone

7148930845

Registration Number

President

Tri La

PWCR

1000007714

Registration Start Date

2022-07-01

Registration End Date

2025-06-30

Doing Business As (DBA)

GRSI; GLOBAL ROAD SEALING, INC.

Crafts

Laborer and Related Classifications | Electrician

Legacy Registration Date

2022-07-01

Legacy Registration Expiration

2025-06-30

Related Lists

Historical Registration Dates (1)

Terms & Conditions

Privacy Policy

Disclaimer

Nondiscrimination Notice

Accessibility

Copyright 2024 State of California

Exhibit A

CA

State of California Department of Industrial Relations

eCPR Public Search Log in

Public Works Support

Contractors

Projects

Register

Home > Customer Account Lookup > Central Valley Engineering & Asphalt, In

Central Valley Engineering & Asphalt, In

Customer Account Lookup

Name

Central Valley Engineering & Asphalt, In

Customer Account

Type

Contractor

Website

(empty)

Email

jake@cenvalley.com

Address 1

216 KENROY LANE

Address_2

City

ROSEVILLE

State

CA

Zip

95678

Contractor Status

DIR Approved

CSLB

Legal Name

CENTRAL VALLEY ENGINEERING & ASPHALT, IN

Business Structure

-- None --

Business Phone

9167911609

Registration Number

President

Warren Holt

PWCR

10000012490

Registration Start Date

2022-07-01

Registration End Date

2025-06-30

Doing Business As (DBA)

Crafts

Operating Engineer (Heavy and Highway Work) | Laborer and Related Classifications | Cement Mason

Legacy Registration Date

Legacy Registration Expiration

Related Lists

Historical Registration Dates (1)

Terms & Conditions

Privacy Policy

Disclaimer

Nondiscrimination Notice

Copyright 2024 State of California

Exhibit A

Associated Accounts

Welcome, Sande Walker

CENTRAL STRIPING SERVICE INC 1000006499

DIR Approved

Registration valid from 2024-07-09 to 2027-06-30

Manage Contractor Employees Manage Contractor Users Manage Contractor Information Re

Exhibit A

CA

DIR EST. 1927 State of California Department of Industrial Relations

eCPR Public Search

Public Works Support

Contractors

Projects

Services

Your information

MS

MS Melanie Steelman

Logout

Home > Customer Account Lookup > CENTRAL STRIPING SERVICE INC

Search

CENTRAL STRIPING SERVICE INC

Customer Account Lookup

Name

CENTRAL STRIPING SERVICE INC

Customer Account

CENTRAL STRIPING SERVICE INC

Type

Contractor

Website

(empty)

Email

geri@centralstriping.biz

Address 1

3489 LUYUNG DRIVE

Address_2

City

RANCHO CORDOVA

State

CA

Zip

95742

Contractor Status

Pending

CSLB

403896

Legal Name

CENTRAL STRIPING SERVICE INC

Business Structure

-- None --

Exhibit A

Business Phone

9166355175

Registration Number

C0923228

President

Geraldine Lesniewski

PWCR

1000006499

Registration Start Date

Registration End Date

Doing Business As (DBA)

CENTRAL STRIPING SERVICE INC

Crafts

Legacy Registration Date

2022-07-01

Legacy Registration Expiration

2024-06-30

Related Lists

Historical Registration Dates (1)

Terms & Conditions

SIERRA NEVADA CONSTRUCTION, INC

Equipment Listing

EQ NUMBER	DESCRIPTION	CONDITION	LOCATION
MOTOR GRADERS			
BL9754	14 CAT 14M MOTOR GRADER W/ GPS	Good	Norther NV/Northern CA
BL9755	14 CAT 140M MOTOR GRADER	Good	Norther NV/Northern CA
BL9926	17 CAT 14M MOTOR GRADER W/ GPS	Good	Norther NV/Northern CA
DOZERS			
DZ7736	21 KOMATSU D61 DOZER	Good	Norther NV/Northern CA
DZ7781	20 KOMATSU D6PXI-24 DOZER	Good	Norther NV/Northern CA
DZ8063	23 CAT D5 DOZER	Good	Norther NV/Northern CA
EXCAVATORS			
EX7701	20 JD 245G 54K EX W/ GPS	Good	Norther NV/Northern CA
EX7726	21 JD 85G EXCAVATOR	Good	Norther NV/Northern CA
EX7729	21 CAT 310 EXCAVATOR	Good	Norther NV/Northern CA
EX7730	21 JD 50G EXCAVATOR	Good	Norther NV/Northern CA
EX7733	21 JD 210 EXCAVATOR W/ GPS	Good	Norther NV/Northern CA
EX7746	21 KOM PC490 EXCAVATOR W/ GPS	Good	Norther NV/Northern CA
EX7747	21 KOM PC210 EXCAVATOR W/ GPS	Good	Norther NV/Northern CA
EX7759	22 JD 85G EXCAVATOR	Good	Norther NV/Northern CA
EX7767	22 JD 85G EXCAVATOR	Good	Norther NV/Northern CA
EX8028	22 KOM PC360 80K EXCAVATOR	Good	Norther NV/Northern CA
EX8029	22 KOM PC210 50K EX W/ GPS	Good	Norther NV/Northern CA
EX9782	16 JD 135GLC 33K EXCAVATOR	Good	Norther NV/Northern CA
EX9824	16 JD 50G 11K EXCAVATOR	Good	Norther NV/Northern CA
EX9833	17 JD 75 18K EXCAVATOR	Good	Norther NV/Northern CA
EX9864	18 JD 350 77K EXCAVATOR	Good	Norther NV/Northern CA
EX9865	18 JD 210G 53K EX W/ GPS	Good	Norther NV/Northern CA
EX9867	18 LINKBELT 75X 18K EXCAVATOR	Good	Norther NV/Northern CA
EX9893	14 BOBCAT E50 MINI EX	Good	Norther NV/Northern CA
EX9947	19 CAT 323F 54K EXC W/ GPS	Good	Norther NV/Northern CA
EX9948	19 CAT 325F 57K EX W/ GPS	Good	Norther NV/Northern CA
EX9951	19 CAT 349F 110K EXC W/ GPS	Good	Norther NV/Northern CA
EX9965	19 LINK-BELT 75X3 OFF SET EXC	Good	Norther NV/Northern CA
LOADERS			
LD7707	20 JD 544L WHEEL LOADER	Good	Norther NV/Northern CA

LD7708	20 JD 544L WHEEL LD W/ FORKS	Good	Norther NV/Northern CA
LD7727	21 JD 544P LOADER	Good	Norther NV/Northern CA
LD7734	21 JD 333G COMPACT LOADER	Good	Norther NV/Northern CA
LD7762	21 JD 210L SKIP LOADER	Good	Norther NV/Northern CA
LD7763	21 JD 210L SKIP LOADER	Good	Norther NV/Northern CA
LD7778	19 JD 410L BACKHOE	Good	Norther NV/Northern CA
LD8030	22 JD 544P WHEEL LD W/FORKS	Good	Norther NV/Northern CA
LD8031	22 JD 624P WHEEL LOADER W/FORK	Good	Norther NV/Northern CA
LD8032	22 JD 744L WHEEL LD W/FORKS	Good	Norther NV/Northern CA
LD8033	22 JD 544P WHEEL LD W/FORKS	Good	Norther NV/Northern CA
LD8070	JOHN DEERE 210P TRACTOR LOADER	Good	Norther NV/Northern CA
LD8091	24 JD 544P WHEEL LOADER	Good	Norther NV/Northern CA
LD8092	24 JD 544P WHEEL LOADER	Good	Norther NV/Northern CA
LD8095	24 JD 210P TRACTOR LOADER	Good	Norther NV/Northern CA
LD8129	24 JD 644G LOADER	Good	Norther NV/Northern CA
LD8130	24 JD 644G LOADER	Good	Norther NV/Northern CA
LD8171	24 CAT 907-14HFCA - EMPIRE	Good	Norther NV/Northern CA
LD9042	79 CLARK 45 WHEEL LOADER	Good	Norther NV/Northern CA
LD9822	17 JD 210LEP SKIP LOADER	Good	Norther NV/Northern CA
LD9823	17 JD 624K-II WHEEL LOADER	Good	Norther NV/Northern CA
LD9858	18 JD 544 W/ FORKS	Good	Norther NV/Northern CA
LD9940	17 BOBCAT T450 SKIDSTEER	Good	Norther NV/Northern CA
LD9949	19 CAT 950GC W/ FORKS	Good	Norther NV/Northern CA
LD9959	19 JD 624L WHEEL LOADER	Good	Norther NV/Northern CA
LD9969	19 CAT 950GC LOADER W/ FORKS	Good	Norther NV/Northern CA
LD9972	19 JD 624L WHEEL LD W/ FORKS	Good	Norther NV/Northern CA
LD9973	19 JD 210 SKIP LOADER	Good	Norther NV/Northern CA
LD9974	19 JD 210 SKIP LOADER	Good	Norther NV/Northern CA

MISC. EQUIPMENT

MS7719	21 WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS7725	21 KUBOTA RTV-X1140W-H	Good	Norther NV/Northern CA
MS7731	21 ALLEN TRIPLE ROLLER SCREED	Good	Norther NV/Northern CA
MS7743	21 SULLIVAN D185 AIR COMPRESSO	Good	Norther NV/Northern CA
MS7744	21 SCHIBECCI PP450/600 POLYPLA	Good	Norther NV/Northern CA
MS7749	19 SKYJACK 5K REACH FORKLIFT	Good	Norther NV/Northern CA
MS7750	21 KUBOTA RTV-X1140W-H	Good	Norther NV/Northern CA
MS7751	WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS7752	WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS7753	WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS7754	WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS7755	WANCO SPEED TRAILER	Good	Norther NV/Northern CA
MS7756	WANCO SPEED TRAILER	Good	Norther NV/Northern CA
MS7757	WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS7758	WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS7760	22 HIPER VR BASE & ROVER	Good	Norther NV/Northern CA

MS7761	22 DATA COLLECTOR	Good	Norther NV/Northern CA
MS7764	21 KUBOTA RTV-X1140W-H	Good	Norther NV/Northern CA
MS7768	22 SULLIVAN AIR COMPRESSOR	Good	Norther NV/Northern CA
MS7774	10 THOMAS SCREEN 400	Good	Norther NV/Northern CA
MS7775	22 SULLIVAN AIR COMPRESSOR	Good	Norther NV/Northern CA
MS7791	22 WANCO LIGHT PLANT	Good	Norther NV/Northern CA
MS7792	22 WANCO LIGHT PLANT	Good	Norther NV/Northern CA
MS7794	18 KLEIN TR MOUNTED H2O PUMP	Good	Norther NV/Northern CA
MS7798	25KV TR MOUNT GENERATOR - CASH	Good	Norther NV/Northern CA
MS8002	22 WANCO WTSP ARROW BOARD	Good	Norther NV/Northern CA
MS8005	22 WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS8006	22 WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS8036	23 HIPER VR BASE & ROVER	Good	Norther NV/Northern CA
MS8038	SCHIBECI HEAD	Good	Norther NV/Northern CA
MS8039	SCHIBECI HEAD	Good	Norther NV/Northern CA
MS8042	MQ GBX24B LIGHT TOWER	Good	Norther NV/Northern CA
MS8043	MQ GBX24B LIGHT TOWER	Good	Norther NV/Northern CA
MS8048	22 WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS8054	23 SCHIBECI PP600 HEAD	Good	Norther NV/Northern CA
MS8058	16 ATLAS AIR COMPRESSOR	Good	Norther NV/Northern CA
MS8061	16 SKYTRAK EXTEND BOOM FORKLFT	Good	Norther NV/Northern CA
MS8062	17 DOOSAN AIR COMPRESSOR	Good	Norther NV/Northern CA
MS8068	WANCO WVTM MESSAGE BOARD	Good	Norther NV/Northern CA
MS8069	WANCO WVTM MESSAGE BOARD	Good	Norther NV/Northern CA
MS8071	23 CONEQTEC HS57 MANHOLE CUTTE	Good	Norther NV/Northern CA
MS8074	24 HIPER VR BASE & ROVER	Good	Norther NV/Northern CA
MS8096	16 DOOSAN AIR COMPRESSOR	Good	Norther NV/Northern CA
MS8098	24 HIPER RECEIVER HR MESA 2	Good	Norther NV/Northern CA
MS8099	24 HIPER RECEIVER HR MESA 2	Good	Norther NV/Northern CA
MS8107	21 MULTIQUIP POWERBUGGY WBH-16	Good	Norther NV/Northern CA
MS8109	24 MQ GBX LIGHT TOWER	Good	Norther NV/Northern CA
MS8110	24 MQ GBX LIGHT TOWER	Good	Norther NV/Northern CA
MS8111	24 MULTIQUIP WBH-16EF BUGGY	Good	Norther NV/Northern CA
MS8112	24 MULTIQUIP WBH-16EF BUGGY	Good	Norther NV/Northern CA
MS8116	24 WANCO WTS ARROW BOARD	Good	Norther NV/Northern CA
MS8117	24 WANCO WTS ARROW BOARD	Good	Norther NV/Northern CA
MS8118	24 WANCO WLTT LIGHT TOWER	Good	Norther NV/Northern CA
MS8119	24 WANCO WVTM MESSAGE BOARD	Good	Norther NV/Northern CA
MS8120	24 WANCO WVTM MESSAGE BOARD	Good	Norther NV/Northern CA
MS8121	24 WANCO WSDT3 SPEED TRAILER	Good	Norther NV/Northern CA
MS8122	24 WANCO WSDT3 SPEED TRAILER	Good	Norther NV/Northern CA
MS8123	24 HIPER VR BASE & ROVER	Good	Norther NV/Northern CA
MS8134	HIPER VR	Good	Norther NV/Northern CA
MS8135	HIPER VR BASE & ROVER	Good	Norther NV/Northern CA
MS8136	HIPER DATA COLLECTOR	Good	Norther NV/Northern CA
MS8137	TRIMBLE BASE & ROVER R750	Good	Norther NV/Northern CA
MS8138	BASE & ROVER X2 GR5	Good	Norther NV/Northern CA

MS8139	HIPER FC-5000 DATA COLLECT	Good	Norther NV/Northern CA
MS8140	HIPER BASE AND ROVER	Good	Norther NV/Northern CA
MS8141	TRIMBLE BASE	Good	Norther NV/Northern CA
MS8142	HIPER V BASE & ROVER	Good	Norther NV/Northern CA
MS8143	HIPER VR BASE & ROVER	Good	Norther NV/Northern CA
MS8144	HIPER V BASE AND ROVER	Good	Norther NV/Northern CA
MS8145	HIPER FC-5000 DATA COLLECTOR	Good	Norther NV/Northern CA
MS8146	HIPER FC-5000 DATA COLLECTOR	Good	Norther NV/Northern CA
MS8147	HIPER FC-5000 DATA COLLECTOR	Good	Norther NV/Northern CA
MS8148	HIPER FC-5000 DATA COLLECTOR	Good	Norther NV/Northern CA
MS8149	HIPER V BASE AND ROVER	Good	Norther NV/Northern CA
MS8150	CONTROL BOX GX-55AM	Good	Norther NV/Northern CA
MS8151	CONTROL BOX GX-55AM	Good	Norther NV/Northern CA
MS8152	CONTROL BOX GX-55AM	Good	Norther NV/Northern CA
MS8153	CONTROL BOX GX-55AM	Good	Norther NV/Northern CA
MS8154	CONTROL BOX GX-60AM	Good	Norther NV/Northern CA
MS8155	TRACKER JACKS	Good	Norther NV/Northern CA
MS8156	TRACKER JACKS	Good	Norther NV/Northern CA
MS8157	HIPER FC DATA COLLECTOR	Good	Norther NV/Northern CA
MS8158	DATA TABLET	Good	Norther NV/Northern CA
MS8159	TOPCON MCR3	Good	Norther NV/Northern CA
MS8160	TOPCON MCR3	Good	Norther NV/Northern CA
MS8161	24 WIRTGEN W6ORI 24" GRINDER	Good	Norther NV/Northern CA
MS8162	17 SULLAIR 185DPQ-KU-T3	Good	Norther NV/Northern CA
MS8163	20 TOPCON GX-55 CONTROL BOX	Good	Norther NV/Northern CA
MS8164	WANCO WTSP55-LSAC ARROW BOARD	Good	Norther NV/Northern CA
MS8165	WANCO WTSP55-LSAC ARROW BOARD	Good	Norther NV/Northern CA
MS8166	TOPCON HR RECEIVER AND FC6400	Good	Norther NV/Northern CA
MS8167	24 VALEW WATER TOWER	Good	Norther NV/Northern CA
MS8169	TRIMBLE SX12 & TSC7 ROB TS	Good	Norther NV/Northern CA
MS8170	????????? T7 FC6000	Good	Norther NV/Northern CA
MS8172	25 TOPCON FC-6400	Good	Norther NV/Northern CA
MS8173	TRIMBLE VX DR	Good	Norther NV/Northern CA
MS8174	TRIMBLE TSC7 DATA COLLECTOR	Good	Norther NV/Northern CA
MS8175	23 SC BASE AND ROVER	Good	Norther NV/Northern CA
MS8176	23 TOPCON FC6000 DATA COLLECT	Good	Norther NV/Northern CA
MS8179	25 TOPCON GX-55 CONTROL BOX	Good	Norther NV/Northern CA
MS8180	25 TRIMBLE DOZER KIT	Good	Norther NV/Northern CA
MS9052	MILLER AC DIKE MACHINE	Good	Norther NV/Northern CA
MS9099	98 HIWAY SAND SPREADER	Good	Norther NV/Northern CA
MS9253	04 MEGA MPT12 12k GAL	Good	Norther NV/Northern CA
MS9264	04 CARDINAL 70 FT YARD SCALE	Good	Norther NV/Northern CA
MS9334	CONEX STORAGE CONTAINER	Good	Norther NV/Northern CA
MS9335	04 GENCOR STORAGE TANKS	Good	Norther NV/Northern CA
MS9400	3,000 GALLON MOTOR OIL TANK	Good	Norther NV/Northern CA
MS9401	8,000 GALLON FUEL TANK	Good	Norther NV/Northern CA
MS9402	6,000 GALLON FUEL TANK	Good	Norther NV/Northern CA

MS9403	30,000 GALLON FUEL TANK	Good	Norther NV/Northern CA
MS9404	4,000 GALLON USED OIL TANK	Good	Norther NV/Northern CA
MS9415	07 ARROW BOARD	Good	Norther NV/Northern CA
MS9468	07 PUMPMASTER	Good	Norther NV/Northern CA
MS9528	07 SULLIVAN 185 COMPRESSOR	Good	Norther NV/Northern CA
MS9534	08 SWEEPSTER JD624 BRM ATTACH	Good	Norther NV/Northern CA
MS9535	40 ' STORAGE CONTAINERS	Good	Norther NV/Northern CA
MS9550	06 J WATER STAND	Good	Norther NV/Northern CA
MS9551	06 J WATER STAND	Good	Norther NV/Northern CA
MS9579	06 ALLMAND LIGHT TOWER	Good	Norther NV/Northern CA
MS9581	07 WANCO MINI MESSAGE BOARD	Good	Norther NV/Northern CA
MS9582	08 WANCO MINI MESSAGE BOARD	Good	Norther NV/Northern CA
MS9583	09 WANCO MINI MESSAGE BOARD	Good	Norther NV/Northern CA
MS9584	10 WANCO MINI MESSAGE BOARD	Good	Norther NV/Northern CA
MS9638	04 WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS9684	10 ATLASCOPCO 185 AIR COMP	Good	Norther NV/Northern CA
MS9723	15 SWEEPSTER JD624 BRM ATTACH	Good	Norther NV/Northern CA
MS9735	14 SULLIVAN COMPRESSOR	Good	Norther NV/Northern CA
MS9768	SWEEPSTER JD624 BROOM	Good	Norther NV/Northern CA
MS9794	WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS9795	WANCO ARROW BOARD	Good	Norther NV/Northern CA
MS9806	KUBOTA 4X4 UTV	Good	Norther NV/Northern CA
MS9816	MAGNUM PRO LIGHT TOWER	Good	Norther NV/Northern CA
MS9817	MAGNUM PRO LIGHT TOWER	Good	Norther NV/Northern CA
MS9870	SCHIBECI GRINDER HEAD	Good	Norther NV/Northern CA
MS9872	WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS9875	18 SWEEPSTER JD624 BRM ATTACH	Good	Norther NV/Northern CA
MS9889	00 CURB TECH GLUE DOWN MACHINE	Good	Norther NV/Northern CA
MS9892	04 SULLAIR 185 AIR COMPRESSOR	Good	Norther NV/Northern CA
MS9894	04 GOMACO 3600 CURB MACHINE	Good	Norther NV/Northern CA
MS9897	06 MILLER CURB MACHINE	Good	Norther NV/Northern CA
MS9930	KUBOTA 4X4 UTV	Good	Norther NV/Northern CA
MS9946	18 CAT 4X4 UTV	Good	Norther NV/Northern CA
MS9963	19 WANCO WTSP MESSAGE BOARD	Good	Norther NV/Northern CA
MS9970	19 KUBOTA 4X4 UTV CREW	Good	Norther NV/Northern CA
MS9971	19 KUBOTA 4X4 UTV CREW	Good	Norther NV/Northern CA
MS9976	99 KOMATSU FG25T LP FORKLIFT	Good	Norther NV/Northern CA
MS9981	19 WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS9982	19 WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS9983	19 WANCO MESSAGE BOARD	Good	Norther NV/Northern CA
MS9984	19 WANCO MESSAGE BOARD	Good	Norther NV/Northern CA

PAVING

PV7741	22 CAT AP1000F WHEEL AC PAVER	Good	Norther NV/Northern CA
PV7742	22 BOMAG 1030 RUBBER TIRE PV	Good	Norther NV/Northern CA
PV8035	23 BEARCAT CHIP SPREADER	Good	Norther NV/Northern CA

PV8170	2025 BOMAG CR820T PAVER	Good	Norther NV/Northern CA
PV9545	08 ROADTEC FLOW HOPPER INSERT	Good	Norther NV/Northern CA
PV9574	11 BEARCAT CHIP SPREADER	Good	Norther NV/Northern CA
PV9802	17 CEDARRAPIDS MS2 PICKUP	Good	Norther NV/Northern CA
PV9863	18 CEDARAPIDS CR362 PAVER	Good	Norther NV/Northern CA
PV9964	19 CEDARAPIDS MS2 PICKUP	Good	Norther NV/Northern CA

ROLLER

RL7739	19 CAT CW16 ROLLER PNEUMATIC	Good	Norther NV/Northern CA
RL8018	14 DYNAPAC CC800 36" ROLLER	Good	Norther NV/Northern CA
RL8060	23 CAT CB2.7 ROLLER	Good	Norther NV/Northern CA
RL8168	24 BOMAG BW80AD - KOMATSU	Good	Norther NV/Northern CA
RL9155	99 CAT CB335 COMBI ROLLER	Good	Norther NV/Northern CA
RL9566	08 VOLVO PT240 PNEU AC ROLLER	Good	Norther NV/Northern CA
RL9576	07 CAT CB334E 54" DD AC ROLLER	Good	Norther NV/Northern CA
RL9620	11 CAT PS150C PNEU AC ROLLER	Good	Norther NV/Northern CA
RL9646	12 CAT PS150C PNEU AC ROLLER	Good	Norther NV/Northern CA
RL9647	12 VOLVO PT125 PNEU AC ROLLER	Good	Norther NV/Northern CA
RL9708	08 CNR CT48S 48" SD DIRT RL	Good	Norther NV/Northern CA
RL9732	15 CAT CB54 79" DD AC ROLLER	Good	Norther NV/Northern CA
RL9778	12 CAT CS56B 84" SD DIRT RL	Good	Norther NV/Northern CA
RL9844	15 CAT CW14 PNEU AC ROLLER	Good	Norther NV/Northern CA
RL9845	12 CAT CS56B 84" SD DIRT RL	Good	Norther NV/Northern CA
RL9868	15 CAT CB54XW 79" DD AC ROLLER	Good	Norther NV/Northern CA
RL9869	15 CAT CS56 84" SD DIRT ROLLER	Good	Norther NV/Northern CA
RL9954	19 CAT CS56B 84" SD RL	Good	Norther NV/Northern CA
RL9955	19 CAT CB24 47" DD AC ROLLER	Good	Norther NV/Northern CA
RL9960	19 CAT CB24 47" DD AC ROLLER	Good	Norther NV/Northern CA
RL9968	19 CNR CT48S 48" SD DIRT RL	Good	Norther NV/Northern CA
RL9998	20 CAT CB24 47" DD AC ROLLER	Good	Norther NV/Northern CA
RL9999	20 CAT 47" CB24B DD AC ROLLER	Good	Norther NV/Northern CA

TRUCKS

TK7703	05 FORD F650 DUMP TRUCK	Good	Norther NV/Northern CA
TK7710	21 INTL MV607 TRUCK - SWEEPER	Good	Norther NV/Northern CA
TK7711	21 CHEVY 2500 4X4 PICKUP	Good	Norther NV/Northern CA
TK7712	20 CHEVY 5500 PAINT TRUCK	Good	Norther NV/Northern CA
TK7717	21 GMC 2500 CREW CAB	Good	Norther NV/Northern CA
TK7720	21 IH 4500 DIESEL 4X2 FLAT	Good	Norther NV/Northern CA
TK7721	21 IH 4500 DIESEL 4X2 FLAT	Good	Norther NV/Northern CA
TK7722	22 PB 567 SUPER TEN DUMP TRUCK	Good	Norther NV/Northern CA
TK7723	21 CHEVY 2500 DOUBLE CAB	Good	Norther NV/Northern CA
TK7724	21 GMC 2500 CREW CAB	Good	Norther NV/Northern CA
TK7732	21 CHEVY 2500 CAB PICKUP	Good	Norther NV/Northern CA
TK7735	21 PETERBILT MECHANIC'S TRUCK	Good	Norther NV/Northern CA

TK7737	21 PETERBILT MECHANIC'S TRUCK	Good	Norther NV/Northern CA
TK7738	21 PETERBILT MECHANIC'S TRUCK	Good	Norther NV/Northern CA
TK7740	22 KW T880 ROADSAVER IIIG	Good	Norther NV/Northern CA
TK7765	22 GMC SIERRA 1500 CREW CAB	Good	Norther NV/Northern CA
TK7766	22 PB 567 SUPER TEN DUMP TRUCK	Good	Norther NV/Northern CA
TK7769	22 GMC SIERRA 2500 CREW	Good	Norther NV/Northern CA
TK7777	22 FORD F150 CREW CAB 4X4	Good	Norther NV/Northern CA
TK7779	22 KW T880 SUPER 16 DUMP TRUCK	Good	Norther NV/Northern CA
TK7780	22 KW T880 SUPER 16 DUMP TRUCK	Good	Norther NV/Northern CA
TK7782	22 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK7783	22 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK7784	22 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK7785	22 FORD F250 4X4 CREW FLAT	Good	Norther NV/Northern CA
TK7786	23 PETERBILT 567 HEAVY HAUL	Good	Norther NV/Northern CA
TK7787	23 PETERBILT 567 TRACTOR	Good	Norther NV/Northern CA
TK7788	22 FORD F250 XL 4X4 CREW CAB	Good	Norther NV/Northern CA
TK7790	22 FORD F450 4X4 CREW CAB	Good	Norther NV/Northern CA
TK7793	22 FORD F250 UTILITY TRUCK	Good	Norther NV/Northern CA
TK7795	23 PB 3 AXLE BOOT TK (3K/GAL)	Good	Norther NV/Northern CA
TK7796	23 PB 4K H2O TK (CURRY TANK)	Good	Norther NV/Northern CA
TK7799	22 FORD F250 PICK UP TRUCK	Good	Norther NV/Northern CA
TK8004	22 ELGIN BADGER BROOM, 2.5 TON	Good	Norther NV/Northern CA
TK8007	22 F250 4X4 XL DIESEL	Good	Norther NV/Northern CA
TK8008	22 F250 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8009	22 F250 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8010	22 F250 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8011	22 F250 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8012	22 F250 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8013	22 F250 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8014	23 CHEVY 2500 4X4 SILVERADO	Good	Norther NV/Northern CA
TK8016	22 F150 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8017	22 F150 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8019	22 F150 4X4 LARIAT CREW CAB	Good	Norther NV/Northern CA
TK8020	23 PETERBILT 567 DUMP	Good	Norther NV/Northern CA
TK8021	23 PETERBILT 567 4K GAL WATER	Good	Norther NV/Northern CA
TK8022	23 PETERBILT 567	Good	Norther NV/Northern CA
TK8023	23 PETERBILT 567	Good	Norther NV/Northern CA
TK8024	22 FORD F150 LARIAT	Good	Norther NV/Northern CA
TK8025	22 FORD F150 LARIAT	Good	Norther NV/Northern CA
TK8026	23 KENWORTH T880 ROADSAVER TK	Good	Norther NV/Northern CA
TK8027	22 FORD F250 PICK UP TRUCK	Good	Norther NV/Northern CA
TK8034	23 KW T880 SUPER 16 DUMP TK	Good	Norther NV/Northern CA
TK8040	23 FORD F250 4X4 SUPERCAB	Good	Norther NV/Northern CA
TK8041	23 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK8044	23 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8045	23 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8046	23 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA

TK8047	24 GMC 2500 4X4 GAS PICKUP	Good	Norther NV/Northern CA
TK8049	23 GMC 2500 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8050	23 IH SCHWARZE MECHANICAL BROO	Good	Norther NV/Northern CA
TK8051	23 IH SCHWARZE MECH BROOM	Good	Norther NV/Northern CA
TK8052	23 FORD F450 4X2 SUPER CREW	Good	Norther NV/Northern CA
TK8053	23 FORD F450 4X2 FLAT	Good	Norther NV/Northern CA
TK8055	23 FORD F450 CREW FLAT	Good	Norther NV/Northern CA
TK8056	23 FORD F450 CREW CABFLAT	Good	Norther NV/Northern CA
TK8057	23 FORD F450 SUPERCAB	Good	Norther NV/Northern CA
TK8059	23 GMC SIERRA 2500HD FLAT	Good	Norther NV/Northern CA
TK8076	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8077	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8078	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8079	24 FORD F350 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8081	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8082	24 FORD F350 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8083	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8084	24 FORD F250 4X4 DEISEL UTILIT	Good	Norther NV/Northern CA
TK8085	25 PETERBILT 567 4K WATER TK	Good	Norther NV/Northern CA
TK8086	25 PETERBILT 567 4K WATER TK	Good	Norther NV/Northern CA
TK8087	24 LAND ROVER DEFENDER	Good	Norther NV/Northern CA
TK8093	19 FORD F750 5YD BOBTAIL	Good	Norther NV/Northern CA
TK8100	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8101	24 FORD F250 4X4 DIESEL PICKUP	Good	Norther NV/Northern CA
TK8102	25 PETERBILT 567 DIESEL	Good	Norther NV/Northern CA
TK8103	25 PETERBILT 567 DIESEL	Good	Norther NV/Northern CA
TK8104	25 PETERBILT 567 DIESEL	Good	Norther NV/Northern CA
TK8105	25 PETERBILT 567 DIESEL	Good	Norther NV/Northern CA
TK8106	24 FORD F-250	Good	Norther NV/Northern CA
TK8124	24 GMC SIERRA SLT CREW CAB	Good	Norther NV/Northern CA
TK8125	24 GMC SIERRA SLT CREW CAB	Good	Norther NV/Northern CA
TK8126	24 GMC SIERRA SLT CREW CAB	Good	Norther NV/Northern CA
TK8127	24 PETERBILT 567 FUEL/LUBE	Good	Norther NV/Northern CA
TK8128	24 PETERBILD 567 FUEL/LUBE	Good	Norther NV/Northern CA
TK8131	24 GMC SIERRA 2500	Good	Norther NV/Northern CA
TK8132	24 GMC SIERRA 2500	Good	Norther NV/Northern CA
TK8133	24 GMC SIERRA 2500	Good	Norther NV/Northern CA
TK8177	25 FORD F250 SUPER DUTY 4X4	Good	Norther NV/Northern CA
TK8178	25 FORD F250 SUPER DUTY 4X4	Good	Norther NV/Northern CA
TK9606	13 GMC 1500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9610	13 PB 367 3 AXLE TRACTOR	Good	Norther NV/Northern CA
TK9618	13 GMC 1500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9626	23 KW T880 ROADSAVER SLURRY TK	Good	Norther NV/Northern CA
TK9628	14 PB 325 TRAFFIC	Good	Norther NV/Northern CA
TK9629	13 FORD F150 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9630	13 FORD F550 4X2	Good	Norther NV/Northern CA
TK9631	13 FORD F550 4X2	Good	Norther NV/Northern CA

TK9633	23 KW T880 ROADSAVER IIIG	Good	Norther NV/Northern CA
TK9644	14 PB MECHANICS	Good	Norther NV/Northern CA
TK9648	14 GMC 1500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9650	14 PB 3600 GALLON WATER	Good	Norther NV/Northern CA
TK9651	23 KW T880 ROADSAVER IIIG	Good	Norther NV/Northern CA
TK9652	23 KW T880 ROADSAVER SLURRY TK	Good	Norther NV/Northern CA
TK9653	23 KW T880 ROADSAVER IIIG	Good	Norther NV/Northern CA
TK9654	23 KW T880 ROADSAVER IIIG	Good	Norther NV/Northern CA
TK9656	23 KW T880 ROADSAVER SLURRY TK	Good	Norther NV/Northern CA
TK9664	13 DODGE 3500 4X2 UTILITY	Good	Norther NV/Northern CA
TK9665	13 DODGE 3500 4X2 UTILITY	Good	Norther NV/Northern CA
TK9693	15 GMC 2500 4X4 FLATBED	Good	Norther NV/Northern CA
TK9695	14 GMC 1500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9697	15 GMC 2500 4X4 FLATBED	Good	Norther NV/Northern CA
TK9701	15 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9713	15 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9721	15 DODGE 2500 4X4 MEGA CAB	Good	Norther NV/Northern CA
TK9724	15 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9740	16 PB MECHANICS	Good	Norther NV/Northern CA
TK9745	17 PB 567 TRACTOR	Good	Norther NV/Northern CA
TK9746	16 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9749	16 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9752	16 DODGE 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9757	PETERBILT 3 AXLE TRACTOR	Good	Norther NV/Northern CA
TK9759	PETERBILT 3 AXLE TRACTOR	Good	Norther NV/Northern CA
TK9761	16 FORD F-250 4X4	Good	Norther NV/Northern CA
TK9772	17 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9773	17 PETERBILT MECH TRUCK	Good	Norther NV/Northern CA
TK9774	17 PETERBILT MECH TRUCK	Good	Norther NV/Northern CA
TK9783	17 GMC 2500 4X4 CREW	Good	Norther NV/Northern CA
TK9784	GMC 2500 DIESEL 4X4 FLATBED	Good	Norther NV/Northern CA
TK9785	17 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9786	FORD F550 XL CREW 4X2 FLATBED	Good	Norther NV/Northern CA
TK9787	INTERNATIONAL 4300 FLATBED	Good	Norther NV/Northern CA
TK9788	INTERNATIONAL 4300 TRAFFIC	Good	Norther NV/Northern CA
TK9789	INTERNATIONAL 4300 TRAFFIC	Good	Norther NV/Northern CA
TK9791	17 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9793	17 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9796	GMC 2500 FLATBED CREW CAB	Good	Norther NV/Northern CA
TK9797	17 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9798	FORD F250 CREW CAB UTILITY	Good	Norther NV/Northern CA
TK9799	FORD F250 CREW CAB UTILITY	Good	Norther NV/Northern CA
TK9815	18 GMC YUKON 4X4	Good	Norther NV/Northern CA
TK9818	18 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9826	18 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9829	GMC 2500 CREW CAB FLATBED	Good	Norther NV/Northern CA
TK9830	GMC 2500 CREW CABFLATBED	Good	Norther NV/Northern CA

TK9831	GMC 2500 CREW CAB FLATBED	Good	Norther NV/Northern CA
TK9834	INTERNATIONAL 4300 TRAFFIC TRU	Good	Norther NV/Northern CA
TK9835	INTERNATIONAL 4300 TRAFFIC	Good	Norther NV/Northern CA
TK9836	INTERNATIONAL 4300 TRAFFIC	Good	Norther NV/Northern CA
TK9837	INTERNATIONAL 4300 TRAFFIC	Good	Norther NV/Northern CA
TK9838	INTERNATIONAL 4300 TRAFFIC	Good	Norther NV/Northern CA
TK9839	INTERNTL 4300 TRAFFIC LIFT GAT	Good	Norther NV/Northern CA
TK9841	INTERNTL 4300 TRAFFIC LIFT GAT	Good	Norther NV/Northern CA
TK9842	INTERNTL 4300 CREW 14' DUMP	Good	Norther NV/Northern CA
TK9843	INTERNATIONAL 4300 CREW CAB	Good	Norther NV/Northern CA
TK9848	GMC 2500 CREW CAB DIESEL UTILI	Good	Norther NV/Northern CA
TK9849	GMC 2500 CREW CAB DIESEL UTILI	Good	Norther NV/Northern CA
TK9850	GMC 2500 CREW CAB DIESEL UTILI	Good	Norther NV/Northern CA
TK9852	19 PETERBILT 567 4K GAL H2O	Good	Norther NV/Northern CA
TK9857	18 GMC 2500 DIESEL CREW FLATBE	Good	Norther NV/Northern CA
TK9859	PETERBILT 4 AXLE BOOT 4,000 GL	Good	Norther NV/Northern CA
TK9860	18 GMC 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9873	19 PETERBILT 4K H2O TK	Good	Norther NV/Northern CA
TK9874	18 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9876	19 FORD F350 SUPER CREW CAB	Good	Norther NV/Northern CA
TK9877	2005 FORD F650 XL 5 YD BOBTAIL	Good	Norther NV/Northern CA
TK9878	2014 FORD F450 CONCRETE CREW	Good	Norther NV/Northern CA
TK9879	2015 FORD F450 CONCRETE CREW	Good	Norther NV/Northern CA
TK9880	18 DODGE 3500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9882	06 INTERNATIONAL 7600 WATER	Good	Norther NV/Northern CA
TK9883	2017 FORD F650 FORM TRUCK	Good	Norther NV/Northern CA
TK9885	2017 FORD F650 FORM TRUCK	Good	Norther NV/Northern CA
TK9886	2018 FORD F450 CONCRETE CREW	Good	Norther NV/Northern CA
TK9887	2011 FORD F450 CONCRETE CREW	Good	Norther NV/Northern CA
TK9888	2014 FORD F450 CONCRETE CREW	Good	Norther NV/Northern CA
TK9924	19 CHEVY 1500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9925	19 CHEVY 1500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9928	19 PETERBILT 337 LUBE TRUCK	Good	Norther NV/Northern CA
TK9929	19 FORD XL F550 MECHANIC TK	Good	Norther NV/Northern CA
TK9931	19 CHEVY 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9933	19 CHEVY 2500 CREW UTILITY	Good	Norther NV/Northern CA
TK9934	19 GMC 2500 4X4 CREW FLATBED	Good	Norther NV/Northern CA
TK9935	19 GMC 2500 4X4 CREW FLATBED	Good	Norther NV/Northern CA
TK9936	19 GMC 2500 4X4 CREW FLATBED	Good	Norther NV/Northern CA
TK9937	19 GMC 2500 4X4 CREW FLATBED	Good	Norther NV/Northern CA
TK9938	19 GMC 2500 4X4 CREW FLATBED	Good	Norther NV/Northern CA
TK9943	19 BEAR CAT 4K BOOT TRUCK	Good	Norther NV/Northern CA
TK9944	19 PETERBILT 567 HEAVY TRACTOR	Good	Norther NV/Northern CA
TK9945	19 TYMCO 600 AIR BROOM	Good	Norther NV/Northern CA
TK9950	19 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9956	19 FORD F150 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9957	19 FORD F150 4X4 CREW CAB	Good	Norther NV/Northern CA

TK9958	19 TYMCO 600 AIR BROOM	Good	Norther NV/Northern CA
TK9977	20 PB 567 TRACTOR	Good	Norther NV/Northern CA
TK9985	20 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9986	20 FORD F250 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9987	20 PB 220 PAINT TRUCK	Good	Norther NV/Northern CA
TK9988	20 CHEVY 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9989	20 CHEVY 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9990	20 CHEVY 2500 4X4 CREW CAB	Good	Norther NV/Northern CA
TK9991	20 IH 5500 4X2 DIESEL CREW CAB	Good	Norther NV/Northern CA
TK9992	20 IH 5500 4X2 DIESEL CREW CAB	Good	Norther NV/Northern CA
TK9993	20 IH 5500 4X2 DIESEL CREW CAB	Good	Norther NV/Northern CA
TK9994	20 IH 5500 4X2 DIESEL CREW CAB	Good	Norther NV/Northern CA
TK9995	20 IH 5500 4X2 DIESEL CREW CAB	Good	Norther NV/Northern CA

TRAILERS

TR7702	20 DIAMOND 230 GAL TACK POT	Good	Norther NV/Northern CA
TR7704	20 PJ UK14 TRAILER TC	Good	Norther NV/Northern CA
TR7705	20 PJ UK14 TRAILER TC	Good	Norther NV/Northern CA
TR7706	20 PJ UK14 TRAILER TC	Good	Norther NV/Northern CA
TR7709	20 PJ UK 14 TRAILER TC	Good	Norther NV/Northern CA
TR7713	20 PJ PC20 CONCRETE FORM TR	Good	Norther NV/Northern CA
TR7714	20 PJ PC20 CONCRETE FORM TR	Good	Norther NV/Northern CA
TR7715	20 PJ PC20 CONCRETE FORM TR	Good	Norther NV/Northern CA
TR7716	20 PJ PC20 CONCRETE FORM TR	Good	Norther NV/Northern CA
TR7745	21 WYLIE 500G WATER BUFFALO	Good	Norther NV/Northern CA
TR7748	21 WYLIE 500G WATER BUFFALO	Good	Norther NV/Northern CA
TR7770	22 HM FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR7771	22 HM FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR7772	22 HM FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR7773	22 HM FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR8000	11 ITT OIL TANKER	Good	Norther NV/Northern CA
TR8001	11 ITT OIL TANKER	Good	Norther NV/Northern CA
TR8003	06 40FT FLATBED TRAILER	Good	Norther NV/Northern CA
TR8064	24 SMITHCO LEAD SIDE DUMP	Good	Norther NV/Northern CA
TR8065	24 SMITHCO PUP SIDE DUMP	Good	Norther NV/Northern CA
TR8066	24 SMITHCO LEAD SIDE DUMP	Good	Norther NV/Northern CA
TR8067	24 SMITHCO PUP SIDE DUMP	Good	Norther NV/Northern CA
TR8088	24 TRAIL KING TK50LP TAG TRAIL	Good	Norther NV/Northern CA
TR8089	24 TRAIL KING TK50LP TAG TRAIL	Good	Norther NV/Northern CA
TR8090	24 TRAIL KING TK50LP TAG TRAIL	Good	Norther NV/Northern CA
TR8097	24 WELLS CARGO 7X12 FOREMAN	Good	Norther NV/Northern CA
TR8108	24 MURRAY EASY TAIL TRAILER	Good	Norther NV/Northern CA
TR8113	24 WELLS CARGO 7X12 TRAILER	Good	Norther NV/Northern CA
TR8114	24 WELLS CARGO 7X12 TRAILER	Good	Norther NV/Northern CA
TR8115	24 WELLS CARGO 7X12 TRAILER	Good	Norther NV/Northern CA
TR9077	92 DIAMOND EMULSION POT	Good	Norther NV/Northern CA

TR9136	02 TRAILKING TK12 TILT	Good	Norther NV/Northern CA
TR9169	83 DIAMOND BILT 250 GAL POT	Good	Norther NV/Northern CA
TR9194	03 TRAILKING TK40 TILT	Good	Norther NV/Northern CA
TR9211	03 MCLELLAN FUEL TRAILER	Good	Norther NV/Northern CA
TR9285	05 TRAILKING 32 FT END DUMP	Good	Norther NV/Northern CA
TR9286	05 TRAILKING 32 FT END DUMP	Good	Norther NV/Northern CA
TR9306	05 WC FOREMAN TRAILER 7X14	Good	Norther NV/Northern CA
TR9342	06 CPS SBD240 SEMI BOTTOM	Good	Norther NV/Northern CA
TR9362	07 CPS SBD240 SEMI BOTTOM	Good	Norther NV/Northern CA
TR9372	04 POLAR 7000 GAL STEEL ACMD	Good	Norther NV/Northern CA
TR9385	06 MCLELLAN FUEL TRAILER	Good	Norther NV/Northern CA
TR9440	07 CPS SBD240 SEMI BOTTOM	Good	Norther NV/Northern CA
TR9444	07 WC FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR9445	07 WC FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR9486	04 ZIEMAN FB UTILITY 10K	Good	Norther NV/Northern CA
TR9491	08 WC FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR9492	08 WC FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR9493	08 WC FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA
TR9512	05 TRAILKING UTILITY 12K	Good	Norther NV/Northern CA
TR9513	08 TRAILKING TK40 TILT	Good	Norther NV/Northern CA
TR9518	08 C & I WATER BUFFALO	Good	Norther NV/Northern CA
TR9538	08 BEST FLATBED UTILITY 10K	Good	Norther NV/Northern CA
TR9539	08 BEST FLATBED UTILITY 10K	Good	Norther NV/Northern CA
TR9568	89 FRUEHAUF 4000 GAL PUP	Good	Norther NV/Northern CA
TR9571	06 TRAILKING TKT50 TILT 30 FT	Good	Norther NV/Northern CA
TR9592	95 ALLCO BOTTOM DUMP PUP	Good	Norther NV/Northern CA
TR9593	05 RANCO BOTTOM DUMP PUP	Good	Norther NV/Northern CA
TR9599	COZAD FLIP TAIL LOWBED	Good	Norther NV/Northern CA
TR9605	05 TRAILKING TK12U (RAMPS)	Good	Norther NV/Northern CA
TR9609	12 KRO BUILT TACK POT	Good	Norther NV/Northern CA
TR9627	13 BEST UTILITY TRAILER	Good	Norther NV/Northern CA
TR9667	13 BIG W 1000 GAL SULFATE TANK	Good	Norther NV/Northern CA
TR9669	13 LOAD TRAIL LIGHT TC BOX 10K	Good	Norther NV/Northern CA
TR9673	90 TRAIL MASTER FB 36K (RAMPS)	Good	Norther NV/Northern CA
TR9689	14 BEST UTILITY TRAILER	Good	Norther NV/Northern CA
TR9690	14 BEST FLATBED 10K	Good	Norther NV/Northern CA
TR9696	14 TRAIL KING TK50 (RAMPS)	Good	Norther NV/Northern CA
TR9715	15 C&B TRAFFIC TRAILER 10K	Good	Norther NV/Northern CA
TR9719	13 MCLAUGHLIN VACUUM TRAILER	Good	Norther NV/Northern CA
TR9734	16 BIG TEX 8X14 DUMP	Good	Norther NV/Northern CA
TR9760	TRAIL KING TAG RAMPS	Good	Norther NV/Northern CA
TR9763	CARGOPRO ENCLOSED TRAILER	Good	Norther NV/Northern CA
TR9764	TECUMSEH 40' BOTTOM DUMP	Good	Norther NV/Northern CA
TR9765	TECUMSEH 40 ' BOTTOM DUMP	Good	Norther NV/Northern CA
TR9766	01 CPS BOTTOM DUMP 20' PUP	Good	Norther NV/Northern CA
TR9767	01 CPS BOTTOM DUMP20' PUP	Good	Norther NV/Northern CA
TR9769	BIG TEX UTILITY TRAILER	Good	Norther NV/Northern CA

TR9770	CPS BOTTOM DUMP PUP	Good	Norther NV/Northern CA
TR9771	C&B 8X14 TRAFFIC TRAILER	Good	Norther NV/Northern CA
TR9781	17 CARGOPRO 7X14 TRAILER	Good	Norther NV/Northern CA
TR9801	CARGOPRO ENCLOSED TRAILER	Good	Norther NV/Northern CA
TR9805	7X12 CARGOPRO ENCLOSED TRAILER	Good	Norther NV/Northern CA
TR9808	SMITHCO SIDE DUMP TRAILER	Good	Norther NV/Northern CA
TR9809	SMITHCO SIDE DUMP TRAILER	Good	Norther NV/Northern CA
TR9810	WALTON 7X14 TRAFFIC TRLR	Good	Norther NV/Northern CA
TR9811	WALTON 7X14 TRAFFIC TRLR	Good	Norther NV/Northern CA
TR9812	WALTON 7X14 TRAFFIC TRLR	Good	Norther NV/Northern CA
TR9813	WALTON 7X14 TRAFFIC TRLR	Good	Norther NV/Northern CA
TR9814	WALTON 7X14 TRAFFIC TRLR	Good	Norther NV/Northern CA
TR9827	MURRAY EASY TAIL TRAILER	Good	Norther NV/Northern CA
TR9840	INTERSTATE ENCLOSED FOREMAN	Good	Norther NV/Northern CA
TR9846	18 TRAIL KING TAG RAMPS	Good	Norther NV/Northern CA
TR9854	INTERSTATE ENCLOSED FOREMAN TR	Good	Norther NV/Northern CA
TR9856	BIG TEX 60CH-16	Good	Norther NV/Northern CA
TR9861	BIG TEX 60CH-16	Good	Norther NV/Northern CA
TR9862	BIG TEX 60CH-16	Good	Norther NV/Northern CA
TR9866	18 TRAIL KING TK12U FLATBED	Good	Norther NV/Northern CA
TR9900	97 FLATBED STAKE TRAILER	Good	Norther NV/Northern CA
TR9901	03 LINE STAKE UTILITY TRAILER	Good	Norther NV/Northern CA
TR9902	99 PARP GRAY DUMP TRAILER	Good	Norther NV/Northern CA
TR9905	03 PJ CH182 FLAT BED HEAVY TR	Good	Norther NV/Northern CA
TR9906	01 HALMARK ENCLOSED SOFTCUT TR	Good	Norther NV/Northern CA
TR9911	04 PJ UTLTY DOUBLE DECK TR	Good	Norther NV/Northern CA
TR9912	98 BOBCAT TILT BED FLATBED TR	Good	Norther NV/Northern CA
TR9913	05 LOADMAX BLANKET FLATBED TR	Good	Norther NV/Northern CA
TR9915	03 WALTON DUMPBED TRAILER	Good	Norther NV/Northern CA
TR9916	04 PJ '18 BOBCAT FLTBD TR	Good	Norther NV/Northern CA
TR9918	04 PJ '18 BOBCAT FLTBD TR	Good	Norther NV/Northern CA
TR9920	03 CARSON UTILITY 10' TR	Good	Norther NV/Northern CA
TR9923	04 ASVE FLTBD SIDEWALK FORM TR	Good	Norther NV/Northern CA
TR9939	19 PJ 14' TRAILER	Good	Norther NV/Northern CA
TR9941	19 PJ 14' TRAILER	Good	Norther NV/Northern CA
TR9942	19 PJ 14' TRAILER	Good	Norther NV/Northern CA
TR9952	19 TRAIL KING TK50LP TRAILER	Good	Norther NV/Northern CA
TR9966	WELLS CARGO TRAILER	Good	Norther NV/Northern CA
TR9967	WELLS CARGO TRAILER	Good	Norther NV/Northern CA
TR9978	20 SMITHCO SIDE DUMP	Good	Norther NV/Northern CA
TR9979	20 SMITHCO SIDE DUMP PUP	Good	Norther NV/Northern CA
TR9980	20 SMITHCO SIDE DUMP	Good	Norther NV/Northern CA
TR9996	20 WC FOREMAN TRAILER 7X12	Good	Norther NV/Northern CA

Exhibit A

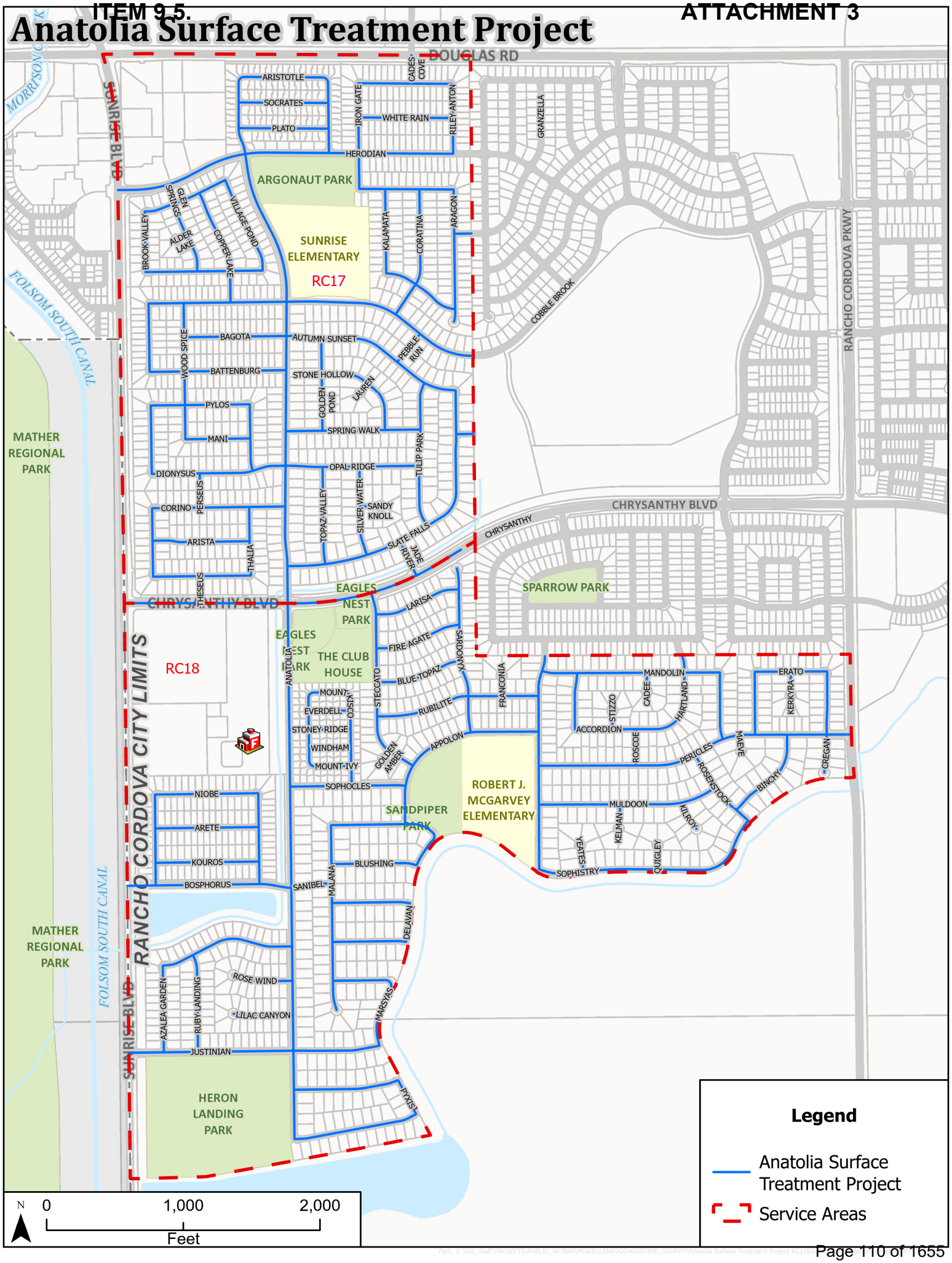
STATEMENT OF EXPERIENCE - ASPHALT MAINTENANCE

Agency	Job Name	Contract Amount	Type of Contract	Completion Date	Contact Person	Phone #	Address
Nevada Department of Transportation	NDOT #3980 Humboldt Co Chip Seal	$ 1,254,007.00	AC Patch, Chip Seal, Striping	12/28/23	Sean Cross	775-315-7325	705 E. 4th Street, Winnemucca, NV 89445
Storey County	Electric Avenue Rehabilitation	$ 4,212,967.70	AC Patch, Slurry Seal, Striping	12/05/23	Jason Wierzbicki	775-847-0958	100 Toll Road, Virginia City, Nevada 89440
Regional Transportation Commission	2023 Preventive Maintenance	$ 11,374,007.00	AC Patch, Slurry Seal, Crack Seal, Striping	11/20/23	Scott Gibson	775-335-1874	1105 Terminal Way, Reno, Nevada 89502
Marin County	2023 Road Sealant Phase 1	$ 574,007.00	Slurry Seal, Striping	08/16/23	Bradley Kurz	415-473-6567	3501 Civic Center Dr, Ste 404, San Rafael, CA 94903
APS - City of Sacramento	Sacramento 2022 Resurfacing	$ 437,007.00	Slurry Seal, Rubber Chip Seal, Fog Seal	11/01/22	Daniel Cruz	209-522-2277	1012 11th Street Suite 1000 Modesto, CA 95354
Nevada Department of Transportation	NDOT #3913 Humboldt Chip & Patch	$ 2,124,007.00	Chip Seal, AC Patch	09/06/22	Darren Dyk	775-934-8714	1951 Idaho St., Elko, Nevada 89801
Nevada Department of Transportation	NDOT #3902 Lincoln Chip Seal	$ 3,144,007.00	Chip Seal, AC Patch, Striping	08/27/22	Jennifer Manubay	775-888-7070	1263 S. Stewart Street, Carson City, NV 89712
Town of San Anselmo	2022 Slurry Seal	$ 402,007.00	Slurry Seal, Micro-Surfacing, Striping	07/13/22	Scott Schneider	415-258-4653	525 San Anselmo Avenue, San Anselmo, CA 94960
City of Rancho Cordova	Rancho Cordova - International Dr Surface Project	$ 609,006.95	AC Patch, Slurry Seal, Crack Seal, Striping	06/10/22	Victor Ramos	916-851-8948	3303 Luyung Drive, Rancho Cordova, CA 95742
City of Reno	City of Reno - 2021 Reno Preventative Maintenance	$ 3,074,007.00	Slurry Seal, Chip Seal, AC Patch, Striping	05/27/22	Kaitlin Redmon	775-334-3307	PO Box 1900, Reno, NV 89505
Regional Transportation Commission	RTC - 2021 Preventive Maintenance	$ 5,761,007.00	Slurry Seal, Chip Seal, AC Patch, Striping	03/10/22	Scott Gibson	775-335-1874	1105 Terminal Way, Reno, Nevada 89502
Washoe County	2021/2022 Slurry Seal	$ 2,382,518.50	Chip Seal/Slurry Seal	11/02/21	Stephen Hein	775-328-2319	1001 East Ninth Street,Reno, Nevada 89512
Nevada Department of Transportation	NDOT #3879 - Wells CIR/Double Chip	$ 1,714,007.00	Cold-in-Place, Chip Seal, Striping	10/08/21	John England	775-777-2703	1951 Idaho Street, Elko, NV 89801
Nevada Department of Transportation	NDOT #3853 SR 208/338 Slurry	$ 1,044,007.00	Micro-surfacing, Striping	09/24/21	Reid Kaiser	775-337-4700	310 Galletti Way, Sparks, NV 89431
City Of Elko	2021 Micro Slury Project	$ 560,782.00	Slurry/Micro	08/13/21	Dennis Strickland	775-777-7100	1751 College Avenue, Elko, Nevada 89801
O'Grady Paving - Santa Clara 2021 Rehab	Santa Clara 2021 Rehab	$ 377,007.00	Slurry Seal	08/11/21	Kyle Kincaid	650-966-1926	2513 Wyandotte Street, Mountain View, CA 94043
City of Fernley	FY 19/20 PMP Maintenance	$ 594,007.00	Slurry, Striping	06/25/21	Jessica Dover	775-784-9866	595 Silver Lace Boulevard, Fernley, NV 89408
Mono County	Twin Lakes Road Maintenance	$ 469,007.00	Slurry Seal, Striping	6/23/2021	Kalen Dodd	760-932-5452	P.O. Box 457, Bridgeport, California 93517
Fresno County	2021 Bituminous Seal Coats	$ 1,264,007.00	Chip Seal	06/16/21	Robert Hendrickson	559-289-8855	2220 Tulare Street, 6th Floor, Fresno, CA 93721
City of Reno	2020 Reno Preventative Maintenance	$ 3,344,007.00	Slurry Seal, Chip Seal, AC Patch, Striping	05/19/21	Kaitlin Redmon	775-334-3307	PO Box 1900, Reno, NV 89505
Eureka County	2020 Road and Airport Maintenance	$ 3,414,007.00	Paving/Patching/Slurry Seal	10/05/20	Jeb Rowley	775-237-5372	701 S. Main Street, Eureka, Nevada 89316
Graniterock - Santa Cruz Rail Trail	Santa Cruz Rail Trail	$ 154,007.00	Slurry Seal	10/01/20	Brian Ashford	831-768-2734	350 Technology Drive, Watsonville, CA 95076
City of Sparks	2020 Street Preventative Maintenance	$ 304,031.00	Slurry, Striping	07/18/20	Bob Schricker	775-353-2273	431 Prater Way, Sparks, NV 89431
City of Fernley	FY 19/20 PMP Maintenance	$ 684,007.00	Slurry, Striping	07/02/20	Jessica Dover	775-784-9919	595 Silver Lace Boulevard, Fernley, NV 89408
Carson City	Roop Street Pavement Micro-Surfacing	$ 234,007.00	Slurry, Patch, Striping	06/26/20	Jeff Freeman	775-636-0802	201 N. Carson Street #2, Carson City, NV 89701
Lyon County	2019 County Roadway Resurfacing	$ 1,634,007.00	Chip Seal/Slurry Seal	11/08/19	Dustin Homan	775-302-7179	34 Lakes Blvd., Dayton, NV 89403
Washoe County	2019-2020 Washoe County Slurry Seal	$ 2,774,007.00	Chip Seal/Slurry Seal	10/31/19	Megan Sizelove	775-328-2316	1001 E. 9th Street, Reno, Nevada 89512
Nevada Department of Transportation	NDOT #3782 - Humboldt Chip	$ 4,091,007.00	Chip Seal	10/23/19	Trent Averett	775-653-8070	705 E. 4th Street, Winnemucca, NV 89445
Q&D - Watsonville Airport Crack and Slurry	Runway 9-27 & Taxiways B and C	$ 138,007.00	Crack, Slurry Seal	10/13/19	Marc Leone	775-786-2677	1050 S. 21st Street, Sparks, NV 89431
City of Reno	2019 Pavement Maintenance	$ 3,321,007.00	Slurry Seal	09/30/19	Teri Martinetti	775-225-7287	PO Box 1900, Reno, NV 89505
City of Davis	Slurry Seal	$ 1,296,007.00	Slurry Seal	07/31/19	Michael Mitchell	530-628-0086	23 Russell Blvd., Davis, CA 95616
City of Hayward	FY19 Pavement Rehab	$ 191,007.00	Slurry Seal	07/13/19	Brett Kincaid	650-966-1926	O'Grady Paving, 2513 Wyandotte Street, Mountainvie
Q&D - Watsonville Airport Crack and Slurry	Runway 2-20 & Taxiways A, C, D and E	$ 280,825.00	Crack, Slurry Seal	05/20/19	Marc Leone	775-786-2677	1050 S. 21st Street, Sparks, NV 89431
City of Santa Clarita	2017-18 Slurry Seal	$ 1,888,950.82	Slurry/Micro-Surfacing	01/03/19	Nelson Vasquez	661-670-9823	23920 Valencia Blvd., Santa Clarita, CA 91355
APS - City of Lompoc	Lompoc 2018 Cape Seal	$ 486,007.00	Micro-Surfacing, Rubber Chip	12/31/18	Lucus Dias	209-522-2277	1012 11th Street Suite 1000 Modesto, CA 95354
City of Clayton	2018 Neighborhood Streets	$ 784,007.00	Slurry Seal	11/19/18	Scott Alman	925-683-5025	6000 Heritage Trail, Clayton, CA 94517

San Joaquin County	Chip Seal 2017-2018	$ 2,267,007.00	Chip Seal	10/29/18	Awni Taha	209-953-7619	1810 E. Hazelton Avenue, Stockton, CA 95205
City of Reno	2018 Preventative Maintenance	$ 2,894,192.75	Slurry/Micro-Surfacing/Asphalt Patching	10/01/18	Teri Martinetti	775-334-2148	P.O. Box 1900, Reno NV 89505
San Luis Obispo County	2017-18 Surface Treatment Various County Roads	$ 2,177,607.00	Slurry Seal/Fog Seal	09/14/18	Pete Newell	805-440-6791	County Govt Center, Room 206, SLO, CA 93408
City of Clovis	Rubberized Cape Seal 2018	$ 824,007.00	Cape Seal	06/25/18	Thomas Cheng	559-324-2374	1033 Fifth Street, Clovis, CA 93612
City of Reno	2017 Reno Surface Treatment Project	$ 782,007.00	Microsurfacing/AsphaltPatching/Cape Seal	12/01/17	Kerrie Koski	775-830-3976	P.O. Box 1900, Reno NV 89505
Nevada Department of Transportation	NDOT #3685 SR 225 Elko	$ 856,007.00	Chip Seal/Fog Seal	12/01/17	Regina Pierce	775-777-7768	1951 Idaho Street, Elko, NV 89801
City of Sparks	2018 Street Preventive Maintenance	$ 439,105.00	Microsurfacing	11/30/17	Bob Schricker	775-353-2273	P.O. Box 857, Sparks, NV 89432-0857
County of San Luis Obispo	2016-17 Surface Treatment Various County Roads	$ 526,007.00	Slurry/Micro/Fog Seal	11/30/17	Simon Hernandez	805-509-5705	County Govt Center, Room 206, SLO, CA 93408
Lyon County	2017 Pavement Maintenance Project	$ 857,007.00	Slurry Seal	11/30/17	Brian Harer	775-827-6111	18 Hwy 95A North, Yerington, NV 89447
Washoe County	2017/2018 Roadway & Parking Lot Repairs	$ 3,155,007.00	Chip Seal/Microsurfacing/Cape Seal/Asphalt Paving	11/30/17	Greg Belancio	775-328-2041	1001 E. 9th Street, Reno, Nevada 89520
City of Carson City	Carson City Pavement Preservation-Micro-Surfacing	$ 664,007.00	Slurry/Micro	11/30/17	Rick Cooley	775-887-2133	201 North Carson Street, Carson City, NV 89701
City of Santa Clarita	2016-17 Slurry Seal	$ 1,496,000.00	Slurry Seal/Microsurfacing	11/07/17	Nelson Vasquez	661-294-2538	23920 Valencia Blvd., Santa Clarita, CA 91355
Nevada Department of Transportation	NDOT #3689 McCarran Slurry	$ 459,007.00	Slurry/Micro	11/03/17	Brad Durski	775-888-3024	1263 S. Stewart Street, Carson City, NV 89712
City of Elko	Micro Slurry Project - 2017	$ 492,007.00	Slurry/Micro	11/01/17	Dennis Strickland	775-777-7100	1751 College Avenue, Elko, NV 89801
County of Sierra	Sierraville Dearwater Airport Slurry Seal and Re-Stripe Runway Project	$ 86,007.00	Slurry Seal	10/31/17	Bryan Davey	530-289-3201	P.O. Box 98, Downieville, CA 95936
Douglas County	2017 Road Seal	$ 419,007.00	Chip Seal/Slurry Seal	10/31/17	Jon Erb	775-782-6233	P.O. Box 218, Minden, NV 89423
Topaz Ranch Estates GID	Topaz Ranch Estates GID Phase 1B - Waterline Improvements	$ 226,466.00	Slurry Seal	10/21/17	Aspen Developers: Jon Winfield	775-786-3310	2340 East 5th Street, Reno, NV 89512
County of San Joaquin	Chip Seal 2016-2017	$ 1,721,007.00	Chip Seal	10/01/17	Awni Taha	209-953-7619	1810 E. Hazelton Avenue, Stockton, CA 95205
Eureka County	Eureka County 2017 Streets Maintenance Project	$ 2,336,418.20	Chip Seal/Slurry Seal	10/01/17	Loren Hunewill	775-623-2888	P.O. Box 714, Eureka, NV 89316
City of Davis	2016 Pavement Rehabilitation	$ 565,000.00	Slurry Seal	10/01/17	Michael Mitchell	530-757-5686	1717 5th Street, Davis, CA 95616
Nevada Department of Transportation	NDOT #3670 SR 341	$ 341,007.00	Scrub Seal	09/30/17	John Angel	775-720-4526	123 W. Nye Lane, Carson City, NV 89706
City of Hanford	FY 16/17 Fiberized Micro Surfacing Pavement Treatment Project	$ 191,007.00	Fiberized Micro	09/30/17	Steve Coodey	559-469-7715	315 N. Douty Street, Hanford, CA 93230
Santa Barbara County	2016-17 Countywide Preventive Maintenance Project	$ 865,400.00	Cape Seal/Microsurfacing	09/30/17	Andrew Rose	805-739-8794	620 W. Foster Rd., Santa Maria, CA 93455
Regional Transportation Commission	2016 Pavement Maintenance Project	$ 5,137,007.00	Chip Seal/Microsurfacing/Crack Seal/Asphalt Paving	07/31/17	Doug Maloy	775-335-1865	1105 Terminal Way, Ste 108, Reno, NV 89502
County of Fresno	Slurry Seals in Various Locations No. 16-14-C	$ 464,489.50	Slurry Seal	07/31/17	Keith Eckert	559-862-5024	2220 Tulare Street, 6th Floor, Fresno, CA 93721
Washoe County	2016/2017 Slurry Seal of Selected Streets	$ 3,936,404.00	Chip/Slurry Seal	10/31/16	Greg Belancio	775-328-2041	1001 E. 9th Street, Reno, Nevada 89520
City of Visalia	2016 Reclamite Seal	$ 976,676.81	Reclamite Seal	10/14/16	Norm Goldstrom	559-713-4186	336 N. Ben Maddox, Visalia, CA 93292
San Joaquin County	Slurry Seal of Local Roads 2015-16	$ 637,997.90	Slurry Seal	09/23/16	Awni Taha	209-953-7619	1810 E. Hazelton Avenue, Stockton, CA 95205
Lander County	Battle Mountain 2016 Road Maintenance Project	$ 3,087,816.00	Chip/Slurry Seal	09/15/16	Burt Ramos	775-635-2728	50 State Route 305, Battle Mountain, NV 89820
City of Rocklin	2016 High Density Mineral Bond Resurfacing	$ 695,548.40	High Density Mineral Bond	09/02/16	Zach Bosch	916-625-5511	4081 Alvis Court, Rocklin, CA 95677
Nevada Department of Transportation	NDOT #3603 Denio	$ 2,527,366.00	Chip Seal with Flush Coat	09/01/16	Dave Schwartz	775-623-8070	795 E. Fourth Street, Winnemucca, NV 89445
City of Santa Clarita	2015-16 Annual Slurry Seal Project	$ 832,318.05	Slurry Seal / Micro-Surfacing	08/19/16	Nelson Vasquez	661-670-9823	23920 Valencia Blvd., Santa Clarita, CA 91355
City of Brentwood	2016 Preventive Maintenance Program and Trail Pavement Management	$ 1,142,817.00	Slurry Seal	08/11/16	James Campero	925-516-5158	150 City Park Way, Brentwood, CA 94513
City of Clovis	2016 Rubberized Cape Seal	$ 844,007.00	Slurry / Rubberized Chip/Cape Seal	06/30/16	Thomas Cheng	559-324-2374	1033 Fifth Street, Clovis, CA 93612
Nevada Department of Transportation	NDOT #3563 Various Counties Chip Seal	$ 4,958,680.00	Double Chip Seal	10/30/15	Randy Hesterlee	775-289-1703	1263 S. Stewart St, Carson City, NV 89712
City of Manteca	2015 Pavement Maintenance	$ 1,833,735.00	Slurry Seal	09/30/15	Matiel Holloway	209-456-8411	1001 W. Center Street, Manteca, CA 95337
Contra Costa County	2015 Contra Costa Cape Seal	$ 504,278.00	Slurry Seal	09/15/15	Dante Morabe	925-313-2006	255 Glacier Drive, Martinez, CA 94553

City of Clovis	Clovis Rubberized Cape Seal	$ 1,392,865.00	Cape Seal	08/30/15	Steve White	559-324-2060	1033 Fifth Street, Clovis, CA 93612
Gardnerville Ranchos GID	2015-2016 Street Maintenance	$ 388,367.80	Slurry Seal	08/30/15	Robert Spellberg	775-265-2048	931 Mitch Drive, Gardnerville, NV 89410
County of Fresno	Fresno County Slurry Seal	$ 477,135.00	Slurry Seal	06/30/15	D'Andra Buchanan	559-696-9789	2220 Tulare Street, 6th Floor, Fresno, CA 93721
Regional Transportation Commission	2014 Preventive Maintenance	$ 2,322,007.11	Slurry/Micro/Chip Seal	01/01/15	Scott Gibson	775-348-0171	1105 Terminal Way, Ste 108, Reno, NV 89502
Nevada Department of Transportation	NDOT #3569 Pyramid Hwy Chip	$ 2,567,569.00	Double Chip Seal	12/31/14	Sam Lompa	775-888-3040	1263 S. Stewart St, Carson City, NV 89712
City of Rocklin	2014 Resurfacing Project	$ 2,208,709.95	Slurry/Micro/Asphalt Rubber Chip Seal	12/19/14	Justin Nartker	916-625-5500	4081 Alvis Court, Rocklin, CA 95677
Contra Costa County	2014 Slurry Seal (Saranap Area)	$ 407,000.00	Slurry Seal	10/01/14	Dante Morabe	925-313-2006	255 Glacier Drive, Martinez, CA 94553
Washoe County	2014/2015 Slurry Seal	$ 1,529,450.00	Slurry/Micro/Chip Seal	10/01/14	Greg Belanchio	775-328-2041	1001 E. 9th Street, Reno, Nevada 89520
Contra Costa County	2014 Discovery Bay Asphalt Rubber Cape Seal - Subcontractor to American Pavement Systems	$ 603,000.00	Slurry Seal	08/01/14	Dante Morabe	925-313-2006	255 Glacier Drive, Martinez, CA 94553
City of Brentwood	2014 Pavement Management Project	$ 534,746.82	Slurry Seal	07/21/14	Anthony Salam	925-516-5168	150 City Park Way, Brentwood, CA 94513
City of Carson	2013 Street Maintenance Program	$ 686,007.00	Slurry/Micro	10/15/13	John Platt	775-887-2355	201 N. Carson Street #3, Carson City, NV 89701
Town of Mammoth	2013 Micro Surfacing Project	$ 233,277.73	Slurry/Micro	10/15/13	Ron Fransler	760-934-8989	P.O. Box 1609, Mammoth Lakes, CA 93546
City of Reno	2013 Surface Treatment	$ 468,007.00	Street Maintenance	10/01/13	Kerrie Koski	775-830-3976	P.O. Box 1900, Reno NV 89505
California Department of Transporation	Caltrans 02-4E9704 Tehama	$ 1,088,007.00	Slurry/Rubberized Chip Seal	09/30/13	Anthony Granados	530-949-1611	1727 - 30th Street, Sacramento, CA 95816
City of Sparks	2013 Preventative Maintenance Program	$ 391,004.10	Micro Seal	09/20/13	Brent Quilici	775-671-7013	P.O. Box 857, Sparks, NV 89432-0857
City of Carlin	2013 City of Carlin Street Maintenance	$ 301,468.65	Rubberized Cape Seal	09/15/13	Carlos Esparza	775-397-5720	810 Oak Street, Carlin, NV 89822
City of Elko	Microsurface Project 2013	$ 182,007.00	Slurry/Micro	08/30/13	Dennis Strickland	775-777-7241	1751 College Avenue, Elko, NV 89801
Regional Transportation Commission	2013 Preventive Crack & Maint.	$ 1,073,007.00	Crack and Patch	06/30/13	Scott Gibson	775-348-0400	P.O. Box 30002, Reno NV 89520
California Department of Transportation	Caltrans 03-3M8304 I-80 Truckee	$ 7,159,007.00	Bonded Wearing Course	10/19/12	Jaret Montplaisier	530-682-5837	1727 - 30th Street, Sacramento, CA 95816
California Department of Transportation	Caltrans 02-3E9204 Rt 70 & 89 Overlay	$ 2,696,007.00	Asphalt Overlay	08/31/12	Michael Hollrigel	530-283-2492	1727 - 30th Street, Sacramento, CA 95816
Regional Transportation Commission	RTC Reno Consolidated 11-02 Phase 1 (Brinkby)	$ 1,737,007.00	Street Reconstruction	08/30/12	Michele Dennis	775-348-0171	1105 Terminal Way, Ste 108, Reno, NV 89502
Nevada Department of Transportation	NDOT D3-041-10 CIR & CHIP	$ 6,077,007.00	Double Chip Seal	07/31/12	Dave Schwartz	775-623-8070	795 E. Fourth Street, Winnemucca, NV 89445
City of Reno	City of Reno 2012 Street Rehab - Unit G	$ 2,157,007.00	Street Reconstruction	07/30/12	Bob Schricker	775-827-6111	P.O. Box 1900, Reno, NV 89505
Regional Transportation Commission	RTC 2012 Preventive Maintenance, Patching	$ 733,007.00	Asphalt Maintenance	07/15/12	Scott Gibson	775-348-0171	1105 Terminal Way, Ste 108, Reno, NV 89502
California Department of Transportation	Caltrans 03-4M3204 RT 70 Micro	$ 619,007.00	Street Reconstruction	07/13/12	Bryan Johnson	530-895-5245	1727 - 30th Street, Sacramento, CA 95816
Reno/Sparks Convention Visitors Auth.	Reno Sparks Livestock Events Center - RV Spaces	$ 409,007.00	Asphalt Overlay	06/30/12	Laura Tabman	775-827-7960	1263 S. Stewart St, Carson City, NV 89712
Nevada Department of Transportation	NDOT D3-006-11 Chip Seal	$ 6,087,451.00	Chip Seal	06/21/12	Boyde Ratcliff	775-777-2701	1263 S. Stewart St, Carson City, NV 89712
Nevada Department of Transportation	NDOT D2-047-10 CIR & CHIP	$ 3,373,007.00	Double Chip Seal	12/31/11	Larry Boge	775-687-3376	310 Galletti Way, Sparks, NV 89431
Nevada Department of Transportation	NDOT D1-005-11 SR 147 & US 93 CHIP	$ 1,811,007.00	Chip Seal	12/31/11	Glenn Petrenko	702-671-8860	123 E. Washington Street, Las Vegas, NV 89101
Nevada Department of Transportation	NDOT D3-006-11 Double Chip Seal	$ 6,695,007.00	Double Chip Seal	12/31/11	Boyd Ratliff	775-777-2700	1951 Idaho Street, Elko, NV 89801
Nevada Department of Transportation	NDOT D2-011-11 Double Micro Surfacing	$ 958,007.00	Microsurface	12/01/11	Steve Lani	775-720-4528	1263 S. Stewart Street, Carson City, NV 89712
Nevada Department of Transportation	NDOT D2-032-10 CHIP SEALS	$ 687,007.00	Chip Seal	10/31/11	John Angel	775-687-3376	310 Galletti Way, Sparks, NV 89431
City of Carson City	2011 Carson City Street Maintenance	$ 504,007.00	Slurry Seal	10/01/11	John Platt	775-887-2355	3505 Butti Way, Carson City, NV 89701

Anatolia Surface Treatment Project



City of Rancho Cordova Surface Treatment Project - Anatolia
Bid Summary

March 27, 2025, 3:00 pm, Open Gov

	Construction Contractor	TOTAL	Bid Schedule	Project Contact	Contractors License	DIR Registration	Equal Employment	Public Contract Code 10285.1, 10162, 10232 Statements	Designation of Subcontractors	Experience / Qualifications Questions 9.13	Bidder's Bond	IRAN Contracting Affidavit	Non-Collusion Affidavit	Debarment & Suspension	CARB Certificate of Reported Compliance	Submittal Confirmation
A	Sierra Nevada Construction, Inc.	$1,104,007.00	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B	American Pavement Systems, Inc.	$1,143,233.55	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C	Dryco Construction, Inc.	$1,155,155.00	X	X	X	X	X	X	X	X	X	X	X	X	X	X
D	VSS International, Inc.	$1,162,325.00	X	X	X	X	X	X	X	X	X	X	X	X	X	X
E	Pavement Coatings Co.	$1,177,214.90	X	X	X	X	X	X	X	X	X	X	X	X	X	X
F	Doolittle Construction, Inc.	$1,194,504.25	X	X	X	X	X	X	X	X	X	X	X	X	X	X
G	Zara Construction	$1,521,305.00	Deemed Non-Resonsive as the Contractor did not meet Sacramento County Specifications requiring the Contractor to "perform with its own organization Contract work amounting to at least thirty (30%) of the total bid price".													
H																
I																

Attendees: Kristine Courdy, Senior Civil Engineer
Jonathan Lujano, Assistant Civil Engineer

Kristine Courdy

Kristine Courdy, Sr. Civil Engineer

3/28/2025
Date

MEMORANDUM

ITEM 9.6.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Albert Stricker, Public Works Director
Kristine Courdy, Senior Civil Engineer

SUBJECT: **A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE CONTRACT CHANGE ORDER 2024-68-4 WITH MARTIN GENERAL ENGINEERING, INC., TO INCREASE THE CONTRACT AMOUNT FROM $2,289,509.70 TO AN AMOUNT NOT TO EXCEED $2,463,447.29 FOR CONSTRUCTION OF THE CHASE DRIVE AMERICAN RIVER PARKWAY CONNECTION PROJECT**

RECOMMENDATION

Adopt the Resolution.

RESULT OF RECOMMENDED ACTION

Adoption of the Resolution and approval of the construction contract change order with Martin General Engineering, Inc. would align with the objectives of the Project to provide a regional non-motorized route to support housing, education, recreation, park and agricultural land uses along the corridor. The contract change order allows staff to finalize the trail construction which will provide residents within the community with a critical, high-quality active transportation connection along Chase Drive, a safe path for students to school and access to the American River Parkway, Soils Born Farms and Hagan Park.

BACKGROUND

The Chase Drive American River Parkway Connection Project (Project) proposes a multi-use path along the east side of the roadway from the Chase/Coloma Plaza to the spur trail connecting to the American River Parkway (see Attachment 3 for the Project Area Map). In addition, the Project includes high-visibility crosswalks, pedestrian-scale lighting, and landscape restoration. The City applied for and successfully received $2.4 million from a Sacramento Area Council of Governments (SACOG) Maintenance and Modernization Grant for this important project.

On May 20, 2024, the City Council approved a construction contract with Martin General Engineering, Inc. to construct the Project.

The first phase of the trail from Coloma Road to Lancer Lane was completed in Fall 2024. The second phase from Lancer Lane to the American River Bike Trail required a permit from the Central Valley Flood Protection Board that was approved in February 2025. One of the permit

conditions was that construction must occur outside of the wet-season, therefore phase two construction is planned to begin in late April 2025.

Per the City Municipal Code, Section 3.60.110 C, the City Manager is given the authority to approve change orders up to 10% of the contract value. During Phase One of the trail construction, the following administrative change orders were approved:

- Administrative Change Order No. 1 = $26,972.52
- Administrative Change Order No. 2 = $9,739.51
- Administrative Change Order No. 3 = $132,671.35

Change Order No. 4 is valued at an amount of $173,937.59, which exceeds the City Manager's signing authority, thus requiring City Council approval. This change order represents 1) Unforeseen repairs required during the first phase of construction; 2) Temporary striping required between the two phases of construction; and 3) Adjustments in bid quantities for Phase Two of the trail construction.

The next steps are to start Phase Two trail construction in late April 2025 with construction completion anticipated in Summer 2025.

FISCAL IMPACT AND FUNDING SOURCE

Funding for this project is captured in the Fiscal Year 2023-24 and 2024-25 Capital Improvement Plan budget, funded by a $2.4 million SACOG Maintenance and Modernization Grant, Measure A Construction Fund, and Transportation Development Act Fund. There is no financial impact on the City's General Fund.

ATTACHMENT(S)

1. Resolution
2. Contract Change Order No. 2024-68-04
3. Project Area Map

CITY OF RANCHO CORDOVA

RESOLUTION NO. XX-2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, AUTHORIZING THE CITY MANAGER TO EXECUTE CONTRACT CHANGE ORDER NO. 2024-68-4, INCREASING THE CONTRACT AMOUNT FROM $2,289,509.70 TO AN AMOUNT NOT TO EXCEED $2,463,447.29 WITH MARTIN GENERAL ENGINEERING, INC. FOR CONSTRUCTION OF THE CHASE DRIVE AMERICAN RIVER PARKWAY CONNECTION PROJECT

WHEREAS, the City solicited bids for the Chase Drive American River Parkway Connection Project under the requirements of the state law and publicly opened bids on May 2, 2024; and

WHEREAS, the lowest responsible bidder is Martin General Engineering, Inc.; and

WHEREAS, on May 20, 2024, the City Council awarded Construction Contract No. 2024-68 to Martin General Engineering Inc. in an amount not to exceed $2,156,838.35 for the Chase Drive American River Parkway Connection Project; and

WHEREAS, the project will include a Class I multi-use path to promote active transportation and recreation, high-visibility crosswalks to enhance safety, and landscaping and Low Impact Design features along Chase Drive from the Chase/Coloma Plaza to the spur trail connecting to the American River Parkway; and

WHEREAS, the Rancho Cordova Municipal Code (RCMC), Section 3.60.110 C allows the City Manager signing authority up to 10% on construction change orders; and

WHEREAS, Change Orders No. 1, 2, and 3 totaling $169,383.38 were processed administratively in compliance with RCMC 3.6.110 C; and

WHEREAS, This change order represents 1) Unforeseen repairs required during the first phase of construction; 2) Temporary striping required between the two phases of construction; and 3) Adjustments in bid quantities for Phase Two of the trail construction.

WHEREAS, Change Order No. 4 in the amount of $173,937.59 exceeds the City Manager's signing authority; and

WHEREAS, funding for this project is captured in the Fiscal Year 2023-24 and 2024-25 Capital Improvement Plan budget, funded by a $2.4 million SACOG Maintenance and Modernization Grant, Measure A Construction Fund, and Transportation Development Act Fund; and

WHEREAS, the Project was reviewed under the requirements of the California Environmental Quality Act (CEQA), and it has been determined to be exempt from further review pursuant to CEQA Regulation 15301 subsection (c) for existing facilities.

NOW, THEREFORE, BE IT HEREBY RESOLVED THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA does authorize the City Manager to execute Contract Change Order

No. 2024-68-4 with Martin General Engineering, Inc. to increase the contract amount from $2,289,509.70 to an amount not to exceed $2,463,447.29 for construction of the Chase Drive American River Parkway Connection Project in a form approved by the City Attorney.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Siri Pulipati, Mayor

Stacy Leitner, CMC
City Clerk

FOURTH AMENDMENT TO THE CONSTRUCTION SERVICES AGREEMENT BETWEEN THE CITY OF RANCHO CORDOVA AND MARTIN GENERAL ENGINEERING, INC. FOR THE CHASE DRIVE AMERICAN RIVER PARKWAY CONNECTION PROJECT

This Fourth Amendment to the Construction Services Agreement ("Amendment") is made by and between the City of Rancho Cordova ("City") and Martin General Engineering, Inc. ("Contractor") as of April 21, 2025. City and Contractor are hereinafter collectively referred to as the "Parties."

RECITALS

WHEREAS, the Parties entered into a Construction Services Agreement ("CSA") dated May 20, 2024 in the contract amount of $2,156,838.35 for the purpose of constructing the Chase Drive American River Parkway Connection Project; and

WHEREAS, per the City Municipal Code, Section 3.60.110 C, the City Manager is given the authority to approve change orders up to 10% of the contract value; and

WHEREAS, on October 4, 2024, Administrative Contract Amendment 2024-68-01 was executed increasing the contract by $26,972.52 to a contract amount of $2,183,810.87 for geogrid placement and school driveway adjustments; and

WHEREAS, on January 9, 2025, Administrative Contract Amendment 2024-68-02 was executed decreasing the contract by -$17,233.01 to a contract amount of $2,166,577.86 for irrigation and landscaping modifications; and

WHEREAS, on February 24, 2025, Administrative Contract Amendment 2024-68-03 was executed increasing the contract by $122,934,84 to a contract amount of $2,289,509.70 for additional aggregate base quantities; and

WHEREAS, this Contract Amendment No. 2024-68-04 was executed decreasing the contract by $173,937.59 to a contract amount of $2,463,447.29 for unforeseen repairs, temporary striping and adjusted bid quantities; and

WHEREAS, the Parties agree that changes to the term and services provided for in the CSA are necessary in order for the City to continue receiving services by Contractor.

NOW, THEREFORE, the Parties hereto agree as follows:

AGREEMENT

1. The Parties agree to amend Section 5 of the CSA in order to increase the compensation amount to pay Contractor for additional services. Section 5 of the CSA is amended to read as follows:

> "Attached hereto as Exhibit "A" and by reference made a part hereof, is the bid and proposal of Contractor. Said bid and proposal will contain, as required by the terms of said specifications, the full and complete schedule

of the different items with the lump sums or unit prices as so specified. The City agrees in consideration of the work to be performed for the Project herein and subject to the terms and conditions thereof, to pay Contractor all sums of money which may become due to Contractor in accordance with the terms of the aforesaid bid and proposal, and this Agreement, to wit: **Two Million Four Hundred Sixty Three Thousand Four Hundred Forty Seven Dollars and Twenty Nine Cents, ($2,463,447.29).** Said sum shall be paid in accordance with Section 8 of the Standard Specifications. With respect to that portion of the above sum as is based upon the estimated quantities specified for the general scope of the work to be performed herein, actual payment will be based upon the quantities as measured upon completion. No payment made under this Agreement shall be construed to be an acceptance of defective work or improper materials."

2. All other terms and conditions in the CSA shall remain in full force and effect to the extent they are not in conflict with this Amendment.

3. The signatures of the Parties to this Amendment may be executed and acknowledged on separate pages or in counterparts which, when attached to this Amendment, shall constitute one complete Amendment.

IN WITNESS WHEREOF, the Parties have executed this Amendment on the day and year first above written.

CITY OF RANCHO CORDOVA

_____
Micah Runner, City Manager

Date:_____

Attest:

_____
Stacy Leitner, CMC, City Clerk

Date:_____

Approved as to Form:

_____
Adam U. Lindgren, City Attorney

Date:_____

CONTRACTOR

_____
Adrian Martin, Vice President

Date:_____

EXHIBIT A

Project Name: **Chase Drive American River Parkway Connection Project**

CITY OF RANCHO CORDOVA

Contract Change Order No. 4

ATTACHMENT 2 Sheet 1 of 2

City Contract No. 2024-68-04

To: **Martin General Engineering.** You are hereby directed to make the herein described changes from the plans and specifications or do the following described work not included in the plans and specifications on this contract.

Description of work to be done, quantities and prices to be paid. Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time.

Change requested by: **Engineer**

Extra Work at agreed Lump Sum/ Agreed Unit Price

1. PCO#04B – Additional Roadway Excavation: MGE is directed to perform additional roadway excavation to accommodate the additional Aggregate base added with PCO#04A and the Digouts for unsuitable materials. Additional Roadway Excavation 10% over base bid quantity to be paid at agreed unit rate of $207.00/CY. **INCREASE: $96,803.55**

2. PCO# 19 – Temporary Striping on Lancer Lane. Contractor is directed to place temporary striping at lancer lane until Phase 2 improvements are completed on the NE side of the intersection. Payment for work at agreed lump sum. **INCREASE: $1,575.00**

Extra Work at Force Account

1. PCO#35 – Reconnect Existing Irrigation: Contractor is directed to reconnect an irrigation line isolated by the project improvements. Payment for work on force account**.** **INCREASE: $4,476.52**

Adjustment to Bid Item Quantities

1. The Following Bid item quantities are adjusted based on field measurements and field directives. **INCREASE: $71,082.52**

Bid Item	Description	Unit	Unit Rate	Quantity	Total
10B	Roadway Ex	CY	$178.00	26.69	$4,750.82
12B	Class 2 Agg Base	CY	$452.00	26.69	$12,061.70
13B	HMA (Type A)	TON	$201.00	270	$54,270.00
				Total	$71,082.52

TOTAL: $173,937.59

Project Name:
Chase Drive American River Parkway Connection Project

CITY OF RANCHO CORDOVA

Contract Change Order No. 4

City Contract No. 2024-68-04

Resolution 43-2024

Contract Summation:

Original Contract:	**$2,156,838.35**	Total Change Orders:	**$306,608.94**	New Contract Cost Total:	**$2,463,447.29**

By reason of this order the time of completion will be adjusted as follows: 0 **working days**

Submitted by: Brian Ellis — Construction Manager/Resident Engineer, City of Rancho Cordova — Date: 03/31/25

Recommend Approval by: _____ — Project Manager, City of Rancho Cordova — Date: _____

Approved by: _____ — Public Works Director, City of Rancho Cordova — Date: _____

We, the undersigned Contractor, have given careful consideration to the change proposed and all of its impacts, both direct and indirect, and hereby agree, if this proposal is approved, that we will provide all equipment, furnish all materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices and time extensions shown above.

Acceptance Date: 3/31/25 — Contractor: Martin General Engineering, Inc.

By: _____ — Title: Adrian Martin, Vice President

If the Contractor does not sign acceptance of this order, his attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Original to: *Contractor*
City Clerk

Copies to: *Resident Engineer*
City Project Manager

City Manager or Designee — Date
City of Rancho Cordova

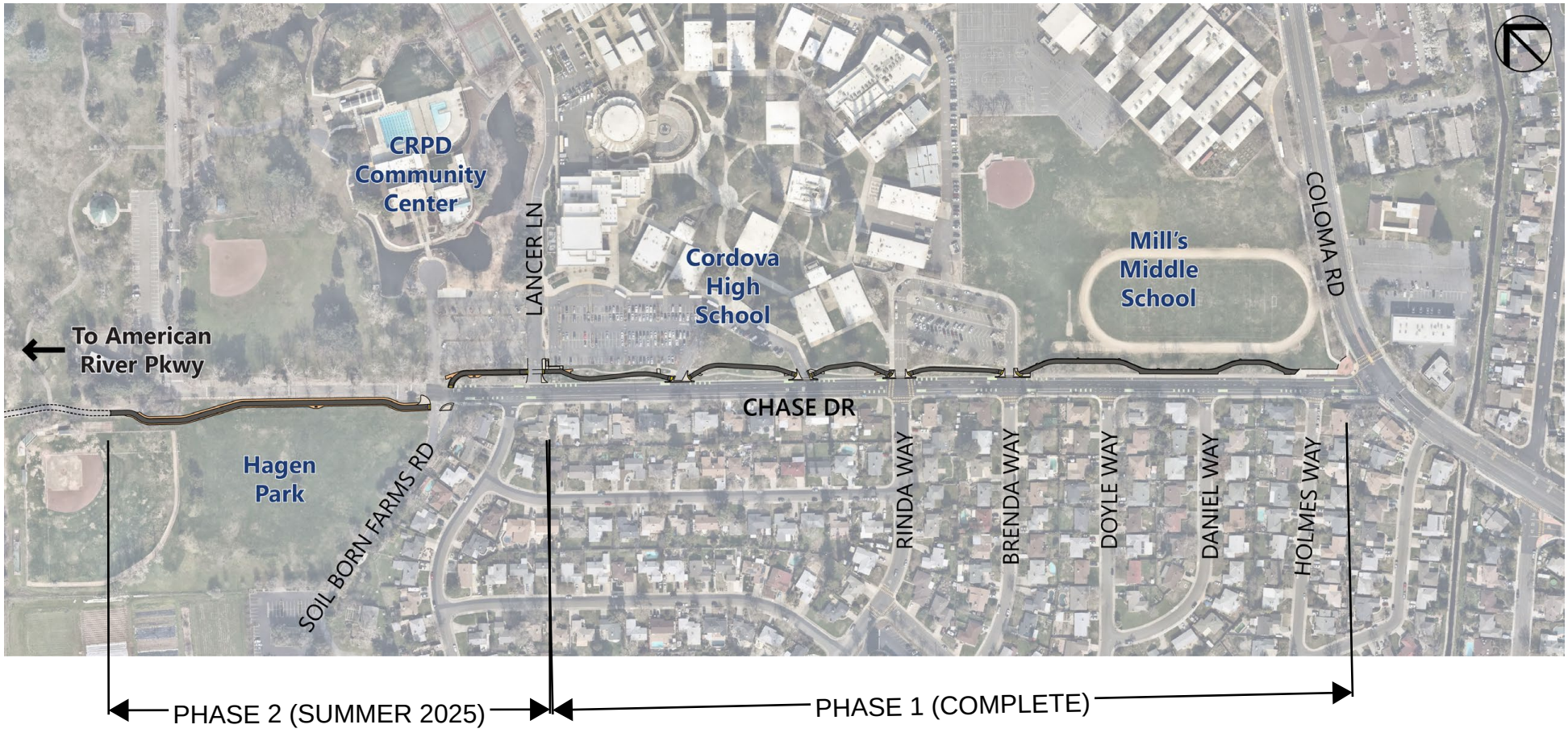
Roadway Excavation PCO#04B -Backup

Start	End	Month Perfomed	Sqft	Length	Depth	Width	CY	Notes
216+45	222+75	July		626.50	0.50	10.00	116.02	Bike Path
212+02	214+20	Aug		226.10	0.50	10.00	41.87	Bike Path
212+02	214+20	Aug	555.50		0.50		10.29	Sidewalk
214+20	228+50	Aug		275.60	0.50	10.00	51.04	Bike Path
214+20	228+50	Aug	59.30		0.50		1.10	Sidewalk
228+50	230+74.5	Aug		192.90	0.50	10.00	35.72	Bike Path
228+50	230+74.5	Aug	608.60		0.50		11.27	Sidewalk
224+86.82	226+57	Sept		250.10	0.50	10.00	46.31	Bike Path
224+86.82	226+57	Sept	1216.80		0.50		22.53	Additional Removal at Bikepath/S
Digouts							166.00	See Additional Backup
					10% BI Quantity		-34.50	
							467.65	

Digout Tracking - Chase Drive ARPC Phase 1
Updated 11/11/24

Date	Location	Depth	Width	Length	SF	Material	CY AB	CY Roadway Ex
7/10/2024	DW#1	1	10	50	500	AB	18.52	18.52
7/10/2024	DW#1	1	6	9	54	AB	2.00	2.00
7/10/2024	DW#1	1	15	15	225	AB	8.33	8.33
7/11/2024	AC Area	1	35	20	700	AB	25.93	25.93
7/11/2024	C&G between DW#1 & DW#2	1	3	12	36	AB	1.33	1.33
7/11/2024	C&G between DW#1 & DW#2	1	3	16	48	AB	1.78	1.78
7/11/2024	C&G between DW#1 & DW#2	1	3.5	82	287	AB	10.63	10.63
7/17/2024	Bike Path between DW#1 and DW#2	0.5	10	140	1400	AB	25.93	25.93
7/19/2024	Bike Path between DW#3 and DW#4	0.5	15	42	630	AB	11.67	11.67
7/19/2024	Bike Path between DW#3 and DW#4	0.5	5	75	375	AB	6.94	6.94
7/19/2024	Bike Path between DW#3 and DW#4	0.5	5	18	90	AB	1.67	1.67
7/25/2024	DW#2	1	14	47	658	AB	24.37	24.37
7/25/2024	DW#2	1	14	20	280	AB	10.37	10.37
7/26/2024	DW#4	1	14	21	294	AB	10.89	10.89
8/13/2024	STA 230+27	0.5	12	12	144	AB	2.67	2.67
8/21/2024	STA224+00	1	10	10	100	AB	3.70	3.70
						Totals	**166.73**	**166.73**

Proposed Project Area Map



MEMORANDUM

ITEM 9.7.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Amanda Norton, Economic Development Director

SUBJECT: **A RESOLUTION ACKNOWLEDGING THE TERMINATION OF A COMMUNITY THEATER PROJECT IN PARTNERSHIP WITH PHOENIX PRODUCTION COMPANY, DOING BUSINESS AS RISE UP THEATRE AND RESCINDING RESOLUTION NO. 23-2024**

RECOMMENDATION

Receive and file this report documenting the notice from Rise Up Theatre to terminate their agreement with the City regarding the development of a community theater, and adopt a Resolution, rescinding Resolution No. 23-2024 which approved the forgivable loan agreement with Rise Up Theatre for the construction of a 99-seat multi-use performing arts facility.

RESULT OF RECOMMENDED ACTION

The community theater project with Rise Up Theatre would be officially concluded, and all City obligations tied to the forgivable loan agreement will be nullified.

BACKGROUND

In the first quarter of 2021, Phoenix Production Company, doing business as Rise Up Theatre (Rise Up), submitted a Community Enhancement Fund (CEIF) grant application for the 2021-2022 fiscal year. Although the project was not initially funded, subsequent budget surpluses allowed the City Council to allocate $150,000 to Rise Up through Resolution No. 120-2022. The grant funding was contingent upon securing a viable location and to-date the grant remains unallocated.

Over the course of the next three years, Rise Up worked closely with City staff to explore multiple locations, explore scope and budget, and adapt to evolving project requirements. Notable efforts included:

- Multiple site searches
- Evaluation of 2 sites (11088 Olson Dr. & 2810 Zinfandel Dr.)
- Participation in multiple Development Services Team (DST) meetings
- Execution of a lease agreement and drafted forgivable loan agreement
- Engagement with architectural planning and tenant improvement estimates
- Proposal of revised project scope and budget

On March 18, 2024, City Council approved Resolution No. 23-2024 allocating $1,938,298 in forgivable loan funding for a 99-seat theater, contingent upon an approved location and finalized agreement. Upon further assessment of the tenant improvement costs, Rise Up elected to explore additional locations.

On January 27, 2025, the City received formal notice from Courtney Conklin, Founder and Artistic Director of Rise Up Theatre, stating the organization's decision to terminate the project and withdraw from their agreement with the City.

FISCAL IMPACT AND FUNDING SOURCE

Community Enhancement and Investment Fund legacy funds were allocated to the project under the original agreement. With the withdrawal of the agreement, there is no fiscal impact.

ATTACHMENT(S)

1. Resolution

CITY OF RANCHO CORDOVA

RESOLUTION NO. XX-2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, ACKNOWLEDGING THE TERMINATION OF THE COMMUNITY THEATER PROJECT IN PARTNERSHIP WITH PHOENIX PRODUCATION COMPANY, DOING BUSINESS AS RISE UP THEATRE AND RESCINDING RESOLUTION NO. 23-2024

WHEREAS, Phoenix Production Company, doing business as Rise Up Theatre, submitted a grant application to the City of Rancho Cordova during the 2021-22 fiscal year for the development of a community theater project; and

WHEREAS, the City Council subsequently approved $150,000 in Community Enhancement Fund (CEIF) grant funding through Resolution No. 120-2022, contingent upon Rise Up securing a viable location for the project; and

WHEREAS, on May 23, 2023, the City Council allocated $1,938,298 in additional funding over five years through Resolution No. 63-2023 to support the theater project, subject to an executed lease and finalized agreement with Rise Up Theatre; and

WHEREAS, staff worked extensively with Rise Up Theatre to identify and evaluate potential sites, draft and negotiate a forgivable loan agreement, and assist with technical and financial planning to advance the project; and

WHEREAS, on March 18, 2024, the City Council approved Resolution No. 23-2024, authorizing execution of a forgivable loan agreement for the community theater project at 11088 Olson Drive; and

WHEREAS, despite collaborative efforts and multiple revisions to project plans, Rise Up Theatre submitted a formal letter dated January 27, 2025, notifying the City of its decision to terminate the agreement and discontinue pursuit of the project; and

WHEREAS, Rise Up Theatre's withdrawal reflects the conclusion of the City's agreement with the organization, rendering the allocated funding and project plans inactive.

NOW, THEREFORE, BE IT HEREBY RESOLVED THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA HEREBY:

1. Acknowledges receipt of the January 27, 2025 letter from Rise Up Theatre formally terminating its participation in the community theater project;
2. Accepts Rise Up Theatre's withdrawal from the forgivable loan agreement and associated funding allocations;
3. Directs staff to close out the project file and release any unencumbered funds previously reserved for this partnership;
4. Encourages continued support for arts and culture initiatives that align with the City's strategic goals and community interests;
5. Rescinds Resolution No. 23-2024.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

Siri Pulipati, Mayor

Stacy Leitner, CMC
City Clerk

MEMORANDUM

ITEM 9.8.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: David Kwong, Assistant City Manager

SUBJECT: **A RESOLUTION APPROVING THE INCREASE TO THE CONTRACT WITH OUTSIDE COUNSEL SANDERS ROBERTS FOR EMPLOYMENT LITIGATION TO AN AMOUNT NOT TO EXCEED $325,000**

RECOMMENDATION

Adopt the Resolution approving a contract amendment to increase the existing contract with outside counsel Sanders Roberts to an amount not to exceed $325,000 for employment litigation for the City as may be assigned by the City Attorney in consultation with the City Manager, in a form approved by the City Attorney.

RESULT OF RECOMMENDED ACTION

This item will pay to defend the City in employment litigation.

DISCUSSION

The City Attorney's law firm, Meyers Nave, provides the City with comprehensive services on personnel and employment matters relating to the City and its employees and officials. From time to time, on particular matters, it may be beneficial to receive litigation services for certain employment litigation from other counsel. For one such matter, the City recently entered into an initial contract for legal services from the law firm Sanders Roberts. Sanders Roberts has an impressive record representing public agencies in employment litigation.

FISCAL IMPACT AND FUNDING SOURCE

The City will pay for these services out of the General Fund. PRISM, the City's risk insurance company, will reimburse a portion of the litigation invoices upon conclusion of the litigation.

ATTACHMENT(S)

1. Resolution

CITY OF RANCHO CORDOVA

RESOLUTION NO. XX-2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, TO APPROVE THE INCREASE OF THE CONTRACT WITH OUTSIDE COUNSEL SANDERS ROBERTS FOR EMPLOYMENT LITIGATION TO $325,000

WHEREAS, the City Attorney's law firm, Meyers Nave, provides the City with comprehensive services on personnel and employment matters relating to the City and its employees and officials; and

WHEREAS, from time to time, on particular matters, it may be beneficial to receive litigation services for certain employment litigation from other counsel; and

WHEREAS, for one such matter, the City recently entered into an initial contract for legal services from the law firm Sanders Roberts.

NOW, THEREFORE, BE IT HEREBY RESOLVED THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA approves the increase of the contract with outside counsel Sanders Roberts for employment litigation to an amount not to exceed $325,000, in a form approved by the City Attorney.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____
Siri Pulipati, Mayor

_____
Stacy Leitner, CMC
City Clerk

MEMORANDUM

ITEM 11.1.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Chance Finley-Ross, Associate Planner

SUBJECT: **MILLS CROSSING – SPECIFIC PLAN AMENDMENT, MAJOR DESIGN REVIEW, AND TENTATIVE SUBDIVISION MAP (ENVIRONMENTAL IMPACT REPORT (SCH #2023010102) PREPARED PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT) – PROJECT NO. PLND-0524-0098 – 10153 FOLSOM BOULEVARD; APN: 076-0020-019, -020, -021, AND -022**

PROPERTY OWNER:	**APPLICANT/DEVELOPER:**
City of Rancho Cordova 2729 Prospect Park Drive Rancho Cordova, CA 95670	Stefan Heisler (City Applicant Representative) 2729 Prospect Park Drive Rancho Cordova, CA 95670

PROJECT:	The City submitted a discretionary entitlement application for mixed-use development on an approximately 10-acre site. The application requests approval for a Major Design Review, Specific Plan Amendment, and Tentative Subdivision Map. The Specific Plan Amendment seeks to rezone the current Residential Mixed-Use (FB-RMU) designation to High Density Residential (FB-HDR), Medium Density Residential (FB-MDR), and Commercial Mixed-Use (FB-CMU). The project will feature community commercial buildings, public open space, and surface parking. The proposed development includes three buildings, designed to accommodate a variety of uses, including office space, community flex space, health services, event space, and a flexible theater. The submission also includes detailed site plans and pedestrian plans with explanations of minor exceptions to development standards, architectural elevations for the proposed structures, landscaping plans, lighting designs, and a Tentative Subdivision Map.
FILE:	PLND-0524-0098
LOCATION:	10153 Folsom Boulevard
APN:	076-0020-019, -020, -021, & -022
ZONING	Residential Mixed-Use (FB-RMU) within the Folsom Boulevard Specific Plan
PLANNER:	Chance Finley-Ross, AICP, Associate Planner

RECOMMENDATION

1. Adopt a Resolution (Attachment 1) certifying the Mills Crossing Environmental Impact Report and adopt the Mitigation Monitoring Report Program and CEQA Findings (Attachment 2); and

2. Introduce and waive the first reading of an Ordinance adopting the Specific Plan Amendment (Attachment 8) with associated exhibit and track changes (Attachments 9 and 10), subject to the findings contained in the Ordinance; and
3. Adopt a Resolution (Attachment 5) approving a Tentative Subdivision Map and a Major Design Review with associated exhibits (Attachments 6 and 7), subject to the findings contained in the Resolution.

FEBRUARY 11TH CITY COUNCIL WORK SESSION

At the February 11, 2025 Work Session, staff and the project team provided a comprehensive overview on the status, anticipated programming and building uses, and updated renderings of the three commercial buildings, open space, housing, and parking components of the project. The project budget and financial considerations were also presented and discussed. The main discussion topics included the space configuration of Building 2, parking, and questions regarding the finance plan options presented.

- **Building 2 space configuration:** Comments expressed the need for maximum flexibility of indoor and outdoor spaces, timeless architecture, and provide for both public and private uses. Classroom spaces should be designed to be multi-functional and not be limited to single uses (e.g. only rehearsal space). The project team has analyzed the individual spaces and ensured configuration for a wide variety of uses and users.

- **Parking:** The City Council discussed the proposed amount of parking on-site and expressed concerns that the surrounding community may utilize the parking, which may conflict with the parking needs of Mills Crossing uses. Parking alternatives at adjacent sites were discussed. The project team is furthering conversations with Los Rios and Regional Transit to execute shared parking agreements. The City Council expressed that if on-site and adjacent off-site parking was insufficient in the future then they would be in favor in exploring vertical parking options such as a parking deck or parking garage. Private parking garage models in Sacramento were offered as an alternative to explore.

PLANNING COMMISSION PUBLIC HEARING

On March 26, 2025, the Rancho Cordova Planning Commission held a public hearing to review the Mills Crossing project and provide recommendations to the City Council. City staff presented the project, followed by discussion that included staff input, public comments, and Commission deliberation. The following key topics were addressed during the meeting:

- **Pedestrian Space Amenities:** The Commission discussed the applicant's request to reduce the number of trash receptacles and electrical outlets in the plaza and project green areas. After deliberation, the Commission determined that the proposed number of trash receptacles would be sufficient since most large events provide their own waste disposal. However, concerns remained about electrical access for future events. The Commission recommended adding a condition of approval requiring the applicant to work with City staff to ensure an adequate number of electrical outlets balancing safety, maintenance, and event needs, are provided in outdoor gathering areas and potential event spaces. Compliance with this condition of approval will be tied to the issuance of a building permit.

- **Trash Enclosures:** The Commission discussed whether the two planned trash enclosures would be sufficient to accommodate large events in the plaza and project green areas. The architect provided details on their size and placement, and after deliberation, the Commission agreed that the enclosures would adequately meet the project's needs.

- **Parking Availability:** The Commission discussed concerns about the adequacy of parking, potential overflow impacts on surrounding businesses and residents, and pedestrian access from shared parking sites under consideration. As a potential short-term solution, the Commission Chair suggested temporarily utilizing vacant future housing parcels (Parcels 6 and 7) for additional parking until permanent solutions are in place. However, challenges such as the cost of temporary improvements and the competitive timelines for commercial and residential development were noted.

- **Pedestrian Safety & Access:** Commissioners expressed concerns about pedestrian safety for people crossing Folsom Boulevard, particularly from the Mather/Mills Light Rail station and potential shared parking opportunities with the MACC/Regional Transit site to the south. The topic of a pedestrian overcrossing at this location was raised, as it had been discussed in earlier Mills Crossing planning efforts. In previous discussions, the safety benefits of an overcrossing were recognized, but discussions also acknowledged significant challenges, including overall cost of the pedestrian crossing and the physical constraints of fitting the structure within the site and at the transit station.

- **Loading Dock:** During public comment, concerns were raised regarding the size, truck access, and location of the proposed loading dock behind Building 2 (the theater). The project architect explained the dock's design, including dimensions and truck maneuverability. After discussion, the Commission determined that the proposed loading dock was sufficient and did not require modifications.

- **Site Lighting:** Commissioners raised questions about site lighting and nighttime safety. The project architect responded that a photometric study had been conducted, demonstrating that the proposed lighting plan provides adequate illumination while shielding surrounding properties from glare, meeting outdoor lighting requirements and standards listed in the City's Zoning Code. After this explanation, no further concerns were expressed.

To address the Planning Commission's concerns, an additional condition of approval has been added to the project requiring the applicant to work with City staff to ensure an adequate number of electrical outlets in the plaza and project green areas. Compliance with this condition will be verified during the building permit process.

The Planning Commission also added two recommendations for City Council to consider:

- Explore the feasibility of a pedestrian overcrossing at Folsom Boulevard, and
- Consider utilizing vacant housing parcels for temporary parking until permanent solutions are identified.

With the added condition and recommendations, the Planning Commission voted to recommend that the City Council:

1. Adopt a Resolution certifying the Mills Crossing Environmental Impact Report and adopt the Mitigation Monitoring Report Program and CEQA Findings; and

2. Introduce and waive first reading of an Ordinance adopting the Specific Plan Amendment with associated exhibit and track changes, subject to the findings contained in the Ordinance; and
3. Adopt a Resolution approving a Tentative Subdivision Map and a Major Design Review with associated exhibits, subject to the findings contained in the Resolution.

The Planning Commission recommendation passed with a 4-2 vote (with one commissioner absent).

RESULT OF RECOMMENDED ACTION

Adoption of the above-referenced resolutions and ordinance would permit development of the Mills Crossing project and would allow the applicant to submit for final maps and necessary improvement plans and building permits to begin construction of the proposed project and associated infrastructure. Additionally, approval of the Specific Plan Amendment would amend the Folsom Boulevard Specific Plan (FBSP) to change the Residential Mixed-Use (FB-RMU) zoning designations to Commercial Mixed-Use (FB-CMU), High-Density Residential (FB-HDR), and Medium Density Residential (FB-MDR) zoning designations for the project site.

BACKGROUND & COMMUNITY OUTREACH

Since 2017, the City has been working to redevelop a long-vacant property on Folsom Boulevard into Mills Crossing, a transformative mixed-use development. The site was formerly home to the Folsom Mather Center, a commercial center with retail and restaurant uses. However, after the buildings were demolished, the site remained vacant for an extended period and is currently used as a parking lot.

The City has taken significant steps toward revitalizing the property, including visioning sessions, project studies, developer selection, and general design proposals. A robust community outreach process has been a key part of this effort, ensuring that residents, stakeholders, and decision-makers have been actively involved over the years. Outreach efforts have included multiple City Council work sessions, public workshops, focus groups, and informal gatherings such as “Coffee with the Mayor.” The City also collected input through online surveys and large-scale community events, including well-attended pop-up workshops. Discussions covered project visioning, development alternatives, design preferences, and community needs. A full list of community engagement efforts is provided in Attachment 11 of this staff report.

SITE CHARACTERISTICS AND LOCATION

The proposed Mills Crossing project is located at 10153 Folsom Boulevard, between La Loma Drive and Paseo Drive/Mather Field Road, as shown in **Figure 1**. The project site is within the Mather Mills Opportunity Area, which is identified in the Folsom Boulevard Specific Plan (FBSP) as a priority location for compact, urban, and pedestrian-oriented development.

The project site is directly adjacent to key community and transit amenities. The Mather Field/Mills Light Rail Station is located immediately south of the site, providing regional transit access. Additionally, the Mills Station Arts & Culture Center (The MACC) is located across Folsom Boulevard, further supporting opportunities for cultural and economic activity in the area. Surrounding land uses include Folsom Lake College (a Los Rios Community College District institution) to the east, multi-family and single-family residential neighborhoods to the north and

northeast, and commercial uses to the west. Given its location and surrounding context, the proposed project aligns with FBSP goals by facilitating redevelopment, enhancing transit accessibility, and supporting economic revitalization along the Folsom Boulevard corridor.

Figure 1: Project Location



PROJECT DESCRIPTION

In May 2024, the City of Rancho Cordova submitted a discretionary entitlement application for a City-sponsored mixed-use development on an approximately 10-acre site. The application requests approval of a Major Design Review, Specific Plan Amendment, and Tentative Subdivision Map. The Specific Plan Amendment proposes rezoning the site from Residential Mixed-Use (FB-RMU) to High Density Residential (FB-HDR), Medium Density Residential (FB-MDR), and Commercial Mixed-Use (FB-CMU) to accommodate a broader range of land uses.

The proposed development is intended to serve as a public resource, featuring community-commercial buildings, public open space, and surface parking. The project includes three buildings designed for multiple uses, including office space, community flex space, health services, event space, and a flexible theater. The entitlement application includes site plans, architectural elevations, landscaping plans, lighting designs, and a Tentative Subdivision Map.

The residential components are planned for future development and will be subject to separate entitlement applications and approvals.

SPECIFIC PLAN AMENDMENT

The entitlement application includes a proposed amendment to the City's Folsom Boulevard Specific Plan (FBSP). The Specific Plan Amendment would re-designate the project site from

Residential Mixed-Use (RMU) to a combination of Commercial Mixed-Use (CMU), High Density Residential (HDR), and Medium Density Residential (MDR), as shown in **Figures 2 & 3**. The FB-CMU designation would allow for a mix of commercial and other compatible uses, supporting an active streetscape along Folsom Boulevard and facilitating transit-oriented development near the Mather Field/Mills Light Rail Station. This designation would provide opportunities for retail, office, and service-oriented businesses that could serve both local residents and transit users.

The HDR designation would accommodate higher-density residential development, increasing housing capacity within close proximity to public transit and commercial services. This designation supports multi-family housing, which aligns with regional housing goals and transit-oriented development principles. The MDR designation would allow for moderate-density residential development, serving as a transition between higher-intensity uses and existing lower-density residential neighborhoods to the north and northeast. This designation is intended to support a mix of attached and detached housing types, contributing to the diversity of housing options within the area.

These proposed changes would establish a more defined land use framework for the site, aligning with the objectives of the Folsom Boulevard Specific Plan and the Mather Mills Opportunity Site by promoting a mix of uses, supporting housing production, and enhancing connectivity within the corridor. Future housing projects within the MDR and HDR designated areas will be subject to a separate entitlement application process at a later date, allowing for further review of site-specific design and development details.

Chapter 23.152 of the Rancho Cordova Municipal Code requires specific findings to approve a Specific Plan Amendment. As shown in Attachment 8 - Draft Ordinance**,** all applicable findings have been met supporting the Specific Plan Amendment.

Figure 2: Existing Specific Plan Land Use Designations

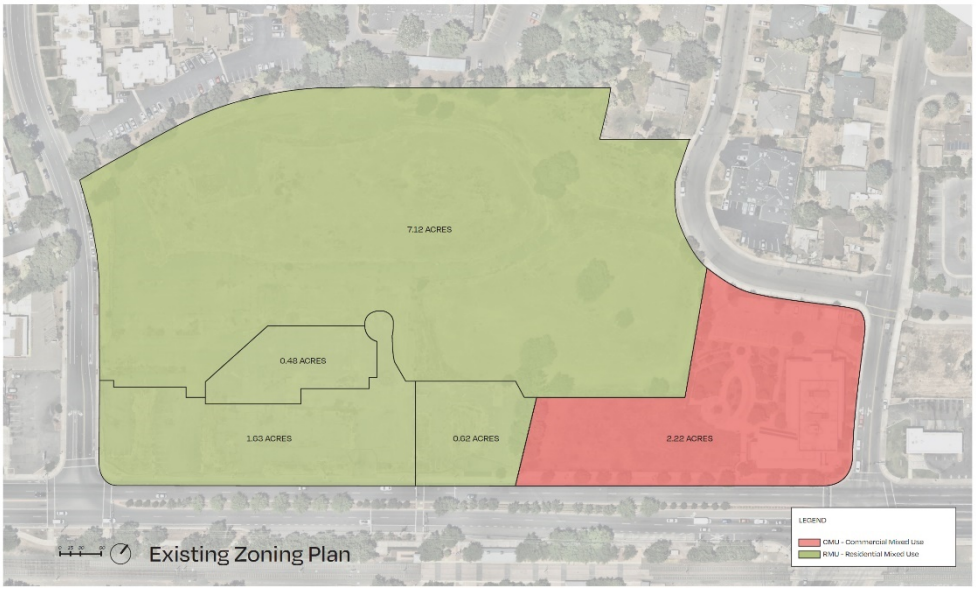
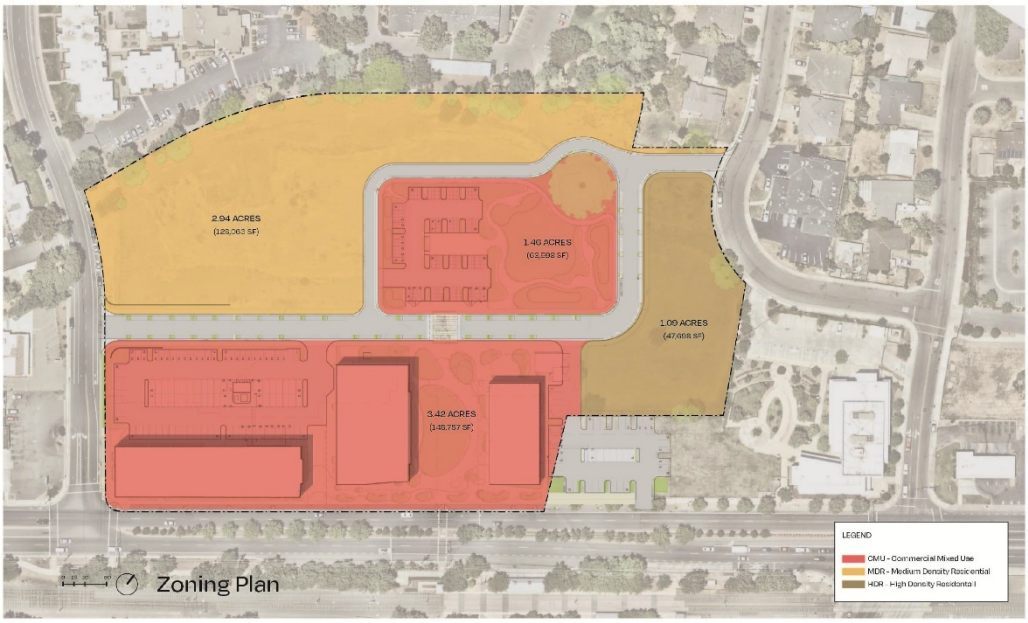


Figure 3: Proposed Specific Plan Land Use Designations



TENTATIVE SUBDIVISION MAP

At the time of this application's processing, the project site consists of four (4) separate parcels with a total combined acreage of 9.85 acres. As part of the proposed development, the applicant has submitted a request for a Tentative Subdivision Map, which would reconfigure the site into seven (7) distinct parcels, as shown in **Figure 4** (Attachment 6). The proposed subdivision is intended to align with the various land use designations and project components, including commercial, residential, and open space elements.

The subdivision map includes the dedication of new public streets, which will traverse the site and provide a direct connection between El Caprice Drive and La Loma Drive. This roadway is designed to improve site circulation, enhance multimodal connectivity, and facilitate access to future development. The map also incorporates detailed street cross-sections, illustrating planned streetscape improvements such as new sidewalks, landscaping, and pedestrian-friendly design features. These improvements are designed to align with the City's roadway standards and the objectives of the Folsom Boulevard Specific Plan.

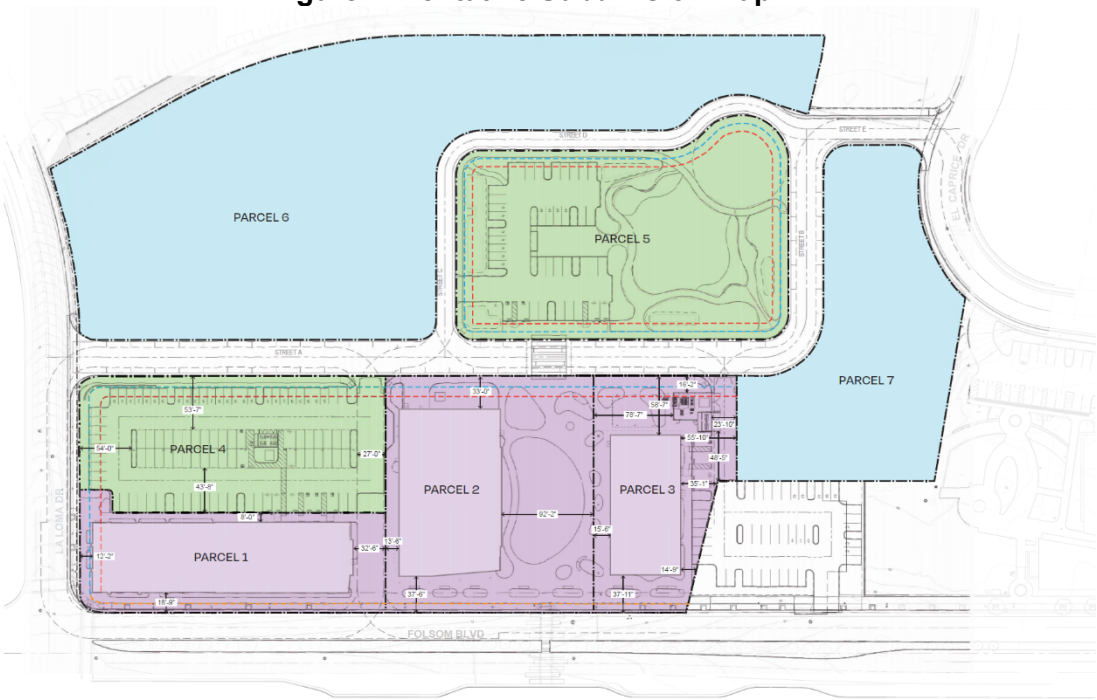
The proposed parcels are as follows:

- Parcels 1 through 4 – Designated for commercial uses, plaza open space, and the complementary parking lot associated with the project.
- Parcel 5 – Reserved as a green space amenity with parking, providing open space within the development.
- Parcel 6 – Planned for future Medium-Density Residential (MDR) development.
- Parcel 7 – Designated for future High-Density Residential (HDR) development.

The proposed subdivision layout is intended to support a functional and cohesive site plan, integrating multiple land uses while ensuring adequate access, infrastructure, and public improvements. A detailed analysis of site design, circulation, and architectural elements is provided in the Major Design Review section of this staff report.

The project, as conditioned, complies with the requirements and procedures of a subdivision map application. Pursuant to Section 66474 of the California Subdivision Map Act, a City must deny approval of a tentative subdivision map if specific findings are determined to be true. As detailed in Attachment 6, all applicable findings have been reviewed and met, supporting approval of the Tentative Subdivision Map request.

Figure 4: Tentative Subdivision Map



MAJOR DESIGN REVIEW

Site Plan

As illustrated in **Figure 5** and Attachment 6, the proposed site plan includes a mix of community-commercial, residential, and open space uses. The community-commercial buildings are concentrated in the southern portion of the site along Folsom Boulevard, in proximity to the Mather Field/Mills Light Rail Station and surrounding commercial uses. Their placement is intended to provide direct access to transit and services while maintaining connectivity with the surrounding area.

The site plan identifies three commercial buildings. Building 1, located at the southwest corner of the site and running parallel to Folsom Boulevard, is proposed to accommodate community-commercial uses, including a health and wellness clinic. Building 2, centrally positioned between Buildings 1 and 3, is planned to house a community arts center. Building 3, situated in the southeast portion of the site, is designated for additional community-commercial and retail uses. The layout of these buildings includes pedestrian pathways and outdoor spaces to facilitate access and circulation throughout the site.

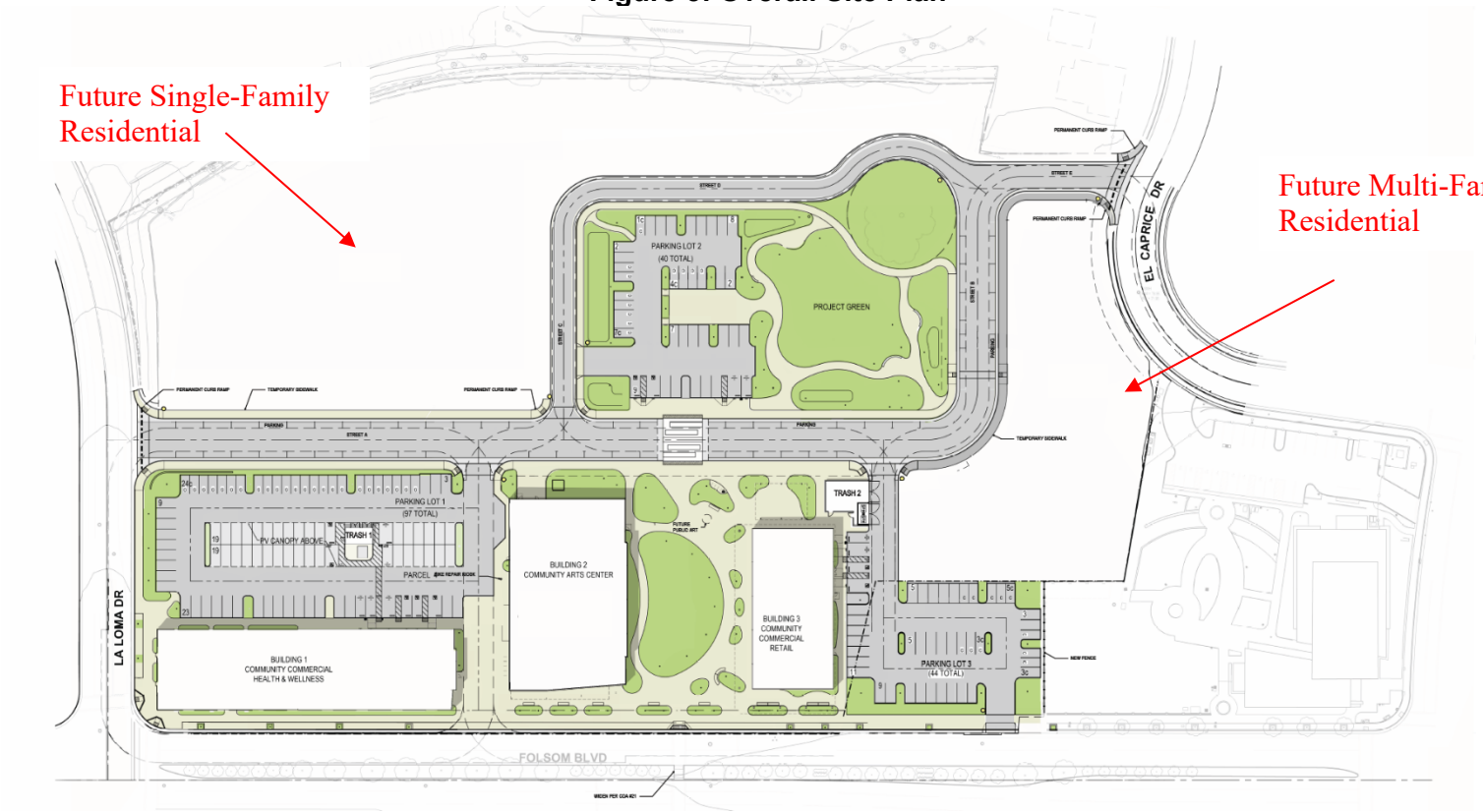
The residential component is planned for the northern portion of the site, adjacent to existing residential neighborhoods. The northeastern parcel is designated for a multifamily affordable apartment development, while the northwestern parcel is planned for townhouse-style homes. These residential projects are intended to provide a range of housing types and will be subject to a separate entitlement process at a later date.

The project also includes two open space areas. A neighborhood and community green space is planned in the northern portion of the site to provide passive recreation opportunities and landscaped gathering areas. Additionally, a plaza space of approximately 0.75 acres is proposed in the south-central portion of the site, designed to encourage and accommodate pedestrian activity and potential community events.

The site plan incorporates three parking lots, strategically placed to serve the community-commercial buildings and the proposed green space. Parking Lot 1, located on the western side of the site, includes an approximately 9,000-square-foot solar canopy structure that will cover a portion of the parking spaces. The solar canopy structure is included as part of the current design review application. Parking Lot 2 is located to the north and will provide supplemental parking for the project green space and Building 2, while Parking Lot 3 is positioned along the eastern side of the site, providing parking capacity for commercial uses. The site design also includes two trash enclosures, one located within Parking Lot 1 and the other adjacent to Parking Lot 3. Additional details regarding parking, access, and circulation are provided in the Parking section of this staff report.

The proposed site layout integrates a combination of land uses, open spaces, and circulation elements to accommodate the intended mix of residential and commercial activities. Further analysis of site design considerations, including infrastructure improvements and pedestrian connectivity, is provided in the Major Design Review section of this report.

Figure 5: Overall Site Plan



Plaza and Green Space

The Mather Mills Opportunity Site, as outlined in the Folsom Boulevard Specific Plan, requires that all major projects within the designated area incorporate a public gathering space to support community engagement and pedestrian activity. Additionally, Chapter 23.722 of the City's Zoning Code mandates the submission of a pedestrian plan as part of the design review application for all mixed-use developments. In response to these requirements, the applicant has submitted a Pedestrian Plan, as shown in **Figure 6** (Attachment 6), which outlines the integration of public spaces within the proposed development.

The Mills Crossing Pedestrian Plan has been designed to align with the City Council's vision for the site and incorporates operational input from City staff regarding the long-term maintenance and functionality of these public spaces. The plan identifies two primary pedestrian-oriented spaces within the project:

- A 20,000 SF plaza, centrally located within the southern portion of the site, designed to function as a flexible public space for gatherings, community events, and daily pedestrian activity.
- An 8,400 SF project green space, situated toward the northern portion of the site, providing opportunities for passive recreation and community use.

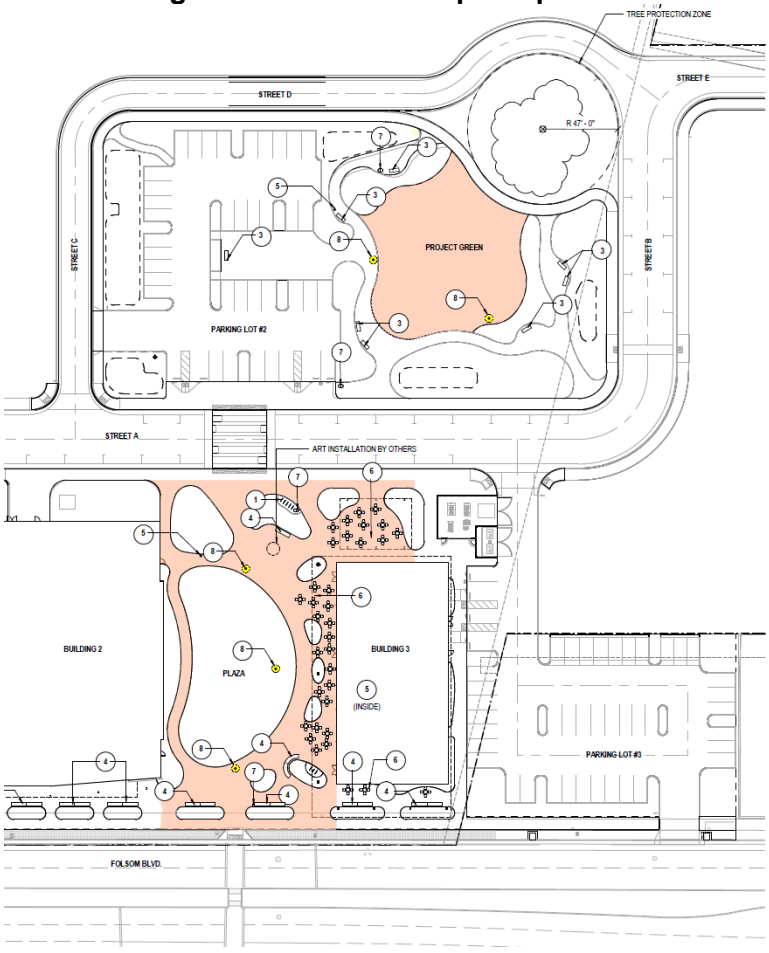
These public spaces are designed to accommodate a range of community activities while maintaining flexibility for both structured events and casual daily use. Given the site's transit-oriented nature and its designation for higher-density development, the open spaces are

intentionally designed to maximize accessibility, greenery, and functionality within a compact footprint. The project green area includes a lawn, pathways, and seating areas that support a variety of uses, including farmers markets, festivals, outdoor gatherings, and various other event types. The plaza area is designed to support dining, co-working, and programmed events, with an open wall on Building 1 identified as a potential surface for movie screenings and projected visual displays.

The project green space serves as a community gathering area intended for passive recreation and informal events. The design emphasizes unobstructed open areas suitable for small-scale activities such as picnicking, relaxation, and social gatherings. Pedestrian pathways and connectivity enhancements are incorporated throughout the site, ensuring access between the commercial, residential, and open space components of the development.

The proposed public spaces are designed to balance active and passive recreational needs, integrating landscaping, pedestrian circulation, and event programming opportunities to contribute to the overall walkability and usability of the site.

Figure 6: Pedestrian Open Space Plan



Landscaping & Site Lighting

The project application includes site landscaping and lighting plans designed to enhance the visual character of the development while supporting safety and visibility for visitors. These elements contribute to the overall functionality and integration of the site with its surroundings.

A landscaping plan has been submitted in compliance with Chapter 23.716 of the City's Zoning Code. The plan incorporates a selection of climate-adaptive trees, plants, and low-growing greenery throughout the site, including along interior and exterior streetscapes, within parking areas, and throughout designated open spaces. A general tree planting plan is provided in **Figure 7** below. The proposed landscaping is intended to provide shading, aesthetic enhancement, and environmental benefits. Parking lot trees have been incorporated to meet shading requirements, while landscaped planters are included along the frontage of Buildings 2 and 3 along Folsom Boulevard. Building 1 features a combination of shrubs and lower-lying landscaping elements along its frontage. Ground cover and ornamental grasses with low-growing spreading plants have been integrated to contribute to the streetscape's visual appeal while minimizing maintenance needs. To further support long-term landscape maintenance, the project includes a condition requiring the installation of a weed barrier beneath ground cover to reduce weed growth and bark runoff. A shading analysis has also been provided, demonstrating compliance with the requirements outlined in Section 23.716.070 of the Zoning Code.

The City has recently received feedback from PG&E regarding the removal of street frontage trees within their easement due to the presence of a high-pressure line along Folsom Boulevard. The City is actively coordinating with PG&E to determine acceptable landscaping alternatives and will develop a final landscape plan that ensures sufficient landscaping while maintaining a cohesive transition between Folsom Boulevard and the development.

Figure 7: Landscape Plan



The project's lighting plan provides illumination throughout the site, supporting pedestrian and vehicular circulation, security, and visibility during evening and nighttime hours. The plan includes pole-mounted lighting for parking areas, bollard lighting along pedestrian pathways, and wall-mounted fixtures on buildings to enhance visibility in key areas. Additionally, as shown in **Figure 8** below, specialized uplighting is proposed for the front and side facades of each building, highlighting architectural features and increasing visibility along Folsom Boulevard. The uplighting system includes color-adjustable lighting options, allowing for variation in illumination based on seasonal or community event themes. All proposed exterior lighting has been reviewed for compliance with the City's outdoor lighting standards outlined in Chapter 23.725 of the Zoning Code and has been determined to meet the applicable requirements. Full lighting plans are provided in Attachment 6 of this staff report.

Figure 8: Example Exterior Up-Lighting



BUILDING 1 - VIEW FROM FOLSOM

Architecture & Design

The proposed main community commercial structures for the Mills Crossing project are designed to be cohesive in style while providing visual interest along Folsom Boulevard. Each building has been carefully reviewed to ensure alignment with the City's design guidelines and the vision set forth in the Folsom Boulevard Specific Plan, specifically for the Mills Opportunity Site. Full-color elevations for the proposed buildings and structures are included in the attached project plans (Attachment 6).

Building 1

Building 1, as shown in **Figure 9,** is a two-story structure with a maximum height of 42 feet, featuring a footprint of approximately 18,000 square feet and a total floor area of approximately 36,000 square feet. This building is designed to accommodate community wellness services

and office spaces. The design emphasizes horizontal continuity, with the building extending in an east-west orientation.

The exterior façade integrates cement plaster and metal panels, with accent colors strategically placed to break up the massing and provide contrast against the predominantly white base. Darker gray accent sections define the structure's articulation, while expansive glass windows, separated by aluminum louvers with a wood-look finish, contribute to transparency and visual rhythm. The building's aesthetic is further enhanced by vertical design features and varying material textures.

Public art has been incorporated into the design, with three large-scale mural locations planned for the west, east, and south elevations. Each mural will extend from the roofline toward the bottom floor, creating prominent visual focal points. A Project Art Plan will be developed to outline the community-driven art selection process for the specific content of these murals and all artwork proposed throughout the Project.

Figure 9: Building 1 Front Elevation



VIEW FROM FOLSOM CORNER

Building 2

Building 2, as shown in **Figure 10**, is a two-story structure with a maximum height of 42 feet, featuring a footprint of 17,000 square feet and a total floor area of approximately 25,000 square feet. The building is designed to house a community theater and flexible art studio spaces, incorporating a rooftop patio covered by an aluminum canopy that faces Folsom Boulevard. The design emphasizes activation of both interior and exterior spaces to support arts and cultural programming.

The building is oriented in a north-south configuration, with an exterior treatment similar to Building 1. The façade consists of cement plaster and metal panels, with white as the primary color and darker gray accent sections delineating different portions of the structure. A distinguishing feature of the building is the second-story glass façade, which extends across the front elevation, allowing natural light into the upper-level interior spaces. The second floor also hangs over the main entrance, providing a covered entryway for pedestrians.

A defining element of Building 2 is its east elevation, which features a blank plaster wall facing the community plaza. This wall has been designed to accommodate outdoor movie screenings, supporting the site's emphasis on community gathering and programming. Additionally, the rear elevation incorporates a metal louver screen along the second story, adding both functional shading and aesthetic variation. Three mural locations have been identified—one on the west elevation and two on the east elevation. As with Building 1, the mural content will be determined through the Project Art Plan.

Figure 10: Building 2 Front Elevation



Building 3

Building 3, as shown in **Figure 11**, is a single-story structure with a maximum height of 30 feet, encompassing a footprint and total floor area of approximately 10,000 square feet. This building is designed to accommodate a community center and flexible event space, supporting a range of indoor and outdoor programming needs.

The architectural composition of Building 3 features a multi-slanted roofline, creating varying parapet heights that add visual interest and break up the building's massing. The primary exterior materials consist of metal panels and cement plaster, with accent colors—including white, yellow, beige, and gray—distributed across the façades to create contrast and depth. The front elevation, facing Folsom Boulevard, incorporates large transparent glass windows, enhancing visibility into the building's interior while fostering a welcoming street presence.

Structural metal beams define the main entrance, supporting an extended roof overhang that provides shade and shelter. Along the left side of the entrance, aluminum louvers with a wood-look finish add to the variation of the façade. The building's side elevation facing the plaza also incorporates significant glazing, further reinforcing transparency and connectivity with the public space. There is also a mural planned for the front entrance of this building, which will be completed at a later date through the Project Art Plan.

Figure 11: Building 3 Front Elevation



Site Vehicle Access and Pedestrian Connectivity

The proposed development is designed to provide efficient vehicle access and safe, well-connected pedestrian pathways. With multiple entry points, dedicated walkways, and proximity to public transit, the project ensures convenient mobility for drivers, cyclists, and pedestrians.

The project will include two primary driveways—one on La Loma Drive and one on El Caprice Drive—providing vehicular access to the site. These driveways will facilitate east-west traffic flow within the development, ensuring efficient internal circulation. The only direct access from Folsom Boulevard will be through Parking Lot 3, located on Folsom Lake College's property. This access point will allow vehicles to enter the site from the southeast, near Building 3.

For pedestrians, the site includes dedicated walkways and crosswalks to ensure safe movement throughout the development. A central crosswalk will connect key areas within the site, allowing pedestrians to easily access buildings and public spaces. From the development, pedestrians can cross Folsom Boulevard using signalized crosswalks to reach the Mather Field/Mills Station Light Rail Station.

Sidewalks are available on both sides of nearby streets, including Folsom Boulevard, El Caprice Drive, La Loma Drive, and Paseo Drive. In addition, there are several marked crosswalks, including those at the intersections of Folsom Boulevard with La Loma Drive and Paseo Drive, as well as a mid-block pedestrian crossing near the site, connecting the project with the Mather Field/Mills Station light rail station across Folsom Boulevard. A marked crosswalk is also available at the all-way stop intersection of Paseo Drive and El Caprice Drive.

For cyclists, Class II bike lanes run along Folsom Boulevard, Mather Field Road, and La Loma Drive. A multi-use path is also located along the south side of Folsom Boulevard, providing additional space for both pedestrians and cyclists.

The site is directly across from the Mather Field/Mills Station Light Rail Station, which is served by Sacramento Regional Transit's Gold Line. This station provides connections to the Blue and

Green Line trains in Downtown Sacramento, offering convenient public transit options for residents and visitors.

Parking

Parking for the Mills Crossing project has been designed to align with City zoning regulations that allow for parking reductions near major transit stops. The current entitlement phase covers the commercial and open space components of the project, with future housing uses providing their own required off-street parking.

A parking study prepared by Nelson Nygaard on August 7, 2024, analyzed the commercial components of the project using the City of Rancho Cordova Municipal Code (Code) parking ratios. Based on these ratios, 254 parking stalls would typically be required. However, Code Section 23.719.080 permits reductions and exemptions to minimum parking requirements, including shared parking arrangements and adjustments for proximity to transit.

The study included a peak shared parking demand analysis, which determined that the highest expected parking demand for the site is 170 spaces. To accommodate this demand, the project will provide 181 on-site off-street parking spaces, ensuring sufficient capacity. Additionally, AB 2097, which prohibits cities from imposing minimum parking requirements for developments within half a mile of major public transit stops, further supports the City's ability to reduce parking requirements for this project. The Mills Crossing site is located across from the Mather Field/Mills Station Light Rail Station, a qualifying major transit stop, making it eligible for these reductions.

Beyond on-site parking, the project also incorporates shared parking opportunities. The site is near several existing parking facilities, including the Regional Transit park-and-ride lot (226 spaces) and the Folsom Lake College student parking lot (295 spaces). The City also owns an adjacent undeveloped lot, which could accommodate approximately 80 additional parking spaces if needed. Furthermore, 45 on-street parking spaces will be available throughout the project area. The next steps include finalizing shared parking agreements with neighboring property owners. The proposed initial Memorandum of Understanding (MOU) with Folsom Lake College for Parking Lot 3 includes a 25-year term with options for extension.

By utilizing a combination of on-site parking, shared parking agreements, and transit accessibility, the Mills Crossing project ensures compliance with both local zoning requirements and state law while providing adequate parking to support the development.

Requested Deviations

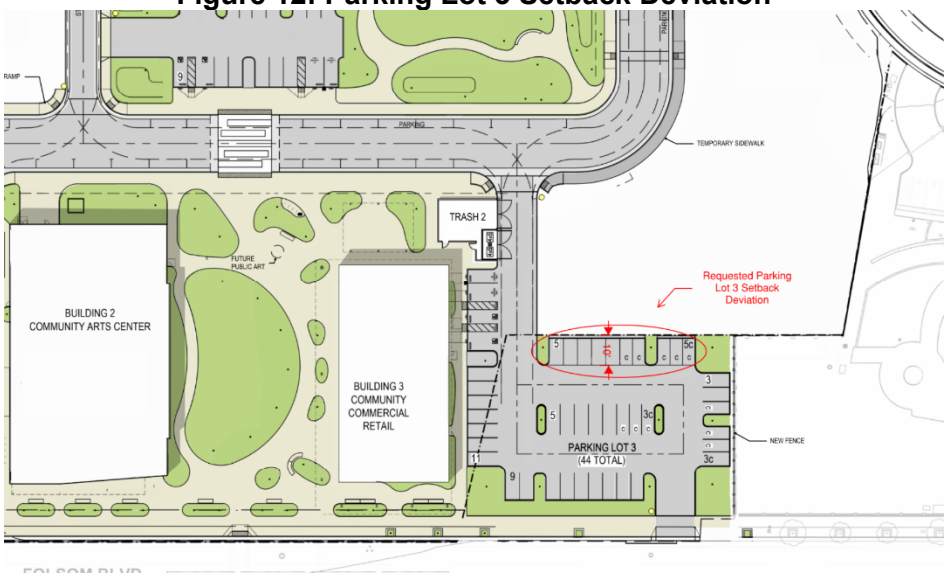
The following section describes requested deviations from the zoning code related to parking lot setbacks and pedestrian-oriented space requirements. The Folsom Boulevard Specific Plan provides flexibility by allowing the Approval Authority to grant exceptions to development standards during design review stage, so long as at least four of six listed conditions and all of the findings are met as listed in Chapter 3, Section D. of the Specific Plan. This project is expected to meet conditions 1-4 from the list provided. All findings are provided in Attachment 5 of this staff report.

Setback Deviation:

The Folsom Boulevard Specific Plan requires a 10-foot setback along the north property line of Parking Lot 3. However, Parking Lot 3's parking spaces, which will be developed as part of an agreement with Folsom Lake College, are proposed within this setback.

This deviation is necessary to meet the project's parking needs while accommodating site constraints. City staff have reviewed the request and determined that the deviation is appropriate given the unique site conditions and will not significantly impact future residential development on the adjacent parcel. The proposal is in conformance with the exception allowances as outlined in the Folsom Boulevard Specific Plan. See **Figure 12** below for the location of the Parking Lot 3 setback deviation.

Figure 12: Parking Lot 3 Setback Deviation



Pedestrian Plan Deviation:

The zoning code outlines specific requirements for pedestrian-oriented spaces, including seating, electrical outlets, and trash receptacles. However, Mills Crossing has been designed to provide flexible, multi-use open spaces that align with community feedback, needs, and City Council direction. The project prioritizes adaptable green spaces for events, gatherings, and recreation while balancing operational efficiency and safety.

- Seating: The required seating would limit the usability of open spaces. Instead, the project includes a mix of permanent and modular seating to support diverse uses. The Project Green area proposes 80 linear feet of seating, while the plaza area provides 190 linear feet in combination with 35 modular tables and chairs.
- Electrical Outlets: The proposed number has been reduced to prevent unnecessary infrastructure and safety concerns while still supporting public events. A total of five electrical outlets are provided for the plaza and project green areas.
- Trash Receptacles: Fewer receptacles are planned to maintain operational efficiency while ensuring adequate waste management. A total of 4 well-placed waste receptacles are provided between the project green and plaza areas.

These deviations allow for a more functional and community-driven design while still meeting the intent of the pedestrian-oriented space requirements. The proposal is in conformance with the exception allowances as outlined in the Folsom Boulevard Specific Plan. Detailed requests and justifications for the setback and pedestrian space deviations can be found at the end of Attachment 6 of this staff report.

FISCAL IMPACT

The Mills Crossing project represents a significant public investment in a transit-oriented, mixed-use development. The total estimated investment in the Mills Crossing site, including both public and private investment, is $160 million. Of this amount, approximately $120 million of capital investment from the City through a combination of grants, cash, and debt financing is anticipated. As a City-owned and operated project, the City of Rancho Cordova will be responsible for the ongoing maintenance and operations of the buildings and site. The project is expected to contribute to the local economy by supporting businesses, increasing foot traffic, and fostering commercial activity along Folsom Boulevard.

ENVIRONMENTAL

The City of Rancho Cordova prepared an Environmental Impact Report (EIR) for the Mills Crossing project in compliance with the California Environmental Quality Act (CEQA). A Notice of Preparation (NOP) was circulated on January 6, 2023, to trustee agencies, the State Clearinghouse (SCH #2023010102), and the public. A public scoping meeting was held on January 19, 2023, with representatives from the City, local agencies, community members, and the project applicant team.

The Draft EIR was released for public review on June 7, 2024, with a Notice of Availability (NOA) published in accordance with CEQA requirements. The document analyzed the project's environmental impacts, mitigation measures, and feasible alternatives. The public comment period lasted from June 7, 2024, to July 22, 2024, during which seven comment letters were received from four agencies, one Tribe, and two individuals. The Final EIR, which includes responses to comments and revisions to the Draft EIR where necessary, determined that no new information required recirculation under CEQA Guidelines Section 15088.5.

Potentially Significant Impacts

The Draft EIR identified potentially significant impacts to the following resources:

- Air Quality
- Biological Resources
- Cultural Resources
- Tribal Cultural Resources
- Hazards and Hazardous Materials
- Greenhouse Gases

Mitigation Measures

To reduce potential impacts, the EIR includes standard mitigation measures such as:

- Implementing SMAQMD construction emission controls to reduce fugitive dust.
- Conducting pre-construction surveys and establishing buffers for nesting birds and roosting bats.

- Halting construction and consulting an archaeologist or tribal monitor if cultural or tribal resources are discovered.
- Prohibiting natural gas infrastructure and ensuring electric vehicle readiness.
- Implementing a Site Cleanup Plan to address hazardous materials.
- Coordinating with Wilton Rancheria Tribal Government to provide a tribal monitor during ground-disturbing activities.
- Implementing transportation demand management strategies to reduce vehicle-related impacts.

With full implantation of these measures, the EIR concluded that all potential impacts will be reduced to a less-than-significant level. The Draft and Final EIR, including responses to comments, is provided in Attachment 3 - Draft EIR and Appendices and Attachment 4 - Final EIR and Appendices.

RECOMMENDED MOTIONS

1. Adopt a Resolution (Attachment 1) certifying the Mills Crossing Environmental Impact Report and adopting the Mitigation Monitoring Report Program and CEQA Findings (Attachment 2); and
2. Introduce and waive first reading of an Ordinance adopting the Specific Plan Amendment (Attachment 8) with associated exhibit and track changes (Attachments 9 and 10), subject to the findings contained in the Ordinance; and
3. Adopt a Resolution (Attachment 5) approving a Tentative Subdivision Map and a Major Design Review with associated exhibits (Attachments 6 and 7), subject to the findings contained in the Resolution

ATTACHMENT(S)

1. Resolution for CEQA
2. Exhibit A to the Resolution – MMRP & CEQA Findings
3. Mills Crossing Draft EIR with Appendices
4. Mills Crossing Final EIR with Appendices
5. Resolution for Major Design Review & Tentative Subdivision Map
6. Exhibit A to the Resolution – Project Plans
7. Exhibit B to the Resolution – Conditions of Approval
8. Ordinance for Specific Plan Amendment
9. Exhibit A to the Ordinance – Updated Specific Plan
10. Specific Plan - Track Changes
11. Community Outreach Summary
12. Presentation

CITY OF RANCHO CORDOVA

RESOLUTION NO. XX-2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, CERTIFYING THE ENVIRONMENTAL IMPACT REPORT AND ADOPTING ENVIRONMENTAL FINDINGS, MITIGATION MEASURES, AND A MITIGATION MONITORING AND REPORTING PROGRAM UNDER CEQA FOR THE MILLS CROSSING PROJECT APPROVALS PROJECT NO. PLND-0524-0098

WHEREAS, Mills Crossing ("Project") includes subdivision of 9.85 acres to develop community-commercial buildings, public open space, and surface parking. The project includes three buildings designed for multiple uses, including office space, community flex space, health services, event space, and a flexible theater. The Project is located at 10153 Folsom Boulevard, between La Loma Drive and Paseo Drive/Mather Field Road. The project site is within the Mather Mills Opportunity Area, which is identified in the Folsom Boulevard Specific Plan (FBSP) as a priority location for compact, urban, and pedestrian-oriented development; and

WHEREAS, the environmental review of the Project commenced with the release of the Notice of Preparation on January 6, 2023 to public agencies and interested parties for consultation on the scope of the EIR; and

WHEREAS, a Draft Environmental Impact Report ("Draft EIR") was released for a 45-day public and agency review on June 7, 2024. The Draft EIR assesses the potential environmental effects of implementation of the Project, identifies means to eliminate or reduce potential adverse impacts, and evaluates a reasonable range of alternatives to the Project; and

WHEREAS, the City received seven comments on the Draft EIR during the public review period. Responses to each individual comment letter were prepared, and are available in Chapter 2, Responses to Comments, of the Final EIR. The Final EIR comprises the Draft EIR together with one additional volume that includes the comments on the Draft EIR submitted by interested public agencies, organizations, and members of the public; written responses to the environmental issues raised in those comments; revisions to the text of the Draft EIR reflecting changes made in response to comments and other information; and other minor changes to the text of the Draft EIR. No new information was received that would require recirculation of the Draft EIR under CEQA Guidelines section 15088.5. The Final EIR is hereby incorporated in this document by reference; and

WHEREAS, on April 21, 2025, the City Council held a public hearing on the Final EIR and Project approvals; and

WHEREAS, the Final EIR identified several potentially significant impacts that will be reduced to a less than significant level with specific mitigation measures. Approval of the Project will therefore require adoption of mitigation findings and a Mitigation Monitoring and Reporting Program; and

WHEREAS, the Final EIR, and the City Council April 21, 2025 staff report, regarding the Draft EIR and Final EIR, including the analysis of the public comments, reflect the City's independent judgement and analysis; and

WHEREAS, the location and custodian of the Draft EIR and Final EIR and other documents that constitute the record of proceedings for the Project is the City of Rancho Cordova Planning Division, 2729 Prospect Park Drive, Rancho Cordova, CA 95670. The Draft EIR and Final EIR and documents relating to the Project are available for review in the City Planning Division.

NOW, THEREFORE, BE IT HEREBY RESOLVED THE CITY COUNCIL FOR THE CITY OF RANCHO CORDOVA, does hereby resolve as follows:

1. The foregoing recitals are true and correct and made a part of this resolution.

2. The City Council has reviewed and considered the Draft EIR and Final EIR (collectively, "Final EIR") , as well as the public comments and staff's analysis of the comments.

3. Based on its review of the foregoing documents, the City Council makes and adopts the following findings relating to the CEQA review for the Project prior to approving the Project:

A. The Final EIR has been completed in compliance with CEQA and the CEQA Guidelines.

B. The City Council has independently reviewed and considered the information contained in Final EIR, prior to making its decision on the proposed Project.

C. The Final EIR reflects the City Council's independent judgment and analysis on the potential environmental impacts of the proposed Project. The Final EIR provides information to the decision makers and the public on the environmental consequences of the proposed Project.

D. The Final EIR adequately describes the proposed Project, its significant environmental impacts, mitigation measures, and a reasonable range of alternatives to the proposed Project.

4. The City Council hereby adopts all findings required under CEQA regarding environmental impacts of the Project, mitigation measures and alternatives, and a Mitigation Monitoring and Reporting Program (Exhibit A); and incorporated herein by reference, all in compliance with the requirements of CEQA.

Effective Date. This Resolution shall become effective immediately upon its passage and adoption.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the 21st day of April 2025 by following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Siri Pulipati, Mayor

ATTEST:

_____
Stacy Leitner, CMC
City Clerk

March 2025 | Mitigation Monitoring and Reporting Program
State Clearinghouse No. 2023010102

MILLS CROSSING PROJECT

for City of Rancho Cordova

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PLACEWORKS

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1. Introduction

1.1 PURPOSE OF MITIGATION MONITORING PROGRAM

This Mitigation Monitoring Program has been developed to provide a vehicle by which to monitor mitigation measures and conditions of approval outlined in the Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2023010102. The Mitigation Monitoring Program has been prepared in conformance with Section 21081.6 of the Public Resources Code and the City of Rancho Cordova's Monitoring Requirements. Section 21081.6 states:

> (a) When making findings required by paragraph (1) of subdivision (a) of Section 21081 or when adopting a mitigated negative declaration pursuant to paragraph (2) of subdivision (c) of Section 21080, the following requirements shall apply:
>
> (1) The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.
>
> (2) The lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.

1.2 EIR SUMMARY

The proposed project would result in up to 120 dwelling units, which, assuming an average of 2.68 persons per household, would accommodate approximately 322 residents. It would also feature up to 140,000 square feet of nonresidential space. The site would offer up to 28,400 square feet of publicly accessible open space. The development would be carried out in phases. Phase 1 would involve the construction of nonresidential buildings (1, 2, and 3), three surface parking lots, open space, and other site improvements. Housing would be constructed in future phases as funding becomes available. Additionally, future phases may involve adjustments to on-site parking, up to a maximum of 325 spaces, as well as the construction of additional nonresidential building space.

1.3 PROJECT LOCATION

The 10.34 -acre project site encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22, and 076-0213-013. The project site is located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County. The City of Rancho Cordova is surrounded by unincorporated Sacramento County to the north, south, east, and west.

1.4 ENVIRONMENTAL IMPACTS

1.4.1 Impacts Considered Less Than Significant or No Impact

The DEIR identified various thresholds from the CEQA Guidelines among a number of environmental categories that would not be significantly impacted by the proposed project and, therefore, have no mitigation measures to monitor. Impacts to the following were found to be less than significant or no impact.

- Aesthetics
- Agricultural and Forestry Resources
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

1.4.2 Potentially Significant Adverse Impacts That Can Be Mitigated, Avoided, or Substantially Lessened

The DEIR identified various thresholds from the CEQA Guidelines among several environmental categories that could be reduced, avoided, or substantially lessened through the implementation of mitigation measures

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Tribal and Cultural Resources

1.4.3 Unavoidable Significant Adverse Impacts

The DEIR did not identify any significant and unavoidable impacts.

2. Mitigation Monitoring Process

2.1 MITIGATION MONITORING PROGRAM ORGANIZATION

As the lead agency, the City of Rancho Cordova (City) is responsible for the review of all monitoring reports, enforcement actions and document disposition. The City will rely on information provided by individual monitors (e.g., CEQA consultant, etc.) as accurate and up to date, and will field check mitigation measure status, as required.

2.2 ENFORCEMENT

Public agencies may enforce conditions of approval through their existing police power, using stop-work orders, fines, infraction citations, or in some cases, notice of violation for tax purposes.

2. Mitigation Monitoring Process

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3. Mitigation Monitoring Requirements

3.1 PRE-MITIGATION MEETING

A pre-monitoring meeting will be scheduled to review mitigation measures, implementation requirements, schedule conformance, and mitigation monitoring responsibilities. Monitoring rules are established, the entire mitigation monitoring program is presented, and any clarification provided.

3.2 CATEGORIZED MITIGATION MEASURES TABLE

Project-specific mitigation measures have been categorized in a table format, as shown in Table 3-1, *Mitigation Monitoring Requirements*. The table identifies the environmental factor, specific mitigation measures, schedule, and responsible monitor. The mitigation table will serve as the basis for scheduling the implementation of, and compliance with, all mitigation measures.

3.3 DATA BASE MANAGEMENT

All mitigation monitoring reports, letters, and memos shall be prepared utilizing Microsoft Word software.

3.4 DISCLOSURE

This mitigation and monitoring report is a public document and shall be kept with the project files and available for review upon appointment. .

3. Mitigation Monitoring Requirements

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Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
AIR QUALITY					
AQ-1	**Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce fugitive Dust.** The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. The following measures are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures. • Control of fugitive dust is required by District Rule 403 and enforced by District staff. • Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads. • Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered. • Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. • Limit vehicle speeds on unpaved roads to 15 miles per hour (mph). • All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as	Project Applicant, Construction Contractor	Prior and during construction related activities.	City of Rancho Cordova	

3. Mitigation Monitoring Requirements

Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	possible after grading unless seeding or soil binders are used. • Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site. • Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1]. • Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.				
BIOLOGICAL RESOURCES					
BIO-1	To protect nesting birds, no project activity shall begin from February 1 through August 31 unless a qualified wildlife biologist completes the following surveys. Separate surveys and avoidance requirements are listed below for nesting birds and raptors. If project construction begins between February 1 through August 31, a qualified biologist shall perform a preconstruction nesting bird survey within seven days prior to construction (or less if recommended by CDFW), within the project work area for all birds protected under the MBTA, including raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established by a qualified biologist in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest, or that the nest is otherwise no longer active.	Project Applicant, Construction Contractor, Wildlife Biologist	February 1 and August 31	City of Rancho Cordova	

Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
BIO-2	A qualified biologist shall conduct a survey for suitable bat roosting habitat within 14 days of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat is identified and proposed for removal, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities will be required. If bats are not found during the preconstruction surveys, no further measures are necessary.	Project Applicant, Construction Contractor, Wildlife Biologist	Within 14 days of construction activities.	City of Rancho Cordova	
CULTURAL RESOURCES					
CUL-1	If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or	Project Applicant, Construction Contractor, Archeologist	If subsurface deposits believed to be cultural or human in origin are discovered during construction	City of Rancho Cordova	

3. Mitigation Monitoring Requirements

Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.				
GREENHOUSE GAS EMISSIONS					
GHG-1	Implement SMAQMD Tier 1 Best Management Practices. The implementing agency will require the Project to implement Sacramento Metropolitan Air Quality Management District Tier 1 Best Management Practices: • BMP 1: projects shall be designed and constructed without natural gas infrastructure. • BMP 2: projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.	Project Applicant, Construction Contractor,	Prior to construction	City of Rancho Cordova	
GHG-2	Implement SMAQMD Tier 2 Best Management Practices. The implementing agency will require the Project to implement Sacramento Metropolitan Air Quality Management District Tier 2 Best Management Practices: • BMP 3: The project applicant shall coordinate with the City of Rancho Cordova to implement feasible transportation demand management (TDM) strategies, which would decrease the vehicle miles traveled generated by the proposed project as follows: o The project community office space component must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for Sacramento County. o The project residential component must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in Sacramento County.	Project Applicant, Construction Contractor	During the project's planning and operational phases.	City of Rancho Cordova	

Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	○ The project retail component must achieve no net increase in total VMT Examples of potential measures include (but are not limited to): paid parking, employee telecommuting, employee shuttle service, expansion of transit service coverage/ subsidized transit fares, enhanced bicycle and pedestrian connections, and flexible work schedules. In the case that the necessary VMT reductions are infeasible, the purchasing and retiring GHG/carbon offsets from a SMAQMD-approved registry is required. Approved registries may include but are not limited to any of the following: (i) the Climate Action Reserve, the American Carbon Registry and Verra; (ii) any entity approved at any time by the California Air Resources Board to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.				
HAZARDS AND HAZARDOUS MATERIALS					
HAZ-1	**Implement Central Valley Regional Water Quality Control Board approved Site Cleanup Plan.** Prior to the issuance of construction permits, the project applicant shall complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech (Appendix 5.6-1, dated March 16, 2022, and Appendix 5.6-2, August 30, 2023) for the proposed project into the project's construction plans. Short-term soil vapor extraction (SVE) will be conducted to remove the impacted soil vapor that migrated to this area. Up to 15 SVE wells will be installed and operated as extraction and/or venting wells to expedite the pore volume flushing of the vadose zone (Section 3.9) for an approximate duration of two months. The City Engineer will transmit testing results to the Central Valley Regional Water Quality Control Board for review and concurrence before issuing construction permits. The City Engineer will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality	Project Applicant,	Prior to the issuance of construction permits	City of Rancho Cordova	

3. Mitigation Monitoring Requirements

Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Documentation will be part of the mitigation monitoring and reporting program.				
TRIBAL CULTURAL RESOURCES					
TCR-1	Prior to issuance of grading permits, a qualified Tribal monitor/consultant shall be identified to be on call during ground-disturbing activities. The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Wilton Rancheria Tribal Government and is listed under the NAHC Tribal Contact list for the area of the project location. A Native American monitor shall be retained by the Lead Agency or owner of the project to be on-site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments that have commented on the project shall provide the Native American monitor. The monitor/consultant will only be present on site during the construction phases that involve ground-disturbing activities. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The onsite monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.	Project Applicant, Construction Contractor, Tribal Monitor	Prior to the issuance of grading permits	City of Rancho Cordova	
TCR-2	If any tribal cultural are discovered during excavation and/or construction activities, construction shall stop within 100 feet of the find, and the qualified Tribal monitor/consultant shall be consulted to determine whether the resource requires further study. The Tribal monitor/consultant shall make recommendations to the City to protect the discovered resources. All tribal cultural resources unearthed by project construction activities shall be evaluated by the qualified tribal monitor/consultant. If the resources are Native American in origin, the	Project Applicant, Construction Contractor, Tribal Monitor	If any tribal cultural resources are discovered during excavation or construction,	City of Rancho Cordova	

Table 3-1 Mitigation Monitoring Requirements

	Mitigation Measure	Responsibility for Implementation	Timing	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
	Wilton Rancheria Tribal Government shall coordinate with the landowner regarding treatment and curation of these resources. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 1506.5[f]).				

3. Mitigation Monitoring Requirements

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4. Mitigation Monitoring Reports

Mitigation monitoring reports are required to document compliance with the Mitigation Monitoring Program and to dispute arbitration enforcement resolution. Specific reports include:

- Field Check Report
- Implementation Compliance Report
- Arbitration/Enforcement Report

4.1 FIELD CHECK REPORT

Field check reports are required to record in-field compliance and conditions.

4.2 IMPLEMENTATION COMPLIANCE REPORT

The Implementation Compliance Report (ICR) is prepared to document the implementation of mitigation measures on a phased basis, based on the information in Table 3-1. The report summarizes implementation compliance, including mitigation measures, date completed, and monitor's signature.

4.3 ARBITRATION/ENFORCEMENT REPORT

The Arbitration/Enforcement Report (AER) is prepared to document the outcome of arbitration committee review and becomes a portion of the ICR.

4. Mitigation Monitoring Reports

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5. Community Involvement

Monitoring reports are public documents and are available for review by the general public. Discrepancies in monitoring reports can be taken to the arbitration committee by the general public.

5. Community Involvement

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March 2025 | Final Environmental Impact Report
State Clearinghouse No. 2023010102

MILLS CROSSING PROJECT:
CEQA FINDINGS OF FACT REGARDING THE FINAL ENVIRONMENTAL IMPACT REPORT

City of Rancho Cordova

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CEQA FINDINGS OF FACT
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FOR THE
MILLS CROSSING PROJECT
STATE CLEARINGHOUSE NO. 2023010102

Exhibit A

I. INTRODUCTION

The California Environmental Quality Act (CEQA) requires that a number of written findings be made by the lead agency in connection with certification of an environmental impact report (EIR) prior to approval of the project pursuant to Sections 15091 and 15093 of the CEQA Guidelines and Section 21081 of the Public Resources Code. This document provides the findings required by CEQA. The potential environmental effects of the proposed Mills Crossing Project have been analyzed in a Draft Environmental Impact Report (DEIR) (State Clearinghouse [SCH] 2023010102) dated January 2023. A Final EIR has also been prepared that incorporates the DEIR and contains comments received on the DEIR; responses to the individual comments; revisions to the DEIR, including any clarifications based on the comments and the responses to the comments; and the Mitigation Monitoring and Reporting Program (MMRP) for the proposed project. This document provides the findings required by CEQA for approval of the proposed project.

A. Statutory Requirements for Findings

The CEQA (Pub. Res. Code §§ 21000, *et seq.*) and the State CEQA Guidelines (Guidelines) (14 Ca. Code Regs §§ 15000, *et seq.*) promulgated thereunder require the environmental impacts of a project to be examined before a project is approved. Specifically, regarding findings, Guidelines Section 15091 provides:

> (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
>
> 1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
>
> 2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(b) The findings required by subsection (a) shall be supported by substantial evidence in the record.

(c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subsection (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

The "changes or alterations" referred to in Section 15091(a)(1)—that are required in or incorporated into the project to mitigate or avoid the significant environmental effects of the project—may include a wide variety of measures or actions as listed in Guidelines Section 15370, including:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.

Regarding a Statement of Overriding Considerations, Guidelines Section 15093 provides:

(a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.

B. Certification

Having received, reviewed, and considered the Final EIR for the Mills Crossing Project, as well as other information in the record of proceedings on this matter, the City of Rancho Cordova City Council adopts the following Findings of Fact and Statement of Overriding Considerations (Findings), in its capacity as the legislative body for the City of Rancho Cordova (City), which is the CEQA Lead Agency. The Findings set forth the environmental and other bases for current and subsequent discretionary actions to be undertaken by the City and responsible agencies for the implementation of the proposed project.

In addition, the City of Rancho Cordova City Council hereby makes findings pursuant to and in accordance with Section 21081 of the California Public Resources Code and State CEQA Guidelines Sections 15090 and 15091 and hereby certifies that:

(1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effect as identified in the final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

C. Project Environmental Report and Discretionary Actions

The Final EIR addresses the direct, indirect, and cumulative environmental effects of construction and operation activities associated with the proposed project. The Final EIR provides the environmental information necessary for the City to make a final decision on the requested discretionary actions for all phases of the proposed project. The Final EIR was also intended to support discretionary reviews and decisions by other responsible agencies. Discretionary actions to be considered by the City may include, but are not limited to, the following:

- Certify that the Final EIR for the proposed project has been completed in compliance with CEQA and reflects the independent judgement and analysis of the City; find that the City Council has reviewed and considered the information contained in the Final EIR prior to approving the proposed project; adopt the Mitigation Monitoring and Reporting Program, finding that the Mitigation Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during proposed project implementation; and determine that the significant adverse effects of the proposed project either have been reduced to an acceptable level, or are outweighed by the specific overriding considerations of the proposed project as outlined in the CEQA Findings of Fact and Statement of Overriding Considerations, as set forth herein.

- Approve the proposed project and related discretionary actions needed.

II. PROCEDURAL COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT

The City published a DEIR on June 7, 2024. The Final EIR has been prepared in accordance with CEQA and the CEQA Guidelines, as amended. As authorized in State CEQA Guidelines Section 15084(d)(2), the City retained a consultant to assist with the preparation of the environmental documents. City staff from multiple departments, representing the Lead Agency, have directed, reviewed, and modified where appropriate all material prepared by the consultant. The Final EIR reflects the City's independent analysis and judgement. The key milestones associated with the preparation of the DEIR are summarized in this section. An extensive public involvement and agency notification effort was conducted to solicit input on the scope and content of the DEIR and to solicit comments on the results of the environmental analysis in the DEIR.

A. Public Notification and Outreach

In conformance with CEQA, the State CEQA Guidelines, and the City of Rancho Cordova CEQA Guidelines, the City conducted an extensive environmental review of the proposed project.

- Completion of a Notice of Preparation (NOP) on January 06, 2023, titled "Notice of Preparation of a Draft Subsequent Environmental Impact Report and Scoping Meeting for the Mills Crossing Civic Center Project" for the Mills Crossing Civic Center Project Environmental Impact Report (EIR). A public scoping meeting was conducted on January 19, 2023, and the public comment period for the NOP closed on February 06, 2023.

- Preparation of a DEIR, which was made available for a 45-day public review period beginning June 7, 2024, and ending July 22, 2024. The scope of the DEIR was determined based on the CEQA Guidelines' Appendix G Checklist and comments received in response to the NOP. The

Notice of Availability (NOA) for the DEIR was sent to interested persons and organizations, sent to the State Clearinghouse in Sacramento for distribution to public agencies, posted at the City's website, and published in the *Grapevine Independent* on June 7, 2024. The NOA was posted at the Sacramento County Clerk's office on June 7, 2024.

- Preparation of a Final EIR, including the responses to comments to the DEIR. The Final EIR was released for a 10-day agency review period prior to certification of the Final EIR.
- Public hearings on the proposed project

In summary, the City conducted all required noticing and scoping for the proposed project in accordance with Section 15083 of the CEQA Guidelines, and the public review for the DEIR exceeded the requirements of Section 15087 of the CEQA Guidelines.

B. Final Environmental Impact Report and Proceedings

The City prepared a Final EIR, including Responses to Comments on the DEIR. The Final EIR/Response to Comments contains comments on the DEIR, responses to those comments, and revisions to the DEIR. Seven comment letters were received—five were from public agencies and Native American tribes, and two were from individuals.

None of the comment letters resulted in the need to modify the environmental analysis in the DEIR.

The Final EIR found that prior to mitigation, implementation of the proposed project would result in potentially significant impacts to air quality, biological resources, cultural resources, greenhouse gas emissions, tribal cultural resources, and wildfire. However, implementation of the proposed mitigation measures would reduce all impacts to less than significant.

The following environmental impacts would be potentially significant with the proposed project; however, mitigation measures would reduce their level of significance to less than significant:

Air Quality

- Impact 5.1-2: The proposed project could result in a cumulatively considerable net increase of a criteria pollutant that the project region is nonattainment under federal or state ambient air quality standards (including releasing emissions which exceed quantitative threshold for ozone precursors).

Biological Resources

- Impact 5.2-1: Development of the proposed project would not significantly impact the following sensitive species: special status birds and bats.
- Impact 5.2-3: The proposed project could affect wildlife movement of special status species.

Cultural Resources

- Impact 5.3-2: Development of the project could impact archaeological resources.
- Impact 5.3-3: Grading activities could potentially disturb human remains.

Greenhouse Gas Emissions

- Impact 5.5-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Hazards and Hazardous Materials

- Impact 5.6-1: The project could potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Impact 5.6-2: The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Impact 5.6-3: The proposed project could potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Impact 5.6-4: The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- Impact 5.6-6: The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Tribal Cultural Resources

- Impact 5.13-1: The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource that is:
  - i) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k);
  - ii) determined by the lead agency to be significant pursuant to criteria in Public Resources Code section 5024.1(c). In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

C. Record of Proceedings

For purposes of CEQA and these Findings, the Record of Proceedings for the proposed project consists of the following documents and other evidence, at a minimum:

- The NOP, NOA, and all other public notices issued by the City in conjunction with the proposed project.
- The DEIR and Final EIR for the proposed project.
- All written comments submitted by agencies or members of the public during the public review comment period on the DEIR.
- All responses to written comments submitted by agencies or members of the public during the public review comment period on the DEIR.
- All written and verbal public testimony presented during a noticed public hearing for the proposed project.

- The Mitigation Monitoring and Reporting Program.
- The reports and technical memoranda included or referenced in the Final EIR.
- All documents, studies, EIRs, or other materials incorporated by reference in the DEIR and Final EIR.
- The Resolutions adopted by the City in connection with the proposed project and all documents incorporated by reference therein, including comments received after the close of the comment period and responses thereto.
- Matters of common knowledge to the City, including but not limited to federal, state, and local laws and regulations.
- Any documents expressly cited in these Findings.
- Any other relevant materials required to be in the record of proceedings by Public Resources Code Section 21167.6(e).

D. Custodian and Location of Records

The documents and other materials that constitute the administrative record for the City's actions related to the proposed project are at the City of Rancho Cordova Department of Community Development (2729 Prospect Park Drive, Rancho Cordova). The Department of Community Development is the custodian of the administrative record for the proposed project. Copies of these documents, which constitute the record of proceedings, are and at all relevant times have been and will be available upon request of the City of Rancho Cordova City Clerk's Department. Additionally, the documents are available online at: https://www.cityofranchocordova.org/residents/new-businesses-and-projects/mills-crossing. This information is provided in compliance with Public Resources Code Section 21081.6(a)(2) and CEQA Guidelines Section 15091(e).

E. Project Location

The 10.34-acre project site encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22, and 076-0213-013. The project site is located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County. The City of Rancho Cordova is surrounded by unincorporated Sacramento County to the north, south, east, and west.

F. Project Objectives

The following objectives for the Mills Crossing Civic Center Project will aid decision makers in their review of the project and associated environmental impacts.

1. Provide for a mix of uses onsite by developing residential, commercial, and recreational uses on infill and underutilized parcels near the Mather Field/Mills Station.
2. Increase the City's housing stock by providing a range of housing density types, including affordable housing.
3. Increase employment opportunities in the City.
4. Improve the jobs-housing balance in the City of Rancho Cordova and provide new housing close to jobs and services.

5. Promote healthy living and physical activity by providing open space areas and opportunities to utilize alternative transportation options available proximate to the site, including the Mather Field/Mills Station.

G. Project Description

The proposed project would result in up to 120 dwelling units, which, assuming an average of 2.68 persons per household (as outlined in the General Plan EIR), would accommodate approximately 322 residents. It would also feature up to 140,000 square feet of nonresidential space. The site would offer up to 28,400 square feet of publicly accessible open space. The development would be carried out in phases. Phase 1 would involve the construction of nonresidential buildings (1, 2, and 3), three surface parking lots, open space, and other site improvements. Housing would be constructed in future phases as funding becomes available. Additionally, future phases may involve adjustments to on-site parking, up to a maximum of 325 spaces, as well as the construction of additional nonresidential building space.

III. CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS

A. Format

Section 15091 of the CEQA Guidelines requires that a Lead Agency make a finding for each significant effect for the proposed project. This section summarizes the significant environmental impacts of the proposed project, describes how these impacts are to be mitigated, and discusses various alternatives to the proposed project, which were developed to reduce the remaining significant environmental impacts. All impacts are considered potentially significant prior to mitigation unless otherwise stated in the findings.

This remainder of this section is divided into the following subsections:

Section B, Issues Deemed "No Impact" or "Less Than Significant Impact" in the DEIR, presents a table of the environmental issues that were determined to have no impact or less than significant impacts. These topics are found in Chapter 8, *Impacts Found Not to Be Significant*, or in individual chapters in individual sections of Chapter 5, *Environmental Analysis*, of the DEIR.

Section C, Findings on Impacts Mitigated to Less Than Significant, presents significant impacts of the proposed project that were identified in Chapter 5 of the DEIR, the mitigation measures identified in the Mitigation Monitoring Program, and the rationales for the findings.

Section IV, Alternatives to the Proposed Project, presents alternatives to the proposed project and evaluates them in relation to the findings in Section 15091(a)(3) of the State CEQA Guidelines, which allows a public agency to approve a project that would result in one or more significant environmental effects if the project alternatives are found to be infeasible because of specific economic, social, or other considerations.

Section V, Lack of Need for Statement of Overriding Considerations, explains that the proposed project would have no significant and unavoidable adverse impacts.

Section VI, Findings on Responses to Comments on the DEIR and Revisions to the Final EIR, presents the City's findings on the response to comments and revisions to the Final EIR, and the decision on whether a recirculated DEIR is necessary.

B. Issues Deemed "No Impact" or "Less Than Significant Impact" in the DEIR

Table 1, *Environmental Issues Determined No Impact or Less Than Significant Impact in the DEIR*, lists the environmental issues determined to have no impact or a less than significant impact in Chapter 8 or Chapter 5 of the DEIR.

Table 1 Environmental Issues Determined No Impact or Less Than Significant Impact in the DEIR

Environmental Issue	Impact	Determination
Chapter 5, Environmental Analysis		
Section 5.1, Air Quality	Impact 5.1-1: The proposed project is consistent with the applicable air quality management plan.	Less than significant
	Impact 5.1-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations.	Less than significant
	Impact 5.1-4: The proposed project would not result in other emissions that would adversely affect a substantial number of people.	Less than significant
Section 5.2, Biological Resources	Impact 5.2-2: Development of the proposed project would not result in the loss of any riparian habitat or other sensitive natural community nor on state or federally protected wetland.	No Impact
	Impact 5.2-4: The proposed project would not conflict with the City's tree preservation ordinance or with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional or state habitat conservation plan.	Less than significant
	Impact 5.3-1: Development of the project could impact an identified historic resource.	No Impact
Section 5.3, Cultural Resources	Impact 5.4-1: Project construction and operation would not cause wasteful, inefficient, or unnecessary energy use.	Less than significant
Section 5.4, Energy	Impact 5.4-2: The project would not conflict with a State or local plan for renewable energy or energy efficiency.	Less than significant
	Impact 5.4-3: The proposed project would not require the relocation or construction of new or expanded energy facilities that would result in significant environmental effects.	Less than significant
Section 5.5, Greenhouse Gas Emissions	Impact 5.5-2: The proposed project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than significant
Section 5.6, Hazards and Hazardous Materials	Impact 5.6-5: The proposed project would not conflict with an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.	Less than significant
	Impact 5.6-7: The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Less than significant
Section 5.7, Land Use and Planning	Impact 5.7-1: Project implementation would not divide an established community.	Less than significant
	Impact 5.7-2: Project implementation would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than significant
Section 5.8, Mineral Resources	Impact 5.8-1: The proposed project would not result in the loss of availability of a known mineral resource nor the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.	Less than significant
	Impact 5.9-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project.	Less than significant

Environmental Issue	Impact	Determination
Section 5.9, Noise	Impact 5.9-2: The proposed project would not result in a substantial permanent increase in ambient noise levels in excess of City standards during the project's operation phase.	Less than significant
	Impact 5.9-3: The project would not generate excessive groundborne vibration during construction or operation.	Less than significant
	Impact 5.9-4: The proximity of the project site to an airport would not result in exposure of future residents or workers to airport-related noise.	Less than significant
Section 5.10, Population and Housing	Impact 5.10-1: The Mills Crossing project would not induce unplanned population growth either directly or indirectly within the project area.	Less than significant
	Impact 5.10-2: Project implementation would not result in substantially displace existing people and/or the construction of replacement housing elsewhere.	Less than significant
Section 5.11, Public Services	Impact 5.11-1: The proposed project would introduce new structures, residents, and workers into the Sacramento Metropolitan Fire District service boundaries; however this increase would not require the need for additional fire protection facilities.	Less than significant
	Impact 5.11-2: The proposed project would introduce new structures, residents, and workers into the Rancho Cordova Police Department service boundaries; however this increase would not require the need for additional police protection facilities or personnel.	Less than significant
	Impact 5.11-3: The proposed project would generate 57 new students into the FCUSD which would impact the school enrollment capacities of area schools.	Less than significant
	Impact 5.11-4: The proposed project would introduce new residents into the Sacramento Public Library System/Rancho Cordova Library service boundaries, thereby increasing the requirement for library facilities and personnel.	Less than significant
Section 5.12, Recreation	Impact 5.12-1: The proposed project would increase the use of existing neighborhood and regional parks and other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less than significant
	Impact 5.12-2: Project implementation would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	Less than significant
Section 5.14, Utilities and Service Systems	Impact 5.14-1: The proposed project would not require the relocation or construction of new or expanded wastewater treatment facilities, the construction of which would cause significant environmental effects.	Less than significant
	Impact 5.14-2: The proposed project would result in the determination of a wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less than significant
	Impact 5.14-3: The proposed project would not require the relocation or construction of new or expanded water facilities, which could cause significant environmental effects.	Less than significant
	Impact 5.14-4: CAW would have sufficient water supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less than significant
	Impact 5.14-5: The proposed project would not require the relocation or construction of new or expanded storm drainage facilities, the construction of which would cause significant environmental effects.	Less than significant
	Impact 5.14-6: The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of waste reduction goals.	Less than significant
	Impact 5.14-7: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less than significant
Chapter 8, Impacts Found Not to Be Significant		
8.1, Aesthetics	Have a substantial adverse effect on a scenic vista?	Less than significant
	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact

Environmental Issue	Impact	Determination
	In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant
	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Less than significant
8.2, Agriculture and Forestry Resources	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact
	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No Impact
	Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No Impact
8.3, Geology and Soils	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Less than significant
	Strong seismic ground shaking?	Less than significant
	Seismic-related ground failure, including liquefaction?	Less than significant
	Landslides?	No Impact
	Result in substantial soil erosion or the loss of topsoil?	Less than significant
	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Less than significant
	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than significant
	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than significant
8.4, Hydrology and Water Quality	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than significant
	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than significant
	Result in a substantial erosion or siltation on- or off-site?	Less than significant
	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	Less than significant
	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Less than significant
	Impede or redirect flood flows?	Less than significant
	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than significant
	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than significant

Environmental Issue	Impact	Determination
8.5, Transportation	The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less than significant
	The proposed project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)	Less than significant
	The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than significant
	The proposed project would not result in inadequate emergency access.	Less than significant
8.6, Wildfire	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less than significant
	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less than significant
	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less than significant
	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less than significant

C. Findings on Significant Environmental Impacts That Can Be Mitigated to Less Than Significant

The following summary describes the impacts of the proposed project that, without mitigation, would result in significant adverse impacts. Upon implementation of the mitigation measures in the DEIR, these impacts from Chapter 5 would be considered less than significant.

1. Air Quality

Impact 5.1-2: The proposed project could result in a cumulatively considerable net increase of a criteria pollutant that the project region is nonattainment under federal or state ambient air quality standards (including releasing emissions which exceed quantitative threshold for ozone precursors.

Construction Phase

As explained in Impact 5.1-2 of the DEIR, the proposed project could exceed SMAQMD's significance criteria during construction, which could result in the cumulatively considerable net increase of criteria pollutants in a non-attainment area. The following mitigation measure would reduce air quality impacts during construction to less than significant.

Operation Phase

As explained in Impact 5.1-2 of the DEIR, the proposed project's operational contribution to overall emissions is minimal and is not expected to delay the region's attainment of air quality standards. No mitigation measures are required, and impacts during operation of the proposed project would be less than significant.

Mitigation Measures:

AQ-1 Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust. The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. The measures are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.1-2 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution. This measure mitigates Impact 5.1-2 to a less than significant level.

Rationale for Finding:

Mitigation Measure AQ-1 requires construction to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. This would

result in the containment of project activity and reduce air quality impacts. Therefore, Mitigation Measure AQ-1 would reduce impacts on air quality to less than significant.

2. Biological Resources

Impact 5.2-1: Development of the proposed project could significantly impact the following sensitive species: special status birds and bats.

As explained in Impact 5.2-1 of the DEIR, development allowed by the proposed project could potentially impact special-status birds and bats. Construction activities could disturb or destroy nests of special-status birds and lead to the loss of foraging habitat for various bird species. Additionally, construction may disturb bat roosts, destroy active roosts, or result in the loss of bats. Development activities from the proposed project could disturb the habitat of special status species, resulting in significant impact.

Mitigation Measures:

BIO-1 To protect nesting birds, no project activity shall begin from February 1 through August 31 unless a qualified wildlife biologist completes the following surveys. Separate surveys and avoidance requirements are listed for nesting birds and raptors.

BIO-2 A qualified biologist shall conduct a survey for suitable bat roosting habitat within 14 days of construction activities. If no suitable habitat is found, no further action is needed. If suitable habitat is identified for removal, an evening bat emergence survey, including possible acoustic monitoring, will be conducted. If bats are found, consultation with CDFW may be required before construction begins.

Finding: The City Council finds that the mitigation measures recommended in the EIR to mitigate Impact 5.2-1 have been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution. These measures mitigate Impact 5.2-1 to a less than significant level.

Rationale for Finding:

Mitigation Measure BIO-1 requires a biologist to perform a preconstruction nesting bird survey within seven days before construction. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established by a qualified biologist in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest, or that the nest is otherwise no longer active. Mitigation Measure BIO-2 requires a biologist to survey suitable bat roosting habitat within 14 days of construction activities. If roosting bats are found, consultation with CDFW before initiation of construction activities may be required. Therefore, Mitigation Measures BIO-1 and BIO-2 would reduce impacts on biological resources to less than significant.

Impact 5.2-3: The proposed project could affect wildlife movement of special status species.

As explained in Impact 5.2-3 of the DEIR, although the project site is a disturbed, developed area surrounded by other developments and with no significant wildlife use or movement corridors, the trees on-site could be used for special status species of birds and bats. Therefore, development allowed under the proposed project could disturb the movement of special status species, resulting in potentially significant impacts.

Mitigation Measures:

Implement mitigation measures BIO-1 and BIO-2.

Finding: The City Council finds that the mitigation measures recommended in the EIR to mitigate Impact 5.2-3 have been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution. These measures mitigate Impact 5.2-3 to a less than significant level.

Rationale for Finding:

Mitigation Measures BIO-1 and BIO-2 require a qualified biologist for nesting birds and bats during construction. These mitigation measures would ensure that impacts towards wildlife movement of special status such as special status birds and bats from the proposed project are reduced to less than significant levels.

3. Cultural Resources

Impact 5.3-2: Development of the project could impact archaeological resources.

As explained in Impact 5.3-2 of the DEIR, although the project site has a low potential for buried pre-contact archaeological sites due to prior development and the presence of alluvium along the American River, ground-disturbing activities could still expose unrecorded cultural and archaeological resources, resulting in potentially significant impacts.

Mitigation Measure:

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The notifications depend on the nature of the find.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.3-2 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution. This measure mitigates Impact 5.3-2 to a less than significant level.

Rationale for Finding:

Mitigation Measure CUL-1 requires an archaeological monitor to oversee ground-disturbing activities and determine if a find represents a cultural resource from any period or cultural affiliation, the archaeologist shall immediately notify the lead agencies and take care of the resource appropriately. Therefore, Mitigation Measure CUL-1 would reduce impacts on cultural resources to less than significant.

Impact 5.3-3: Grading activities could potentially disturb human remains.

As explained in Impact 5.3-3 of the DEIR, the undeveloped project site requires ground-disturbing activities, which have the potential to disturb human remains, leading to potentially significant impacts. However, these impacts can be reduced to a less-than-significant level through specific mitigation measures, including protocols for handling accidental discoveries of human remains as outlined by the California Health and Safety Code, Section 7050.5; CEQA Section 15064.5; and Public Resources Code, Section 5097.98.

Mitigation Measure:

CUL-2: If human or potentially human remains are discovered, protection measures will be taken to prevent disturbance. The archaeologist will notify the Sacramento County Coroner, who will determine if the remains are Native American. If so, the coroner will contact the Native American Heritage Commission (NAHC), which will designate a Most Likely Descendant (MLD) to make recommendations on the treatment of the remains. If there is a disagreement, the NAHC can mediate, and if no agreement is reached, the remains will be reburied and protected. Work will halt until the appropriate agencies confirm the remains have been properly treated.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.3-3 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution. This measure mitigates Impact 5.3-3 to a less than significant level.

Rationale for Finding:

Mitigation Measure CUL-2 requires if there is a find that includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance. This would result in the protection of important resources, and being preserved in appropriate locations. Therefore, Mitigation Measure CUL-2 would reduce impacts on cultural resources to less than significant.

4. Greenhouse Gases

Impact 5.5-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Construction

As explained in Impact 5.5-1 of the DEIR, construction activities for the proposed project—including worker commutes, haul truck trips, and off-road equipment use—would generate GHG emissions. The maximum emissions during the third year of construction would be 973 metric tons of CO_2e, which is below the SMAQMD significance threshold. These emissions would cease once construction is complete. Impacts during construction would be less than significant.

Operational Significance Analysis

As explained in Impact 5.5-1, of the DEIR, the operation of the proposed project would increase GHG emissions, mainly from motor vehicle trips and on-site energy use. To meet SMAQMD guidelines and ensure emissions are less than significant, the project will implement Mitigation Measures GHG-1 and GHG-2.

Mitigation Measures:

GHG-1 **Implement SMAQMD Tier 1 Best Management Practices.** The proposed project will implement SMAQMD Tier 1 Best Management Practices (BMPs), including designing the project without natural gas infrastructure and meeting CalGreen Tier 2 standards, with all electric vehicle spaces being electric vehicle ready.

GHG-2 **Implement SMAQMD Tier 2 Best Management Practices**. The proposed project will implement SMAQMD Tier 2 Best Management Practices (BMPs), including coordinating with the City of Rancho Cordova to reduce vehicle miles traveled (VMT) through transportation demand management (TDM) strategies. The project aims for a 15 percent VMT reduction per worker and resident, and no net increase in VMT for the retail component.

Finding: The City Council finds that the mitigation measures recommended in the EIR to mitigate Impact 5.5-1 have been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and these measures mitigate Impact 5.5-1 to a less than significant level.

Rationale for Finding:

Mitigation Measure GHG-1 requires the proposed project to implement Sacramento Metropolitan Air Quality Management District Best Management Practices, such as projects shall be designed and constructed without natural gas infrastructure and shall meet the current CALGreen Tier 2 standards, except all-electric-vehicle-capable spaces shall instead be electric-vehicle ready. Mitigation Measure GHG-2 requires the project applicant to coordinate with the City of Rancho Cordova to implement feasible transportation demand management strategies, which would decrease the

vehicle miles traveled generated by the proposed project. Mitigation Measures GHG-1 and GHG-2 would reduce impacts on greenhouse gases to less than significant.

5. Hazards and Hazardous Materials

Impact 5.6-1: The project could potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

As explained in Impact 5.6-1 of the DEIR, the project site's remediation work for a former parking lot area may involve handling soil with low tetrachloroethylene (PCE) concentrations. If PCE levels exceed safety standards, the soil will be disposed of at a hazardous waste facility. The project will follow regulations for the transport, disposal, and handling of hazardous materials, including implementing a Health and Safety Plan (HASP) with measures to prevent spills and control air quality. Real-time air and dust monitoring will protect public health during excavation, and the Regional Water Quality Control Board (RWQCB) must confirm the remediation is successful before construction can begin. With mitigation, impacts are expected to be less than significant.

Mitigation Measure:

HAZ-1 The project will implement the Central Valley Regional Water Quality Control Board-approved Site Cleanup Plan, including short-term soil vapor extraction (SVE) to remove impacted soil vapor. Up to 15 SVE wells will be installed for approximately two months. Before construction permits are issued, the City Engineer will submit testing results to the Regional Water Quality Control Board for review. The project's construction plans will incorporate all recommendations from the Site Cleanup Plan, and City inspectors will ensure compliance and documentation as part of the mitigation monitoring and reporting program.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.6-1 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and this measure mitigates Impact 5.6-1 to a less than significant level.

Rationale for Finding:

Mitigation Measure HAZ-1 requires the project applicant to complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech for the proposed project. Short-term soil vapor extraction (SVE) will be conducted to remove the impacted soil vapor that migrated to the proposed project site. The City will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Documentation will be part of the mitigation monitoring and reporting program. Therefore, Mitigation Measure HAZ-1 would reduce impacts to less than significant.

Impact 5.6-2: The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

As mentioned in Impact 5.6-2 of the DEIR, the proposed project involves additional remediation efforts that may include the storage, use, and transport of hazardous materials, with potential risks of accidental release or exposure to toxic emissions, particularly during ongoing remediation activities. To prevent environmental impact, the project must comply with the hazard safety plan and safe work practices outlined in mitigation measure HAZ-1, including site-specific training for personnel on emergency response and safety procedures. The project also involves residential and commercial uses that typically use small amounts of hazardous materials, but with adherence to regulations, impacts are expected to be less than significant.

Mitigation Measure:

See Mitigation Measure HAZ-1.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.6-2 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and this measure mitigates Impact 5.6-2 to a less than significant level.

Rationale for Finding:

Mitigation Measure HAZ-1 requires the project applicant to complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech for the proposed project. SVE will be conducted to remove the impacted soil vapor that migrated to the proposed project site. The City will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Therefore, Mitigation Measure HAZ-1 would minimize impacts on the potential of release of hazardous materials.

Impact 5.6-3: The proposed project could potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As explained in Impact 5.6-3 of the DEIR, the proposed project, located less than 0.25 miles west of Folsom Lake College-Rancho Cordova, involves handling hazardous materials that could pose a risk to the school. Mitigation measure HAZ-1 ensures safe handling practices to minimize hazardous material release, reducing risks to the public, including students. The City of Rancho Cordova has informally consulted with Folsom Lake College and Los Rios Community College District regarding the project and remediation activities. The City has also adhered to CEQA requirements, including a 30-day notice to the school district. The City's ongoing coordination with the district and compliance with safety protocols, including site-specific training and RWQCB remediation oversight, will ensure impacts are less than significant.

Mitigation Measure:

See Mitigation Measure HAZ-1.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.6-3 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and this measure mitigates Impact 5.6-3 to a less than significant level.

Rationale for Finding:

Mitigation Measure HAZ-1 requires the project applicant shall complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech for the proposed project. SVE will be conducted to remove the impacted soil vapor that migrated to the proposed project site. The City will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Therefore, Mitigation Measure HAZ-1 would minimize impacts on the potential to emit hazardous emissions within one-quarter mile of an existing or proposed school.

Impact 5.6-4: The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5, and, as a result, would create a significant hazard to the public or the environment.

As explained in Impact 5.6-4 of the DEIR, the project site, including the former dry cleaner location with PCE contamination, will undergo additional remediation activities to remove hazardous materials. Compliance with Mitigation Measure HAZ-1 and the Central Valley RWQCB's site cleanup plan will ensure proper removal, sampling, and reporting of hazardous materials. The mitigation measures and General Plan policies will reduce potential hazards to the environment, ensuring impacts are less than significant.

Mitigation Measure:

See Mitigation Measure HAZ-1.

Finding: The City Council finds that the mitigation measures recommended in the EIR to mitigate Impact 5.6-4 have been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and these measures mitigate Impact 5.6-4 to a less than significant level.

Rationale for Finding:

Mitigation Measure HAZ-1 requires the project applicant shall complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech for the proposed project. SVE will be conducted to remove the impacted soil vapor that migrated to the proposed project site. The City will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The proposed project site is included on a list of

hazardous materials sites compiled under Government Code Section 65962.5; therefore compliance with Mitigation Measure HAZ-1 would address and mitigate hazardous materials within the site.

Impact 5.6-6: The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

As explained in Impact 5.6-6 of the DEIR, the Sacramento County Evacuation Plan, managed by the City of Rancho Cordova, could be affected by construction closures for trenching and utility work. Mitigation Measure HAZ-1 ensures that evacuation procedures, including routes based on the work location, will be discussed before site work begins. With this mitigation, the proposed project will comply with emergency response and evacuation plans, making impacts less than significant.

Mitigation Measure:

See Mitigation Measure HAZ-1.

Finding: The City Council finds that the mitigation measure recommended in the EIR to mitigate Impact 5.6-6 has been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and this measure mitigates Impact 5.6-6 to a less than significant level.

Rationale for Finding:

Mitigation Measure HAZ-1 mandates a discussion on evacuation procedures before site work commencement, determining evacuation routes based on work location and necessary circumstances. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Therefore, Mitigation Measure HAZ-1 would reduce impacts to less than significant.

6. Tribal Cultural Resources

Impact 5.13-1: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is: (i) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). (ii) determined by the lead agency to be significant pursuant to criteria in Public Resources Code Section 5024.1(c). In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

As mentioned in Impact 5.13-1 of the DEIR, the proposed project could significantly impact tribal cultural resources listed or eligible for listing in the California Register of Historical Resources. The 2006 General Plan EIR conducted archaeological investigations, identifying 31 cultural resources in the area, with part of the project site having undergone previous investigations. While the project site is not in an archaeologically sensitive area, the development may still affect cultural resources, including previously unrecorded resources and human remains. The lead agency must evaluate the significance of tribal cultural resources following Public Resources Code criteria, and the City consulted with Native

American tribes regarding potential resources. Despite a low likelihood of uncovering tribal resources due to past disturbances, the City will follow mitigation measures recommended by Wilton Rancheria.

Mitigation Measures:

TCR-1 Prior to grading permits being issued, a qualified tribal monitor/consultant will be selected to oversee ground-disturbing activities. The project applicant must hire a tribal monitor/consultant who is ancestrally affiliated with the project area, approved by the Wilton Rancheria Tribal Government, and listed on the NAHC Tribal Contact list. The monitor will be on-site during construction activities such as grading, excavation, and trenching, and will maintain daily logs documenting construction activities and any cultural materials found. The monitoring will continue until grading and excavation are complete or until the tribal representatives determine the site has a low potential for impacting tribal cultural resources..

TCR-2 If tribal cultural resources are found during excavation or construction, work will stop within 100 feet of the discovery, and the tribal monitor/consultant will be consulted to assess whether further study is needed. The monitor/consultant will recommend actions to protect the resources, and all unearthed resources will be evaluated. If the resources are Native American in origin, the Wilton Rancheria Tribal Government will work with the landowner on their treatment and curation. Construction can resume in other areas of the project while the evaluation and any necessary mitigation take place.

Finding: The City Council finds that the mitigation measures recommended in the EIR to mitigate Impact 5.13-1 have been incorporated into the proposed project and adopted, as stated in the applicable City Council resolution, and these measures mitigate Impact 5.13-1 to a less than significant level.

Rationale for Finding:

Mitigation Measure TCR-1 requires an archaeological monitor to oversee ground-disturbing activities and determine if a resource requires further study. This would result in the protection and documentation of important tribal cultural resources. Mitigation Measure TCR-2 states that if tribal cultural resources are found during construction, work must stop and a tribal monitor will assess and recommend protection, and if the resources are Native American, the Wilton Rancheria Tribal Government will oversee their treatment. Mitigation Measures TCR-1 and TCR-2 would reduce impacts on tribal cultural resources to less than significant.

IV. ALTERNATIVES TO THE PROPOSED PROJECT

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible, and therefore, merit in-depth consideration, and explanation of which alternatives are infeasible.

A. Alternatives Considered and Rejected During the Scoping/Project Planning Process

The following is a discussion of the alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in the DEIR.

1. Alternative Development Areas

As discussed in Section 7.2.1 of the DEIR, the project site is zoned Residential Mixed-Use Folsom Boulevard Specific Plan, incorporating medium- and high-density housing, office, and commercial services. Although there may be other vacant sites that can accommodate this mixed-use project, one of the project's objectives is to develop diverse on-site uses on underutilized parcels near Mather Field/Mills Station. There are no sites of a similar size and proximity to light rail and the Mather Field/Mills Station that would be suitable for the uses planned with the proposed project. In addition, any development of the size and type proposed by the proposed project would have substantially the same environmental impacts. Because no off-site locations could accommodate the uses and scale of the proposed project with less effect on the environment, an alternate site was eliminated from consideration.

2. Residential-Only Alternative

As discussed in Section 7.2.2 of the DEIR, the Residential-Only Alternative would only develop the residential component of the proposed project (up to 394 dwelling units). Eliminating the non-residential component of the proposed project would result in accounting for more non-residential square footage elsewhere in the City and would require future residents to travel further for services that are currently planned on-site, likely increasing VMT. Given the Specific Plan's location and proximity to the Mather Field/Mills light rail station, this site is suitable for both residential and non-residential uses, including commercial uses. According to the Folsom Boulevard Specific Plan (FBSP), the project site has a land use designation of Residential Mixed Use (FB-RMU), which allows for medium- and high-density housing (between 6.1 and 40 dwelling units per acre). Therefore, the project site could allow between 61 and 394 units. The proposed project has the potential to generate 322 residents and 280 jobs, and the Residential-Only Alternative would allow up to 1,056 residents.

The proximity to a major transit system makes this site ideal for mixed use. Limiting the property to residential-only would force commercial interests to locate elsewhere in the region. In addition, this alternative would only meet three of the project objectives—it would not be able to provide for a mix of uses near the Mather Field/Mills Station nor improve the jobs-housing balance by providing new housing close to jobs and services. The Residential-Only Alternative would not be feasible because it would not be compatible with the goals and policies regarding the jobs-housing balance and would instead only focus on increasing the housing supply.

B. ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

The following alternatives were determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the proposed project but may avoid or substantially lessen any of the significant effects of the proposed project.

1. No Project/Existing General Plan Alternative

As discussed in Section 7.3.1 of the DEIR, the No Project/Existing General Plan Alternative is required to discuss the existing conditions at the time the notice of preparation is published and evaluate what would reasonably be expected to occur in the foreseeable future if the proposed project is not approved (CEQA Guidelines, Section 15126.6[e]). Pursuant to CEQA, this alternative is based on current plans and consistent with available infrastructure and community services. Therefore, the No Project Alternative assumes that the proposed project would not be adopted, and development on the site would be consistent with the projected buildout in the General Plan. DEIR Table 7-1, No Project Alternative Buildout Statistical Summary, compares the buildout summary of the proposed project with the No Project/Existing General Plan Alternative. The proposed project designates 42 percent of the site for residential uses, 33 percent for non-residential uses, and 25 percent for open space. The proposed project assumes 29 units per acre density to generate 120 dwelling units and a FAR of approximately 1.01 to calculate non-residential square footage. Under the No Project/Existing General Plan Alternative, the density and FAR are the same as the proposed project; however, the amount of land allocated to each land use type is modified. Since the FBSP requires a greater than 50 percent residential use on the site, the No Project/Existing General assumes 51 percent of the site for residential use and 49 percent for nonresidential development. There is no open space requirement under the FBSP.

Finding:

As discussed in Section 7.3.1.15 of the DEIR, the No Project Alternative would increase impacts on air quality, energy, greenhouse gases, and other factors compared to the proposed project. The alternative would not meet the proposed project objective for including open space and recreational use. The City Council rejects this alternative for these reasons.

2. Reduced Development Alternative

The Reduced Development Alternative would reduce residential and nonresidential development and increase the amount of public open space at the project site. DEIR Table 7-2, Reduced Development Alternative Buildout Statistical Summary, compares the buildout summary of the proposed project with the Reduced Development Alternative. Under the Reduced Development Alternative the density and FAR are the same as the proposed project; however, the amount of land allocated to each land use type is modified to reduce development for residential and non-residential development while increasing the amount of open space. The Reduced Development Alternative designates 33 percent of the site for residential uses, 33 percent for non-residential uses, and 34 percent for open space.

Finding:

As discussed in Section 7.3.2.15, of the DEIR, the Reduced Development Alternative would increase impacts related to land use and planning compared to the proposed project but have similar or fewer impacts in other areas. Under this Alternative, all project objectives would be met; however, the reduction in residential units compared to the proposed project, particularly with the site's proximity to a light rail stop, makes this alternative less attractive in terms of the use of alternative transportation. Further, the reduction in residential units also makes this alternative less compatible with Objective 2:

Increase the City's housing stock by providing a range of housing density types, including affordable housing.. The City Council rejects this alternative for these reasons.

V. LACK OF NEED FOR STATEMENT OF OVERRIDING CONSIDERATIONS

CEQA requires decision makers to balance the benefits of the proposed project against its unavoidable environmental risks when determining whether to approve a proposed project. If the benefits of the proposed project outweigh the unavoidable adverse effects, those effects may be considered "acceptable" (State CEQA Guidelines § 15093[a]). CEQA requires the agency to support, in writing, the specific reasons for considering a project acceptable when significant impacts are infeasible to mitigate. Such reasons must be based on substantial evidence in the Final EIR or elsewhere in the administrative record (State CEQA Guidelines § 15093 [b]). The agency's statement is referred to as a Statement of Overriding Considerations.

Because the proposed project would not result in significant and unavoidable impacts, no statement of overriding considerations is necessary.

VI. FINDINGS ON RESPONSES TO COMMENTS ON THE DEIR AND REVISIONS TO THE FINAL EIR

The Final EIR contains responses to comments, revisions, clarifications, and corrections to the DEIR. The focus of the response to comments is on the disposition of significant environmental issues raised in the comments, as specified by State CEQA Guidelines Section 15088(b). The City provided a written response to each comment made by a public agency (and two individuals) in Section 2 of the Final EIR, pursuant to State CEQA Guidelines Section 15088(b).

City staff has reviewed this material and determined that none of it constitutes the type of significant added information that requires recirculation of the DEIR for further public comment under CEQA Guidelines Section 15088.5. None of the new material indicates that the proposed project will result in a significant new environmental impact not previously disclosed in the DEIR. And none of the new material indicates that there would be a substantial increase in the severity of a previously identified environmental impact that will not be mitigated, or that there would be any of the other circumstances requiring recirculation described in Section 15088.5 of the CEQA Guidelines.

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MILLS CROSSING PROJECT DRAFT EIR

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PLACEWORKS

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Abbreviations and Acronyms

ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
ADT	average daily trips
af	acre-feet
afy	acre-feet per year
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Commission Plan
bgs	below ground surface
BMP	best management practice
BP	Before Present
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalEE Mod	California Emissions Estimator Model
CalGEM	California Department of Conservation Geologic Energy Management Division
CALGreen	California Green Building Standards Code
California Register	California Register of Historical Resources
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAW	California American Water
CBC	California Building Code
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level

Abbreviations and Acronyms

CO_2	carbon dioxide
CO_2e	Carbon dioxide equivalent
CO	Carbon monoxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPD	Cordova Recreation and Parks Department
CUPA	Certified Unified Program Agencies
dB	decibel
dBA	A-weighted decibel
DEIR	Draft Environmental Impact Report
DOF	California Department of Finance
DOT	Department of Transportation
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EDD	California Employment Development Department
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESL	Endangered Species List
FAR	floor-area ratio
FBSP	Folsom Boulevard Specific Plan
FCUSD	Folson-Cordova Unified School District
FESA	federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FTA	Federal Transit Administration
GHG	greenhouse gas
gpcd	gallons per capita per day
GWh	gigawatt hours
GWP	Global warming potential
HAA	Housing Accountability Act
HASP	Health and Safety Plan
HCD	California Department of Housing and Community Development
HCP	Habitat Conservation Plan
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
IFC	International Fire Code
Ldn or DNL	Day-Night Sound Level

Abbreviations and Acronyms

Leq	Equivalent Continuous Noise Level
LHMP	Local Hazard Mitigation Plan
Ln	Statistical Sound Level
LOS	level of service
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
$MMTCO_2e$	Million metric tons of CO_2e
MOU	memorandum of understanding
MPO	metropolitan planning organizations
MRZ	Mineral Resource Zone
MTCO2e	Metric ton of CO_2e
MTIP	Metropolitan Transportation Improvement Program
MTP	Metropolitan Transportation Plan
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NHPA	National Historic Preservation Act of 1966
NIOSH	National Institute for Occupational Safety and Health
NO2	nitrogen dioxide
NOP	Notice of Preparation
Nox	oxides of nitrogen
NPDES	National Pollutant Discharge Elliminiation System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
O_3	ozone
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
P-C	Product-Consumption
PCE	Tetrachloroethylene
PM	particulate matter
ppm	parts per million
PPV	Peak Particle Velocity
PRC	California Public Resources Code
PRC	Public Resources Code
RCPD	Rancho Cordova Police Department
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
RPS	Renewables Portfolio Standard

Abbreviations and Acronyms

RTAC	Regional Transportation Advisory Committee
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Government
SacRT	Sacramento Regional Transit District
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCP	Site Cleanup Program
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMFD	Sacramento Metropolitan Fire District
SMGB	California State Mining and Geology Board
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SOI	sphere of influence
SQDM	Stormwater Quality Design Manual
SQIP	Stormwater Quality Improvement Plan
SSQP	Sacramento Stormwater Quality Partnership
SVAB	Sacramento Valley Air Basin
SVE	soil vapor extraction
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDM	transportation demand management
TOD	Transit- Oriented Development
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
VdB	vibration decibel
VMT	vehicle miles traveled
VOC	volatile organic compound
ZCP	Zero Carbon Plan
ZE	zero-emission
ZEV	zero-emission vehicle
ZNE	zero net energy
µg/kg	micrograms/kilogram
µg/L	micrograms per liter
$\mu g/m_3$	microgram per cubic meter

1. Executive Summary

1.1 INTRODUCTION

This Draft Environmental Impact Report (DEIR) (State Clearinghouse No. 2023010102) addresses the environmental effects associated with the implementation of the proposed Mills Crossing Project (proposed project). The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers.

This DEIR has been prepared pursuant to the requirements of CEQA and the City of Rancho Cordova CEQA procedures. The City of Rancho Cordova, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on City technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (air quality, biological resources, cultural resources, energy, greenhouse gas emissions, hazards and hazardous materials, noise).

1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

1.2.1 EIR Format

Chapter 1. Executive Summary: Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

Chapter 2. Introduction: Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

Chapter 3. Project Description: A detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

Chapter 4. Environmental Setting: A description of the physical environmental conditions in the vicinity of the project as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's environmental impacts.

Chapter 5. Environmental Analysis: Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

Chapter 6. Unavoidable Impacts, Irreversible Changes, and Growth-Inducing Impacts: Describes the significant unavoidable adverse impacts of the proposed project, the significant irreversible environmental changes associated with the project, and the ways in which the proposed project would cause increases in employment or population that could result in new physical or environmental impacts.

Chapter 7. Alternatives to the Proposed Project: Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative and a Reduced Intensity Alternative.

Chapter 8. Impacts Found Not to Be Significant: Briefly describes the potential impacts of the project that were determined not to be significant by prior environmental review and were therefore not discussed in detail in this EIR.

Chapter 9. Organizations Consulted and Qualifications of Preparers: Lists the people and organizations that were contacted during the preparation of this EIR, and lists the people who prepared this EIR for the proposed project.

Appendices: The appendices for this document comprise these supporting documents:

- Appendix 2-1: NOP and NOP Comments
- Appendix 5.1-1: Air Quality & Greenhouse Gas Emissions Assessment
- Appendix 5.2-1: Biological Resource Assessment
- Appendix 5.3-1: Archeological Resources Inventory Report
- Appendix 5.4-1: Energy Calculations for Mills Crossing
- Appendix 5.6-1: Site Cleanup Plan for Mills Crossing
- Appendix 5.6-2: Site Cleanup Plan Addendum
- Appendix 5.6-3: Site Remediation Notice of Exemption
- Appendix 5.9-1: Noise Impact Assessment

1.2.2 Type and Purpose of This DEIR

This DEIR has been prepared as a "Project EIR," defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

The City Council certified the Rancho Cordova General Plan EIR ("2006 EIR" or "2006 General Plan EIR") on June 26, 2006 (State Clearinghouse Number 2005022137). The 2006 General Plan EIR is incorporated by reference. In the section discussing Tiering, CEQA Guidelines Section 15152 provides that:

(a) "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

(b) Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including general plans, zoning changes, and development projects. This approach can eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration. Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration. However, the level of detail contained in a first tier EIR need not be greater than that of the program, plan, policy, or ordinance being analyzed;

(c) Where a lead agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand

(d) Where an EIR has been prepared and certified for a program, plan, policy, or ordinance consistent with the requirements of this section, any lead agency for a later project pursuant to or consistent with the program, plan, policy, or ordinance should limit the EIR or negative declaration on the later project to effects which

(1) Were not examined as significant effects on the environment in the prior EIR; or

(2) Are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means;

(e) Tiering under this section shall be limited to situations where the project is consistent with the general plan and zoning of the city or county in which the project is located, except that a project requiring a rezone to achieve or maintain conformity with a general plan may be subject to tiering.

(f) A later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR. A negative declaration shall be required when the provisions of Section 15070 are met.

(g) When tiering is used, the later EIRs or negative declarations shall refer to the prior EIR and state where a copy of the prior EIR may be examined. The later EIR or negative declaration should state that the lead agency is using the tiering concept and that it is being tiered with the earlier EIR

(h) The rules in this section govern tiering generally. Several other methods to streamline the environmental review process exist, which are governed by the more specific rules of those provisions. Where multiple methods may apply, lead agencies have discretion regarding which to use.

This DEIR relies on the analysis of general matters in the 2006 EIR focused on the area defined as the Folsom Boulevard Planning Area by the 2006 General Plan EIR. This DEIR evaluates the potential environmental impacts that might reasonably be anticipated to result from the development of the proposed project. The analysis in this DEIR is specific to the conditions of the 9.85-acre site within the larger Rancho Cordova Planning Area and the impacts of the proposed project. As such, this Project DEIR is intended to fully analyze the impacts of the proposed project.

1.3 PROJECT LOCATION

The 9.85-acre project site encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22. The project site is located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County. The City of Rancho Cordova is surrounded by unincorporated Sacramento County to the north, south, east, and west (see Figure 3-1, *Regional Location,* in Chapter 3*, Project Description*).

1.4 PROJECT SUMMARY

The proposed project would feature a variety of uses including commercial, residential, open space, and community event space on the 9.85-acre site. The community-commercial uses on-site located at the south portion of the site would include a community health clinic; an events and meeting space; an arts center; a community-commercial building with office and studio spaces and a commercial kitchen; and a commercial-retail building featuring a fresh market and a café. The residential uses on the northern portion of the site would include a multifamily affordable apartments and zero lot line townhouse-style homes. The open spaces on the site would include 1.3 to 1.5 acres of neighborhood and community green space and a 0.75- to 1.0-acre plaza and green space in the south-central portion of the site.

1.5 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (§ 15126.6[a]) state that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluated the comparative merits of the alternatives." The DEIR has determined that there would be no significant and unavoidable impacts from the implementation of the proposed project. Therefore alternatives in this DEIR were based, in part, on their potential ability to reduce or eliminate the impacts determined to be potentially significant for implementation of the proposed project. Project alternatives are assessed in further detail in Chapter 7, *Alternatives to the Proposed Project.*

1.6 NO-PROJECT/EXISTING GENERAL PLAN ALTERNATIVE

The No Project/Existing General Plan Alternative is required to discuss the existing conditions at the time the notice of preparation is published and evaluate what would reasonably be expected to occur in the foreseeable future if the proposed project is not approved (CEQA Guidelines, Section 15126.6[e]). Pursuant to CEQA, this alternative is based on current plans and consistent with available infrastructure and community services. Therefore, the No Project Alternative assumes that the proposed project would not be adopted and development on the site would be consistent with the projected buildout in the General Plan.

1.6.1 Reduced Development Alternative

The Reduced Development Alternative would reduce residential and nonresidential development and increase the amount of public open space at the project site. The reduced development alternative designates 33 percent of the site for residential uses, 33 percent for non-residential uses, and 34 percent for open space.

1.7 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.
6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

1.8 AREAS OF CONTROVERSY

The State CEQA Guidelines Sections 15123(b)(2) and (3) require that a DEIR identify areas of controversy known to the lead agency, including issues raised by other agencies and the public and issues to be resolved, including the choice among alternatives and whether, or how to, mitigate the significant effects. A Notice of Preparation (NOP) for the project was circulated on January 6, 2023, with a 30-day public review period ending on February 6, 2023. The following issues of concern were identified during the review period of the distribution of the NOP during the public scoping meeting held on January 19, 2023:

- Removal of on-site trees
- Crime and safety concerns associated with the project
- Overcrowding in the housing portion of the project
- Parking concerns on surrounding residential streets
- Waste collection for the project
- Increased traffic and freeway congestion; improvements to freeway exits
- Design conformity with surrounding uses
- Noise generated by the project
- Flooding concerns on surrounding streets due to the southwesterly slope of the project site
- Emergency access to and from the site
- Project's contribution of parkland
- Project proposes too much parking
- Project's proposed roadways and access points create hazards

1.9 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1 summarizes the conclusions of the environmental analysis contained in this EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AIR QUALITY			
Impact 5.1-1: The proposed project is consistent with the applicable air quality management plan.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.1-2: The proposed project could result in a cumulatively considerable net increase of a criteria pollutant that the project region is nonattainment under federal or state ambient air quality standards (including releasing emissions which exceed quantitative threshold for ozone precursors).	Potentially significant	AQ-1 **Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce fugitive Dust.** The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. The following measures are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures. ● Control of fugitive dust is required by District Rule 403 and enforced by District staff. ● Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads. ● Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered. ● Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. ● Limit vehicle speeds on unpaved roads to 15 miles per hour (mph). ● All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. ● Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1]. • Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated	
Impact 5.1-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations	Less than significant	No mitigation measures required.	Less than significant
Impact 5.1-4: The proposed project would not result in other emissions that would adversely affect a substantial number of people	Less than significant	No mitigation measures required.	Less than significant
5.2 BIOLOGICAL RESOURCES			
Impact 5.2-1: Development of the proposed project could significantly impact the following sensitive species: special status birds and bats	Potentially significant	BIO-1: To protect nesting birds, no project activity shall begin from February 1 through August 31 unless a qualified wildlife biologist completes the following surveys. Separate surveys and avoidance requirements are listed below for nesting birds and raptors. If project construction begins between February 1 through August 31, a qualified biologist shall perform a preconstruction nesting bird survey within seven days prior to construction (or less if recommended by CDFW), within the project work area for all birds protected under the MBTA, including raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established by a qualified biologist in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest, or that the nest is otherwise no longer active. BIO-2: A qualified biologist shall conduct a survey for suitable bat roosting habitat within 14 days of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat is identified and proposed for removal, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities will be required. If bats are not found during the preconstruction surveys, no further measures are necessary.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.2-2: Development of the proposed project would not result in the loss of any riparian habitat or other sensitive natural community nor on state or federally protected wetland	No impact	No mitigation measures are required.	No impact
Impact 5.2-3: The proposed project could affect wildlife movement of special status species	Potentially significant	Implement mitigation measure BIO-1 and BIO-2.	Less than significant
Impact 5.2-4: The proposed project would not conflict with the City's tree preservation ordinance or with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional or state habitat conservation plan	Less than significant	No mitigation measures are required.	Less than significant
5.3 CULTURAL RESOURCES			
Impact 5.3-1: Development of the project could impact an identified historic resource	No impact	No mitigation measures are required.	No impact
Impact 5.3-2: Development of the project could impact archaeological resources	Potentially significant	CUL-1 If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find: • If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.	
Impact 5.3-3: Grading activities could potentially disturb human remains	Potentially significant	CUL-2 If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (Section 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.	Less than significant
5.4 ENERGY			
Impact 5.4-1: Project construction and operation would not cause wasteful, inefficient, or unnecessary energy use.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.4-2: The project would not conflict with a State or local plan for renewable energy or energy efficiency.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.4-3: The proposed project would not require the relocation or construction of new or expanded energy facilities that would result in significant environmental effects.	Less than significant	No mitigation measures are required.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.5 GREENHOUSE GAS EMISSIONS			
Impact 5.5-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	Potentially significant	GHG-1 Implement SMAQMD Tier 1 Best Management Practices. The implementing agency will require the Project to implement Sacramento Metropolitan Air Quality Management District Tier 1 Best Management Practices: ● BMP 1: projects shall be designed and constructed without natural gas infrastructure. ● BMP 2: projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready. GHG-2 Implement SMAQMD Tier 2 Best Management Practices. The implementing agency will require the Project to implement Sacramento Metropolitan Air Quality Management District Tier 2 Best Management Practices: ● BMP 3: The project applicant shall coordinate with the City of Rancho Cordova to implement feasible transportation demand management (TDM) strategies, which would decrease the vehicle miles traveled generated by the proposed project as follows: ○ The project community office space component must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for Sacramento County. ○ The project residential component must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in Sacramento County. ○ The project retail component must achieve no net increase in total VMT Examples of potential measures include (but are not limited to): paid parking, employee telecommuting, employee shuttle service, expansion of transit service coverage/ subsidized transit fares, enhanced bicycle and pedestrian connections, and flexible work schedules. In the case that the necessary VMT reductions are infeasible, the purchasing and retiring GHG/carbon offsets from a SMAQMD-approved registry is required. Approved registries may include but are not limited to any of the following: (i) the Climate Action Reserve, the American Carbon Registry and Verra; (ii) any entity approved at any time by the California Air Resources Board to act as an "offset	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.	
Impact 5.5-2: The proposed project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases	Less than significant	No mitigation measures are required.	Less than significant
5.6 HAZARDS AND HAZARDOUS MATERIALS			
Impact 5.6-1: The project could potentially create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials	Potentially significant	HAZ-1 **Implement Central Valley Regional Water Quality Control Board approved Site Cleanup Plan.** Prior to the issuance of construction permits, the project applicant shall complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech (Appendix 5.6-1, dated March 16, 2022, and Appendix 5.6-2, August 30, 2023) for the proposed project into the project's construction plans. Short-term soil vapor extraction (SVE) will be conducted to remove the impacted soil vapor that migrated to this area. Up to 15 SVE wells will be installed and operated as extraction and/or venting wells to expedite the pore volume flushing of the vadose zone (Section 3.9) for an approximate duration of two months. The City Engineer will transmit testing results to the Central Valley Regional Water Quality Control Board for review and concurrence before issuing construction permits. The City Engineer will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Documentation will be part of the mitigation monitoring and reporting program.	Less than significant
Impact 5.6-2: The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Potentially significant	Implement Mitigation Measure HAZ-1	Less than significant
Impact 5.6-3: The proposed project could potentially emit hazardous emissions or handle	Potentially significant	Implement Mitigation Measure HAZ-1	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school			
Impact 5.6-4: The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5; which could create a significant hazard to the public or the environment	Potentially significant	Implement Mitigation Measure HAZ-1	Less than significant
Impact 5.6-5: The proposed project would not conflict with an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.	Less than significant	No mitigation measures are required	Less than significant
Impact 5.6-6: The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Potentially significant	Implement Mitigation Measure HAZ-1	Less than significant
Impact 5.6-7: The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires	Less than significant	No mitigation measures are required	Less than significant
5.7 LAND USE AND PLANNING			
Impact 5.7-1: Project implementation would not divide an established community	Less than significant	No mitigation measures are required	Less than significant
Impact 5.7-2: Project implementation would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	No mitigation measures are required	Less than significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.8 MINERAL RESOURCES			
Impact 5.7-1: The proposed project would not result in the loss of availability of a known mineral resource nor the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.	Less than significant	No mitigation measures are required.	Less than significant
5.9 NOISE			
Impact 5.8-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.8-2: The proposed project would not result in a substantial permanent increase in ambient noise levels in excess of City standards during the project's operation phase	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.8-3: The project would not generate excessive groundborne vibration during construction or operation.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.8-4: The proximity of the project site to an airport would not result in exposure of future residents or workers to airport-related noise	Less than significant	No mitigation measures are required.	Less than significant
5.10 POPULATION AND HOUSING			
Impact 5.9-1: The Mills Crossing project would not induce unplanned population growth either directly or indirectly within the project area	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.9-2: Project implementation would not result in substantially displace existing people and/or the construction of replacement housing elsewhere	Less than significant	No mitigation measures are required.	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.11 PUBLIC SERVICES			
FIRE PROTECTION AND EMERGENCY SERVICES			
Impact 5.11-1: The proposed project would introduce new structures, residents, and workers into the Sacramento Metropolitan Fire District service boundaries; however this increase would not require the need for additional fire protection facilities	Less than significant	No mitigation measures are required.	Less than significant
POLICE PROTECTION			
Impact 5.11-2: The proposed project would introduce new structures, residents, and workers into the Rancho Cordova Police Department service boundaries;however this increase would not require the need for additional police protection facilities or personnel	Less than significant	No mitigation measures are required.	Less than significant
SCHOOL SERVICES			
Impact 5.11-3: The proposed project would generate 57 new students into the FCUSD which would impact the school enrollment capacities of area schools	Less than significant	No mitigation measures are required.	Less than significant
LIBRARY SERVICES			
Impact 5.11-4: The proposed project would introduce new residents into the Sacramento Public Library System/Rancho Cordova Library service boundaries, thereby increasing the requirement for library facilities and personnel	Less than significant	No mitigation measures are required.	Less than significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.12 RECREATION			
Impact 5.12-1: The proposed project would increase the use existing neighborhood and regional parks and other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.12-2: Project implementation would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	Less than significant	No mitigation measures are required.	Less than significant
5.13 TRIBAL CULTURAL RESOURCES			
Impact 5.13-1: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is: i) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). ii) determined by the lead agency to be significant pursuant to criteria in Public Resources Code section 5024.1(c). In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	Potentially significant	TCR -1 Prior to issuance of grading permits, a qualified Tribal monitor/consultant shall be identified to be on call during ground-disturbing activities. The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Wilton Rancheria Tribal Government and is listed under the NAHC Tribal Contact list for the area of the project location. A Native American monitor shall be retained by the Lead Agency or owner of the project to be on-site to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.). A monitor associated with one of the NAHC recognized Tribal governments that have commented on the project shall provide the Native American monitor. The monitor/consultant will only be present on site during the construction phases that involve ground-disturbing activities. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The onsite monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources. TCR-2: If any tribal cultural are discovered during excavation and/or construction activities, construction shall stop within 100 feet of the find, and the qualified Tribal monitor/consultant shall be consulted to determine whether the resource requires further study. The Tribal monitor/consultant shall make recommendations to the Cityto protect the discovered resources. All tribal cultural resources unearthed by project construction activities shall be evaluated by the qualified	Less than significant

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		tribal monitor/consultant. If the resources are Native American in origin, the Wilton Rancheria Tribal Government shall coordinate with the landowner regarding treatment and curation of these resources. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 1506.5[f]).	
5.14 UTILITIES AND SERVICE SYSTEMS			
Impact 5.14-1: The proposed project would not require the relocation or construction of new or expanded wastewater treatment facilities, the construction of which would cause significant environmental effects.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.14-2: The proposed project would result in the determination of a wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less than significant	No mitigation measures are required,	Less than significant
Impact 5.14-3: The proposed project would not require the relocation or construction of new or expanded water facilities, which could cause significant environmental effects.	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.14-4: CAW would have sufficient water supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.14-5: The proposed project would not require the relocation or construction of new or expanded storm drainage facilities, the construction of which would cause significant environmental effects	Less than significant	No mitigation measures are required.	Less than significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.14-6: The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of waste reduction goals	Less than significant	No mitigation measures are required.	Less than significant
Impact 5.14-7: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste	Less than significant	No mitigation measures are required.	Less than significant

2. Introduction

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is a public document designed to provide decision-makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage, and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth-inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (CEQA § 21067). The City of Rancho Cordova has the principal responsibility for approval of the Mills Crossing project. For this reason, the City of Rancho Cordova is the CEQA lead agency for this project.

The DEIR intends to provide sufficient information on the potential environmental impacts of the proposed Mills Crossing project to allow the City of Rancho Cordova to make an informed decision regarding the approval of the project. Specific discretionary actions to be reviewed by the City are described in Section 3.4, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed Mills Crossing project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the project; and identifies mitigation measures to reduce or avoid adverse effects.

2.2 NOTICE OF PREPARATION

The City of Rancho Cordova issued a Notice of Preparation (NOP) for public review from January 6 to February 6, 2023. Comments received during the public review period are in Appendix 2-1. Table 1-1, *Notice of Preparation Comment Letters*, summarizes the comments received during the public comment period.

The City of Rancho Cordova conducted an in-person public scoping meeting on Thursday, January 19, 2023, and public comments are summarized and noted under "Scoping Meeting" in Table 1-1.

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
Agency			
Sacramento Municipal Utility District (SMUD)	01/07/2023	• SMUD requires the project acknowledge impacts related to: - Overhead and/or underground transmission and distribution line easements - Utility line routing - Electrical load needs/requirements - Energy efficiency - Climate change - Cumulative impacts related to the need for increased electrical delivery. - Potential need to relocate and/or remove any SMUD infrastructure that may be affected in or around the project area. • SMUD would like to have the following details related to the electrical infrastructure in the DSEIR's project description: - Existing 69/12kV OH/UG facilities south of Folsom Blvd. - Existing 12kV OH/UG facilities on the project site - Building foundation must have a minimum horizontal clearance of 5 feet from any SMUD trench. - Proposed SMUD facilities located on the customer's property outside of the existing or proposed PUE(s) may require a dedicated SMUD easement. - Applicant shall dedicate and provide a vehicular access road. - Requires a minimum 1.5-foot OUE adjacent to all public roads for 12kV facilities. - Developer shall dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication as a public utility easement for overhead and underground facilities and appurtenances. - If alternative locations are not provided, existing overhead/underground 12kV facilities will need to remain to maintain existing services not part of development. - If applicable existing overhead lines will be removed and existing underground cables will be relocated at developer's expense to maintain existing services within development.	Section 5.4, *Energy*

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
Pacific Gas and Electric Company (PG&E)	01/10/2023	• PG&E thanks for the notice and asks once detailed plans are available to send for review.	N/A
Native American Heritage Commission (NAHC)	01/13/2023	• The NAHC explains Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) which both have tribal consultation requirements. • The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. • AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015. • SB 18 applies to all California tribes and local governments that adopt or amend general plans or specific plans or create open space designations. • NAHC recommends contacting the appropriate regional California Historical Research Information System (CHRIS) Center for an archaeological record search. • NAHC recommends if an archaeological inventory survey is required then prepare a professional report detailing the findings and recommendations of the records search and field study. • NAHC recommends contacting the NAHC for a Sacred Lands File search and a Native American Consultation List of appropriate tribes for consultation concerning the project site.	Section 5.13, *Tribal Cultural Resources*
Sacramento County Department of Transportation	01/25/2023	• Commenter anticipates based on the project's size; the project may generate enough traffic to cause impacts in Sacramento County. • Commenter asks the City to analyze the Folsom Blvd. at Horn Rd. Paseo Rio Way and Folsom Blvd. at Bradshaw Rd for LOS and queuing analysis. • Commenter states that if any County facilities are impacted from the project, then the Sacramento County would request to enter a Project Specific Reciprocal Funding Amendment with the City of Rancho Cordova.	Chapter 8, *Impacts Not Found to Be Significant*
Cordova Recreation and Park District (CRPD)	02/02/2023	• States the proposed project falls under the Quimby park land requirements for project with 50 or more lots. • The commenter states parcels have inconsistent labels, and it is unclear which parcels are intended to be City Open Space or Quimby park land dedications and recommends the DSEIR to clarify this issue. • CRPD anticipates standard Quimby dedication requirements be applied to all residential units per the Municipal Code, Chapter 22.40. • CRPD anticipates that standard Quimby dedication to be around 1.25 acres and the project may need to contribute towards maintenance of the Quimby Community Park. • Recommends CRPD be listed as the jurisdiction responsible for Quimby Parkland.	Section 5.12, *Recreation*

2. Introduction

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
		• States once the Quimby park land have been clarified then CRPD can provide more information about Quimby in-lieu fees, park impact fees, and on-going maintenance assessments for park land.	
Sacramento Regional Transit District (SacRT)	02/04/2023	• SacRT feels that the Mills Crossing project will provide benefits such as higher quality of life, increased transit ridership, reduced traffic congestion and driving, healthier lifestyle through more active transportation, and reduced pollution and environmental destruction. • SacRT is in support of the project because it incorporates: - Development patterns with a mix of commercial and residential. - High-density residential sites with planned pedestrian pathways and crossing to fixed-route transit options. - 55-60 multi-family affordable housing units. • SacRt requests review of a traffic impact analysis to further understand the methodology for planned number of parking spaces. • SacRt suggests revising the layout of affordable housing units be brought closer to the center of the community, around the neighborhood green space, and closer to the planned pathways to transit. SacRT argues that many residents of affordable housing units are likely to be transit-dependent; therefore, placing these units closer to transit options may be more beneficial.	Chapter 3, *Project Description* Chapter 8, *Impacts Not Found to Be Significant*
Central Valley Regional Water Quality Control Board (RWQCB)	02/06/2023	• States the Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. • States beneficial uses, water quality objectives, and Antidegradation Policy are State's water quality standards. • States the environmental review document should evaluate potential impacts to surface and groundwater quality. • Provides an overview of permitting requirements for Construction Storm Water General Permit, Clean Water Act Section 404 Permit. • Clean water Act Section 402, Waste Discharge Requirements, Dewatering Permit, Limited Threat General NPDES Permit, and NPDES Permit.	Chapter 8, *Impacts Found Not to Be Significant*
Sacramento Metropolitan Air Quality Management District (Sac Metro Air District)	02/06/2023	• Recommends the City utilize the Guide to Air Quality Assessment in Sacramento County (CEQA Guide) as a resource. • States the DEIR's construction analysis should disclose projected construction emissions of Criteria Pollutants, pollutants regulated by the Clean Air Act, using methods referenced in the CEQA Guide's chapter on Construction-Generated Criteria Air Pollutant and Precursor Emissions. If construction emissions are projected to exceed Sac Metro Air District thresholds, then the DEIR should incorporate mitigation measures from this chapter as well.	Section 5.1, *Air Quality* Section 5.5, *Greenhouse Gas Emissions*

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
		• States all projects must implement Sac Metro Air District Basic Construction Emission Control Practices. • States the DEIR's analysis should disclose projected operational emissions of Criteria Pollutants using methods referenced in CEQA Guide's chapter on Operational Criteria Air Pollutant and Precursor Emissions. If project exceed Sac Meto Air District's operational emissions, then the project proponent develop an Air Quality Mitigation Plan (AQMP) using methods in the CEQA Guide. • Recommends using its Recommended Guidance for Land Use Emission Reductions to develop AQMP measures. • Requires the operational analysis of Criteria Pollutants include an analysis of health effects. The operational analysis should also study consistency with local and regional plans such as the City's Folsom Boulevard Specific Plan and SACOG Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS). • Recommends using mitigation methods referend in the CEQA Guide's chapter on GHG Emissions if GHG emissions from the project exceed the Sac Metro Air District's thresholds. • States to review if an Authority to Construct and Permit to Operate is needed before installing or operating new equipment or processes that may release or control air pollutants pursuant to Sac Metro Air District Rule 201. • Recommends the project be equipped with MERV-13 or higher-rated air filtration systems to serve as a clean air center during wildfire smoke events and an onsite renewable energy system to provide emergency power. • Recommend the DEIR evaluate project support of bicycle and pedestrian transportation as consistent with adopted policies to encourage multi-modal transportation such as the Folsom Boulevard Specific Plan • Recommends the project incorporate strategies to reduce urban heat island effect from the Urban Heat Island Mitigation Project such as certified cool roofs, cool pavement, new air quality supportive tree species.	
Organization			
Sacramento Area Bicycle Advocates – Marven E. Norman	02/09/2023	• Argues the proposed project would introduce several hazards by design and the DEIR should acknowledge and mitigate these hazards. • States there is an unacceptable number of options for entering the parking structure off La Loma Drive. • States the intersection at La Loma Drive and Folsom Blvd does not provide enough space to allow all turning movements into the garage resulting in an additional threat to bicyclists using the Class II bike lanes which exist on La Loma Drive.	Chapter 8, *Impacts Not Found to Be Significant*

2. Introduction

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
		• States the new street proposed by the project which runs from La Loma Drive to El Caprice DR would create a speeding problem and cut-through traffic. States the EIR must acknowledge and mitigate this hazard. • Recommends using AB 45 (Friedman 2021) to keep speeds and traffic counts low. • States the project should remove the on-street parking along the new street and instead narrow the street by using wider sidewalks and bioswales/planter boxes with trees. The commenter states incorporating this measure would keep speeds low and potentially improve water quality and runoff. • Commenter states that if on-street parking is kept in the design then at least provide demarcation between traveled way and parking bay along the new street. • Suggest making all crosswalks associated with the project site raised crosswalks and incorporating bulbouts. • States the studies done for the project should not ignore other forms of transportation in the analysis given the location of the project directly adjacent to the rail transit station. • States that any offsite traffic mitigation deemed to be necessary for the project not contradict and undermine the existing active transportation plans for the City, County, Caltrans, or other entities.	
Individual			
Nancy Marsh	01/05/2023	• States parking seems excessive considering how much street parking is available. • Suggest Folsom Lake College parking lot be leased to events since its never full. • States Public transportation should be encouraged as the space is right across the street from buses and light rail. • Suggest reducing parking and add more green space or a craft center (like in Davis). • Asks to please landscape with native plants and trees and recommends using CA Native Plant Society as a resource. • Recommends no more crepe myrtle but instead adding oak or CA sycamore.	Chapter 3, *Project Description* Section 5.2, *Biological Resources* Chapter 8, *Impacts Not Found to Be Significant*
Scoping Meeting	01/19/2023	**On-site trees** • Commenter is concerned about the preservation of the existing trees on-site. • Commenter states that oak trees are protected in the City. • Commenter counted 24 trees on-site and feels that the design's smaller replacement trees will not adequately replace the existing trees. **Project contribution to crime/safety concerns** • Commenter asserts that the existing area surrounding the project contains a number of low-income apartment communities that have contributed crime, litter, and overall decay in the community.	Section 5.2, *Biological Resources* Section 5.11, *Public Services* Chapter 8, *Impacts not found to be Significant* Section 5.14, *Utilities*

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
		• Commenter is concerned with how the project may exacerbate these issues by catering to risky demographics such as students and low-income renters. • Commenter further suggests that a sub-station be built on or in proximity to the site. **Overcrowding/parking/waste collection** • Commenter states concern that future project residents, assumed to be young-adult students, will contribute overcrowding in the units proposed under the project's housing portion. • Commenter further expresses concern that the project's proposed parking will not be sufficient to accommodate all residents' vehicles due to possible overcrowding in units and commenter's assumption that residents' vehicles will be larger than average vehicles. • Commenter claims that the surrounding community will be overburdened with parking issues due to the project's lack of accommodation for parking. • Commenter suggests that the traffic analysis account for parking issues. • Commenter claims that as a result of overcrowding there will be on-street parking issues. • Commenter also expresses concerns that issues will arise over the solid waste collection logistics, including the number and storage of bins on-site. **Traffic** • Commenter expressed concerns that the project will significantly exacerbate existing traffic issues on La Loma Drive and other streets in the project vicinity. • A number of commenters echoed this concern. • Commenter suggests isolating the traffic study to the project area. **Use of the light rail** • Commenter expresses that the project's goal to reduce vehicle trips through its proximity to a light rail stop does not consider realistic use of the light rail. • Commenter states the light rail's route only extends from Folsom to Sacramento which limits its viability as an option to replace most vehicle trips. • Commenter implies that the project should not consider the light rail's effect in reducing traffic, parking and other vehicle related concerns. **Design conformity with surrounding uses** • Commenter states that the project's design should consider and conform with the surrounding development of the community. • **Wildlife**Commenter expresses concern about the presence of wild turkeys in the existing community. • Commenter implies that the project may exacerbate the issue. **Noise** • Commenters discussed the possibility of noise issues attributed to the event center uses from the proposed project.	

2. Introduction

Table 1-1 Notice of Preparation Comments

Agency/Organization/ Individual	Date	Summary of Comments	DEIR Section Where Comment Is Addressed
		• Commenter also expressed concerns about noise from parking. **Existing community infrastructure and housing condition** • Commenters expressed concern that the existing community's apartment building, roads and associated infrastructure are unmaintained and create hazards and eyesores in the community. • Commenter states that the City should be investing in improving the condition of the existing community as opposed to the proposed project. **Flooding/slope on property** • Commenter states that the property contains a notable incline; the north side of the property is significantly higher than the south portion. • Several commenters expressed concern that this condition could contribute to flooding issues on-site as well as in the surrounding streets by increasing the hardscape on-site. • Commenter suggests that the project include storm drainage upgrades and that the EIR address the drainage issues. • Commenter further states that a 'wet pit' is present on the site, indicating a potential jurisdictional water/habitat. **Emergency access** • Commenter expresses concern about access to the site, stating that the project only includes two points of ingress/egress which could create potential issues with internal circulation and access for emergency vehicles. **Mistletoe tree parasite** • Commenter states that a number of trees in the community are affected by mistletoe. • Commenter suggests that the City invest in the maintenance of trees and implement a tree maintenance program. **Solar panel hazard** • Commenter expresses concern that the project will contribute toxic/hazardous waste through its use of solar panels.	

The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Based on this process and the initial study for the project, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered Potentially Significant are addressed in this DEIR, but issues identified as Less Than Significant or No Impact are addressed in Chapter 8, *Impacts Not Found to Be Significant*.

2.3 SCOPE OF THIS DEIR

The scope of the DEIR was determined based on the comments received in response to the NOP and comments received at the scoping meeting conducted by the City. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the DEIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The information in Chapter 3, *Project Description*, establishes the basis for analyzing future, project-related environmental impacts. However, further environmental review by the City may be required as more detailed information and plans are submitted on a project-by-project basis.

2.3.1 Unavoidable Significant Adverse Impacts

This DEIR determined that there would be no significant and unavoidable adverse impacts, as defined by CEQA, that would result from the implementation of the proposed project. Therefore, a "statement of overriding considerations" is not required to approve the project.

2.4 INCORPORATION BY REFERENCE

Some documents are incorporated by reference into this DEIR, consistent with Section 15150 of the CEQA Guidelines, and they are available for review at the City of Rancho Cordova.

- Rancho Cordova General Plan Draft Environmental Impact Report, prepared by Rancho Cordova, March 13, 2006.
- *Rancho Cordova General Plan,* prepared by Rancho Cordova*,* June 26, 2006.

2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the DEIR to the City address shown on the title page of this document. Upon completion of the 45-day review period, the City of Rancho Cordova will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the City of Rancho Cordova for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearing before the City.

The DEIR is available to the general public for review at the City Hall and online.

- Rancho Cordova City Hall, 2729 Prospect Park Drive, Rancho Cordova, CA 95670
- https://www.cityofranchocordova.org/residents/new-businesses-and-projects/mills-crossing

2.6 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The Mitigation Monitoring Program for the Mills Crossing project will be completed as part of the Final EIR, prior to consideration of the project by the Rancho Cordova City Council.

3. Project Description

3.1 ENVIRONMENTAL SETTING

3.1.1 Project Location

The 9.85-acre project site encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22. The project site is located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County. The City of Rancho Cordova is surrounded by unincorporated Sacramento County to the north, south, east, and west (see Figure 3-1, *Regional Location*).

3.1.2 Project Site History

The project site includes a former dry cleaning site that operated from 1971 through 2003 located on the northwest portion of the project site (See Figure 5.6-1, Project Remediation Map in Chapter 5.6, *Hazards and Hazardous Materials*). The project site was found to have elevated levels of tetrachloroethylene (also known as perchloroethylene or "PCE") found in groundwater. The project site was previously remediated via a soil vapor extraction system from 2010 to 2016 and one groundwater extraction well from 2014 to 2017 (Appendix 5.6-1). The City of Rancho Cordova bought the property in 2018 and is working on addressing residual PCE in soil vapor that still exceeds screening levels (SWRCB 2024). The 2021 soil vapor data show that PCE concentrations in soil vapor exceed the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs) for vapor concentrations in the former dry cleaner area located on the northwest portion of the project site. The PCE concentrations exceeded the residential ESL for vapor intrusion consideration, which corresponds to a carcinogenic risk of 10-6. The City plans to perform additional site remediation including soil and sewer line excavation in the former dry cleaner area and contingency in-situ soil treatment at a deeper depth in the former parking lot area.[1] Section 5.6 provides additional details about potential hazards and hazardous materials at the project site.

3.1.3 Existing and Surrounding Uses

The project site is currently vacant. The project site was previously developed as a commercial shopping center, but all of the previous buildings have since been demolished, leaving only the parking lot remaining. A few scattered trees are found in weedy patches within and around the perimeter of the project site. The project site also has a sloping incline located on the northwest portion of the project site on La Loma Drive. The project site is surrounded by residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova

[1] The proposed remediation activities have been exempt under State CEQA Guidelines Section 15304(f). This remediation work is not part of the proposed project because it needs to be completed whether or nor the proposed project goes forward. Also, the remediation work and should be completed before any approval of the proposed project and prior to construction from the proposed project.

to the east, light industrial uses to the south, and commercial and residential uses to the west. Figure 3-2, *Aerial Photograph,* shows the project site in its local context. Section 4.0, *Environmental Setting*, includes a more detailed description of the existing environmental setting.

3.1.4 Existing Zoning and Land Use Designations

The project site is zoned Residential Mixed-Use – Folsom Boulevard Specific Plan (RMU [FBSP]). The RMU (FBSP) Zoning District is intended to designate property for the development of medium and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the City encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development.

The project site has a land use designation of Residential Mixed-Use (FB-RMU).

3.2 STATEMENT OF OBJECTIVES

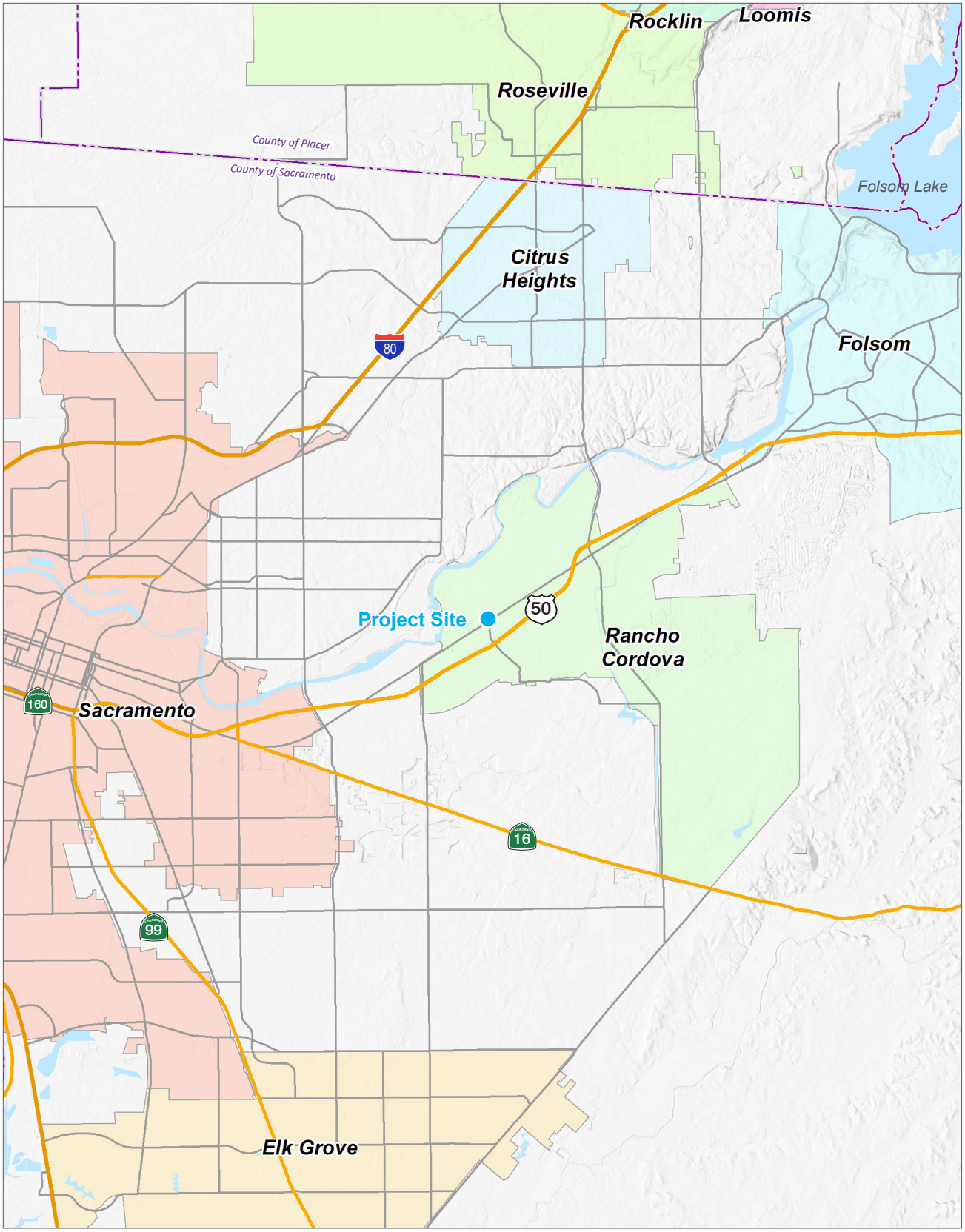
Objectives for the Mills Crossing Project will aid decision makers in their review of the project and associated environmental impacts:

1. Provide for a mix of uses onsite by developing residential, commercial, and recreational uses on infill and underutilized parcels near the Mather Field/Mills Station.
2. Increase the City's housing stock by providing a range of housing density types, including affordable housing.
3. Increase employment opportunities in the City.
4. Improve the jobs-housing balance in the City of Rancho Cordova and provide new housing close to jobs and services.
5. Promote healthy living and physical activity by providing open space areas and opportunities to utilize alternative transportation options available proximate to the site, including the Mather Field/Mills Station.

3.3 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means:

> ... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)…enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])



Source: Generated using ArcMap, Inc. 2022.

0 3
Scale (Miles)

Note: Unincorporated county areas are shown in white.

Figure 3-1
Regional Location



Source: Nearmap, Inc. 2022.

0 270
Scale (Feet)

Project Boundary

Figure 3-2
Aerial Photograph

PLACEWORKS

3.3.1 Description of the City's General Plan Environmental Impact Report

The Environmental Impact Report for the City of Rancho Cordova General Plan ("2006 EIR") was approved by the Rancho Cordova City Council on June 26, 2006. The 2006 EIR was proposed to replace the General Plan which the City adopted from Sacramento County upon incorporation in July 2003. As indicated in the 2006 EIR, the project site is located in the Folsom Boulevard Planning Area, and a Specific Plan was prepared for this Planning Area after the adoption of the 2006 General Plan.

As indicated above, the project site is zoned RMU (FBSP) which allows between 6.1 and 40 dwelling units per acre. As such, the project site could allow between 61 units and 394 units. As the project site is within the Mather Mills Opportunity Site, additional development standards are provided, which indicate that there is no minimum or maximum floor area ratio (FAR) for the project site.

3.3.2 Description of the Proposed Project

The proposed project would include community-commercial buildings, housing, public open space, and a parking structure. Figure 3-3, *Conceptual Site Plan,* shows the layout of the proposed uses on the project site. In order to accommodate the proposed uses lisred below, the necessary entitlements include:

- A Specific Plan Amendment to rezone portions of the Mills Crossing project site area from a Residential Mixed-Use (RMU) zone to a Commercial Mixed-Use (CMU), Medium Density Residential (MDR), and High-Density Residential (HDR) zone. As shown in Figure 3-4, *Zoning Option 1*, and 3-5, *Zoning Option 2*, to view the potential new configuration for the Mills Crossing Project site. Figure 3-4 shows 2.96 acres MDR, 4.79 acres CMU, and 1.09 acres HDR, and Figure 3-5 shows 3.05 acres MDR, 4.79 acres CMU, and 1.0 acres HDR. The remaining RMU areas will be dedicated as a public right of way. (See Section 3.3.3*, Project Site Rezone Designation*, for more information on the individual zones)

- A Tentative Subdivision Map to create between five and nine new parcels for the proposed uses.

- Major Design Review for new construction.

Community-Commercial Buildings

The community-commercial buildings would include up to 140,000 square feet of uses, and would include the following:

- Health and Wellness
  - Community Health Clinic—up to 30,000 square feet

- Events and Meetings Space
  - Space for meetings, community and cultural events, banquet, and weddings—up to 15,000 square feet

- Arts Center (Subtotal—up to 35,000 square feet)
  - Flex Theater (black/white/green box)—up to 18,000 square feet

- Flexible Classrooms and Rehearsal Space—up to 6,000 square feet
- Production/Artist's Studios—up to 4,000 square feet
- Gallery/Exhibits—up to 4,000 square feet
- Administrative Space—up to 3,000 square feet

- Community-Commercial Building (Subtotal—up to 52,500 square feet)
  - Commercial Office-Anchor—up to 25,000 square feet
  - Commercial Office-Shared—up to 10,000 square feet
  - Flexible Studios 1—up to 5,000 square feet
  - Flexible Studios 2—up to 7,500 square feet
  - Commercial Kitchen—up to 5,000 square feet

- Commercial-Retail (Subtotal—up to 7,500 square feet)
  - Fresh Market, Food and Beverage, Café, Retail—up to 5,000 square feet
  - Café—up to 2,500 square feet

Housing

The proposed project would provide up to 120 dwelling units, as follows:

- Between 55 and 60 Multifamily Affordable Apartments
- Between 50 and 60 Zero Lot Line Townhouse-Style Homes for Sale

Public Open Space

The proposed project would include up to 2.5 acres of public open space as follows:

- Between 1.3 and 1.5 acres of Neighborhood and Community Greens
- Between 0.75 and 1.0-acre of Plaza and Green Space

Parking Structure

The proposed project would include a parking structure with between 275 and 325 parking spaces.

Internal Circulation and Access

Figure 3-3, *Conceptual Site Plan,* shows the conceptual internal roadways and access points into and out of the project site. The project site would be accessible via Folsom Boulevard to the south, La Loma Drive to the west, and El Caprice east of the project site.



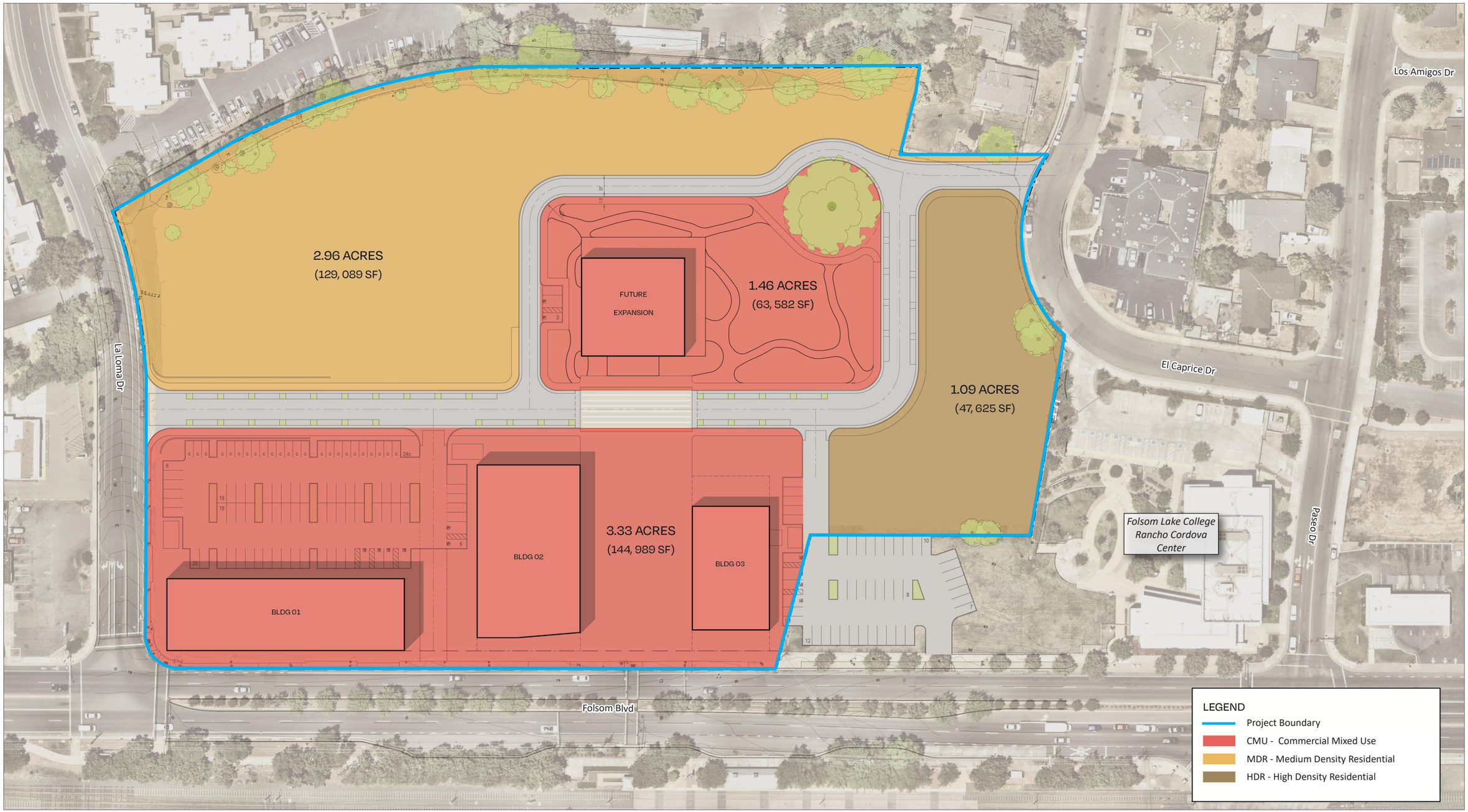
Source: City of Rancho Cordova 2022.

0 100
Scale (Feet)

Project Boundary

PLACEWORKS

Figure 3-3
Conceptual Site Plan



Source: City of Rancho Cordova 2024.

0 100
Scale (Feet)

PLACEWORKS

Figure 3-4
Zoning Option 1



Source: City of Rancho Cordova 2024.

0 100
Scale (Feet)

PLACEWORKS

Figure 3-5
Zoning Option 2

Infrastructure Requirements

Electrical Infrastructure

As discussed in Chapter 2, *Introduction*, the Sacramento Municipal Utility District (SMUD) commented on the Notice of Preparation for the proposed project and described the potential electrical infrastructure requirements associated with construction and operation of the proposed project (see Appendix 2-1). The following are requirements that the proposed project would adhere to with respect to SMUD's electrical infrastructure:

- The project applicant shall conduct a pre-engineering meeting with all utilities to ensure proper clearances are maintained for structural setbacks of less than 14-feet.
- Building foundations would have a minimum horizontal clearance of 5 feet from any SMUD trench. The project applicant would verify with other utilities (Gas, Telephone, etc.) for their specific clearance requirements.
- A minimum 12.5-foot Public Utility Easement (PUE) adjacent to all public roads for 12kV facilities is required.
- Proposed SMUD facilities located on the project site outside of the existing or proposed PUE(s) may require a dedicated SMUD easement.
- The project applicant shall dedicate and provide a vehicular access road; SMUD will supply the minimum specifications during the acquisition process. (or: The Applicant shall dedicate and provide all-weather vehicular access for service vehicles that are up to 26,000 pounds. At a minimum: (a) the drivable surface shall be 20-feet wide; and (b) all SMUD underground equipment and appurtenances shall be within 15-feet from the drivable surface).
- The project applicant shall dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication (and 10 feet adjacent thereto) as a public utility easement for overhead and underground facilities and appurtenances.
- If alternative locations are not provided, existing overhead/underground 12kV facilities would need to remain in order to maintain existing services not part of development.
- If applicable, existing overhead lines will be removed and existing underground cables will be relocated at project applicant's expense to maintain existing services for surrounding development.

3.3.3 Project Site Rezone Designations

The proposed zoning designations and associated standards are as follows:

- **Commercial Mixed-Use (CMU).** This district is intended to designate property for vibrant commercial and mixed-use development. While a predominantly commercial district, the CMU category is designed to

provide for the integration of retail and service commercial uses with office and/or residential uses. In multiple-story buildings, retail uses are the predominant use on the ground floor. This district designates property for the development of residential uses with a density between 10 and 18 dwelling units per acre

- **High Density Residential (HDR).** This district designates property for the development of residential uses with a density between 20.1 and 40.0 dwelling units per acre. The HDR district is intended for higher-density residential development, such as apartments, condominiums, lofts, and other multi-story residential uses. This district is typically located along major roadways and transit corridors near and adjacent to or within service and employment centers. High-density residential development is designed to be pedestrian- and transit-friendly

- **Medium Density Residential (MDR). This** district designates property for the development of a wide range of housing types with a density range between 6.1 and 18.0 dwelling units per acre. The MDR district is intended for higher-density single-family homes (attached or detached), condominiums, and small apartment complexes. This district provides a compatible transition between the lower-density residential neighborhoods of the city and the urban centers.

3.3.4 Construction and Operation

Construction

Construction activities would involve the removal of vegetation and paved areas; grading to finished design elevations; excavation to allow construction of building foundations, utilities, roadways, parking areas, sidewalks, and landscaping. Equipment used during construction may include, but is not limited to, crawler tractors, tractors, loaders, backhoes, excavators, graders, scrapers, cranes, forklifts, generator sets, welders, pavers, paving equipment, rollers, and air compressors. It is anticipated that construction of the project would occur from 2024 through 2029.

Operation

The proposed project would result in up to 120 dwelling units which, assuming 2.68 persons per household as included in the General Plan EIR, would result in approximately 322 residents. The project would include up to 140,000 square feet of community-commercial uses. The open space proposed for the project site (up to 2.5 acres) would be publicly accessible.

3.4 INTENDED USES OF THE DEIR

This Draft EIR (EIR) is a project EIR that examines the environmental impacts of the proposed project. This DEIR also addresses various actions by the City and others to adopt and implement the proposed project. This DEIR intends to evaluate the environmental impacts of the proposed project, thereby enabling the City of Rancho Cordova, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for this project are:

Lead Agency	Action
City of Rancho Cordova City Council	■ Development Agreement ■ Specific Plan Amendment ■ Tentative Subdivision Map ■ Site Plan Approval ■ Development Agreement ■ Major Design Review ■ Building Permit ■ Certify EIR and Adopt Mitigation Monitoring and Reporting Program
Responsible Agencies	**Action**
Central Valley Regional Water Quality Control Board	■ Issuance of National Pollutant Discharge Elimination System (NPDES) Permit ■ Issuance of Construction Permit

3.4.1 References

State Water Resources Control Board (SWRCB). 2024 (accessed). GeoTracker: Lily Company (T10000000403). https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T1000000040.

4. Environmental Setting

4.1 INTRODUCTION

This section provides a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective" (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

4.2 REGIONAL ENVIRONMENTAL SETTING

4.2.1 Regional Location

The City of Rancho Cordova is located entirely within Sacramento County, California. Sacramento County is bounded by Placer and Sutter counties to the north, San Joaquin County to the south, Yolo and Solano counties to the west, and El Dorado and Amador counties to the east. Sacramento County covers approximately 1,015 square miles of land, the majority of which consists of flat grassland and oak woodlands with foothill areas to the west and east of the County line. The land uses in the surrounding counties vary from flat agricultural lands in Yolo, Solano, and San Joaquin counties, to foothill areas in Sutter and Amador counties, and mountain terrains in Placer and El Dorado counties. See Figure 3-1, *Regional Location*, in Chapter 3, *Project Description*.

4.2.2 Regional Planning Considerations

Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Community Strategy

SACOG is responsible for the preparation of, and updates to, the MTP/SCS for the region and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTIP identifies short-term projects (seven-year horizon) in more detail. The 2020 MTP/SCS was adopted by the SACOG board on November 18, 2019. The MTP/SCS is a long-range plan for transportation improvements in the region and provides a 20-year transportation vision and a corresponding list of projects. The plan is based on projections for growth in population, housing, and jobs. SACOG determines the regional growth projections by evaluating baseline data (existing housing units and employees, jobs/housing ratio, and share of regional growth for housing units and employees), historic reference data (based on five- and ten-year residential building permit averages and historic county-level employment statistics), capacity data (General Plan data for each jurisdiction), and current MTIP data about assumptions used in the most recent MTP/SCS. SACOG staff then meets with each jurisdiction to discuss and incorporate more subjective considerations about planned growth for each area. Finally, SACOG makes a regional growth forecast for new homes and new jobs based on an economic analysis

provided by a recognized expert to estimate regional growth potential based on market analysis and related economic data, which is incorporated into the MTP/SCS.

Sacramento Metropolitan Air Quality Management District (SMAQMD)

The SMAQMD is the regional agency responsible for air quality regulation within Sacramento County. The agency regulates air quality through its planning and review activities and has permit authority over most types of stationary emission sources. SMAQMD can require operators of stationary sources to obtain permits, impose emission limits, set fuel or material specifications, and establish operational limits to reduce air emissions. The SMAQMD regulates new or modified stationary sources of criteria air pollutants and toxic air contaminants. All areas designated as nonattainment are required to prepare plans showing how the area would meet the air quality standards by its attainment dates. The following are the most recent air quality plans applicable to the area of the proposed project:

- Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan
- SMAQMD's Triennial Report and Air Quality Plan Revision
- PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County
- $PM_{2.5}$ Maintenance Plan and Redesignation Request

Greenhouse Gas Emissions Reduction Legislation

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in a number of State regulations. Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction goals for the State of California:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

AB 32, the Global Warming Solutions Act (2006), was passed by the State legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 established a legislative target for the year 2020 goal outlined in Executive Order S-03-05. CARB prepared its first Scoping Plan in 2008 that outlined the State's plan for achieving the 2020 targets of AB 32.

In 2008, SB 375 was adopted to connect passenger-vehicle GHG emissions reduction targets for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips.

In September 2016, Governor Brown signed SB 32, making the Executive Order B-15-30 goal for the year 2030 of a 40 percent reduction below 1990 levels by 2030 into a statewide-mandated legislative target. CARB issued an update to its Scoping Plan in 2017, with programs for meeting the SB 32 reduction target.

Executive Order B-55-18 sets a goal for the state to achieve carbon neutrality no later than 2045 and to achieve and maintain net negative emissions thereafter. SB 100 would help the state reach the goal set by Executive Order B-55-18 by requiring that the state's electricity suppliers have a source mix that consists of at least 60 percent renewable/zero carbon sources in 2030 and 100 renewable/zero carbon sources in 2045.

Senate Bill 743

On September 27, 2013, SB 743 was signed into law and started a process that has fundamentally changed transportation impact analysis for CEQA compliance. With the adoption of SB 375, the state signaled its commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to the reduction of GHG emissions, as required by the California Warming Solutions Act of 2006 (AB 32).

SB 743 generally eliminates auto delay, level of service, and other similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts under CEQA. Pursuant to the CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code § 21099[b][1]).

Pursuant to SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines to implement SB 743 on December 28, 2018. Under the new guidelines, VMT-related metric(s) that evaluate the significance of transportation-related impacts under CEQA for development projects, land use plans, and transportation infrastructure projects, were required beginning July 1, 2020. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements for evaluation of the level of service, but these metrics can no longer be the basis for determining transportation impacts under CEQA.

Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan)

The Central Valley Regional Water Quality Control Board (RWQCB) adopted the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) in 1975, and the most recent edition reflects amendments through May 2018. The purpose of the Basin Plan is to designate beneficial uses of waters within the Sacramento and San Joaquin River basins, establish water quality objectives to protect those beneficial uses and implement a program needed to achieve those objectives. The Basin Plan establishes water quality standards for both surface and ground waters.

The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain water quality standards. The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

4.3 LOCAL ENVIRONMENTAL SETTING

4.3.1 Location and Land Use

Project Location

The 9.85-acre project site encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22. The project site is at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County. The City of Rancho Cordova is surrounded by unincorporated Sacramento County to the north, south, east, and west (see Figure 3-1, *Regional Location*).

The site is approximately 0.48 miles north of US Route 50 (US-50) and approximately 115 feet north of the Sacramento Regional Transit District's (SacRT) Mather Field Mills light rail station on the SacRT Gold Line. Primary access to the site is via Folsom Boulevard and La Loma Drive.

Existing Land Use

The project site is vacant and includes grassy and paved areas. This includes a parking area in the western portion of the property and a landscaped area in the eastern portion. According to the City's directory, the site was previously developed with commercial and retail properties; however, all structures have since been demolished. The project site is surrounded by residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova Center to the east, light industrial uses and the Mather Field Mills Light Rail station to the south, and commercial and residential uses to the west. Figure 3-2, *Aerial Photograph,* shows the project site in its local context.

4.3.2 Environmental Resources and Infrastructure

Aesthetics

The project site is currently vacant with a residual parking lot and associated concrete roads covering a large portion of the site. The project site is approximately 0.76 mile southeast of the American River; no other scenic features exist near the project site.

Biological Resources

The project site is situated on leveled flat terrain with elevations ranging from 77 to 82 feet above sea level. The project site includes the previously developed area and surrounding ruderal grassland. No buildings are on-site, but foundations and paved areas remain. A few scattered trees are found in weedy patches around the perimeter. Refer to Section 5.2, *Biological Resources*, for a detailed analysis of the existing street network and the Specific Plan's impacts on biological resources.

Air Quality

The project site is in the Sacramento Valley Air Basin (SVAB), which includes the counties of Butte, Colusa, Glenn, Placer, Sacramento, Shasta, Solano, Sutter, Tehama, Yolo, and Yuba. Ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are the criteria air pollutants of primary concern in this analysis because of their nonattainment status with respect to the applicable National ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) in the SVAB.

Cultural Resources

The project site is currently vacant and is not listed as a state or national historic resource. Refer to Section 5.3, *Cultural Resources*, for more information on historical, archaeological, and paleontological resources.

Geology and Landform

The project site is in the Great Valley geomorphic province of California. The geology of the Great Valley (Valley) is characterized by thick, Jurassic- through Holocene-aged sedimentary deposits. The California Geological Survey (CGS) and the United States Geological Survey (USGS) have mapped a large portion of the valley as being underlain by Quaternary-aged Riverbank formation. The geological formations underlying the project site consist mostly of Cenozoic Quaternary gravelly alluvial and glacial deposits from the ancestral channel of the American River, which date back to the mid-Pleistocene age or approximately 600,000 years.

Hydrology

As shown on Figure 3-2, *Aerial Photograph*, the project site is vacant and largely consists of concrete hardscape and unmaintained grass. Though the site is nearly flat, the northwestern portion of the site is several feet above grade at La Loma Drive. The southwestern portion of the site slopes down southwest. Under existing conditions, stormwater is carried through the site's natural drainage via sheet flow to the southern portion of the site. Additionally, existing storm drains and curb-and-gutter improvements are along La Loma Drive and Folsom Boulevard.

Noise

The noise environment surrounding the project site consists primarily of traffic on surrounding roadways, including Folsom Boulevard and La Loma Drive. Noise associated with the light rail operations can also be heard from the project site. Refer to Section 5.9, *Noise*, of the DEIR, for additional information concerning the existing noise environment.

Public Services and Utilities

The Sacramento Metropolitan Fire District (SMFD) provides fire protection services, fire suppression, inspection, plan checking, emergency transportation and medical services, public education, advanced life support, and rescue services to the City of Rancho Cordova, including the project site. SMFD station 61 is located approximately 0.97-mile east of the project site. The City of Rancho Cordova Police Department (RCPD) is contracted through the Sacramento County Sheriff's Department (SCSD) Patrol Services. Patrol

Services operate the SCSD towing and parking enforcement, community resources and service centers, emergency operations, and specialized patrol units. The project site would be served by the Folsom Cordova Unified School District and in the attendance area of Cordova Meadows Elementary School, which is 0.31 mile north of the project site; Mills Middle School, which is approximately 0.8 mile northeast of the project site; and Cordova High School, which is 0.92 mile northeast of the project site. Refer to Section 5.11, *Public Services*, of the DEIR, for additional information concerning the existing public services.

Sanitary sewer service for the proposed project would be provided by the Sacramento Area Sewer District (SASD) and the Sacramento Regional County Sanitation District (Regional San). SASD operates and maintains the laterals and mainline pipes for wastewater conveyance and collection from the source to the Regional San interceptors. The project site is within the Suburban-Rosemont Public Water System service area which covers a portion of eastern Rancho Cordova along the American River. For stormwater drainage, the City's Stormwater Division protects these waterways by preventing pollutants from entering the drainage system. Republic Services Inc. currently provides solid waste and recycling collection services to the City. Solid waste is transported to Forward Landfill in Manteca California. Refer to Section 5.14, *Utilities and Service Systems*, for additional information concerning the existing wastewater treatment and collection systems, water supply and distribution systems, storm drainage, and solid waste collection and disposal.

Transportation

Regional access to the project site is provided by US-50, which is 0.48 mile south of the site. The City is also regionally connected by the SacRT's light rail system, which connects Rancho Cordova to Sacramento and Folsom via the Gold Line. The Mather Field Mills light rail stop is south of the project site across Folsom Boulevard.

4.3.3 General Plan and Zoning

The project site is zoned Residential Mixed-Use (RMU) under the Folsom Boulevard Specific Plan (FBSP). The FBSP RMU Zoning District is intended to designate property for the development of medium- and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the City encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development. The project site has a land use designation of Residential Mixed-Use (FB-RMU).

4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed where they are significant. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone. Section 15355 of the Guidelines defines cumulative impacts as "…two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of a project when added to other proposed or committed projects in the vicinity.

The CEQA Guidelines (Section 15130 [b][1]) state that the information utilized in an analysis of cumulative impacts should come from one of two sources:

A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or

B. A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

Depending on the environmental category, the cumulative impact analysis may use either source A or B. Some impacts are site-specific, such as cultural resources and geology and soils, and others may have impacts outside the City boundaries, such as regional air quality. Generally, the growth projections that are identified in the City of Rancho Cordova General Plan have been utilized for the general plan forecast year conditions. Table 4-1, *Related Cumulative Projects in the City of Rancho Cordova,* provides a list of cumulative projects in the city.

Table 4-1 Related Cumulative Projects in the City of Rancho Cordova

Project/Applicant Name	Location	Project Type/Size
City of Ranch Cordova		
Rio Del Oro Specific Pan	Northeast of Sunrise Boulevard and Douglas Road	Variety of housing types and styles; 12,189 units
Montelena	Southwest corner of Douglas Road and Rancho Cordova Parkway	Single-family detached housings; 806 units
Anatolia IV	Southwest corner of Chrysanthy Boulevard and Rancho Cordova Parkway	Single-family detached housings; 139 units
North Douglas	The northeast corner of Douglas Road and Americanos Boulevard	Single-family detached housings; 686 units
Arista Del Sol	West of Grantline Road, 1 mile south of Douglas Road	Single-family detached housings; 389 units
Sunridge Lot J	Southeast corner of Douglas Road and Rancho Cordova Parkway	Single-family detached housings; 740 units
Sundance	West of Sunrise Boulevard, approximately a 1/4 mile south of Douglas Road	Townhomes; 129 units
Grantline 208	South of Douglas Road and east of Rancho Cordova Parkway	Single-family detached housings; 502 units
Douglas 103	The southeast corner of Douglas Road and Borderlands Drive	Single-family detached housings; 198 units
Douglas 98	Southwest corner of Douglas Road and Grantline Road	Single-family detached housings; 528 units
The Ranch	East of Rancho Cordova Parkway, approximately 1/2 mile south of Douglas Road	Single Family Detached (Traditional and Active Adult); 1,329 units
Callahan	East of Rancho Cordova Parkway and south of North Campus Road	Variety of housing types and styles; 553 units
Gilmartin/Trevor	East of Rancho Cordova Parkway and north of Kiefer Boulevard	Variety of housing types and styles; 1,043 units
Shalako	East of Sunrise Boulevard and south of Kiefer Boulevard	Variety of housing types and styles; 1,050 units
Grantline 220	West of Grant Line Road and south of Chrysanthy Boulevard	Variety of housing types and styles; 910 units

Table 4-1 Related Cumulative Projects in the City of Rancho Cordova

Project/Applicant Name	Location	Project Type/Size
Sierra Sunrise	East of Americanos Boulevard and south of North Campus Road	Variety of housing types and styles; 1,046 units
Westborough Specific Plan	South of Folsom Boulevard and east of Folsom South Canal	Variety of housing types and styles; 3,898 units

Source: Rancho Cordova 2023.

Cumulative impact analyses for several topical sections are also based on the most appropriate geographic boundary for the respective impact. Several potential cumulative impacts that encompass regional boundaries (e.g., air quality and traffic) have been addressed in the context of various regional plans and defined significance thresholds. Climate change is a global issue, and the cumulative impacts analysis has been addressed in the context of state regulations and regional plans designed to address the global cumulative impact. The following is a summary of the approach and extent of cumulative impacts, which are further detailed in each environmental topical section:

- **Air Quality.** Air quality impacts include regional (cumulative) impacts and localized impacts. For cumulative impacts, the analysis is based on the regional boundaries of the SVAB.
- **Energy.** While energy impacts are site-specific, they contribute to the consumption and demand for energy in the region and are compared to regional totals.
- **Greenhouse Gas Emissions.** GHG emissions impacts are not site-specific impacts but cumulative impacts. Therefore, the project-level analysis in Section 5.5 also provides the analysis to determine whether the project would make a cumulatively considerable contribution to significant cumulative GHG emissions impact.
- **Noise.** Cumulative traffic noise impacts are based on the traffic study, which considers the regional growth based on citywide and regional projections. Cumulative construction impacts are based on nearby projects that may have concurrent construction schedules. Cumulative operational impacts are based on existing development combined with the project and reasonably foreseeable nearby future development.
- **Population and Housing.** Cumulative impacts are based on regional demographic projections in regional plans (e.g., SACOGs MTP/SCS).

4.5 REFERENCES

Rancho Cordova, City of. 2023, February 21 (accessed). Major Development and Projects. https://www.cityofranchocordova.org/departments/community-development/planning/major-developments-and-projects.

5. Environmental Analysis

Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental issue area that was determined to need further study in the DEIR. This scope was determined in the notice of preparation (NOP), which was published January 6, 2023 (see Appendix 2-1), and through public and agency comments received during the NOP comment period from January 6, 2023, through February 6, 2023 (see Appendix 2-1). Environmental issues and their corresponding sections are:

- 5.1 Air Quality
- 5.2 Biological Resources
- 5.3 Cultural Resources
- 5.4 Energy
- 5.5 Greenhouse Gas Emissions
- 5.6 Hazards and Hazardous Materials
- 5.7 Land Use and Planning
- 5.8 Mineral Resources
- 5.9 Noise
- 5.10 Population and Housing
- 5.11 Public Services and Recreation
- 5.12 Recreation
- 5.13 Tribal Cultural Resources
- 5.14 Utilities and Service Systems

Sections 5.1 through 5.14 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed. The DEIR has determined that there would be no significant and unavoidable impacts from the implementation of the proposed project.

Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section is organized under ten major headings:

- Environmental Setting
- Thresholds of Significance
- Environmental Impacts

- Plans, Programs, and Policies
- Cumulative Impacts
- Existing Regulations and Standard Conditions
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

In addition, Chapter 1, *Executive Summary,* has a table that summarizes all impacts by environmental issue.

Terminology Used in This Draft EIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would not change the environment.
- **Less than significant.** The project would not cause any substantial, adverse change in the environment.
- **Less than significant with mitigation incorporated.** The DEIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

5.1 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Mills Crossing Project (proposed project) to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. In this section, "emissions" refers to the actual quantity of pollutant, measured in pounds per day (lbs/day), and "concentrations" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu g/m^3$).

The analysis in this section is based in part on the following technical report(s):

- *Air Quality & Greenhouse Gas Emissions Assessment: Mills Crossing*, ECORP Consulting, Inc., June 2023

A complete copy of this study is included in the technical appendices to this Draft SEIR (Appendix 5.1-1).

5.1.1 Environmental Setting

5.1.1.1 AIR POLLUTANTS OF CONCERN

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 5.1-1, *Criteria Air Pollutants- Summary of Common Sources and Effects.*

Table 5.1-1 Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health and Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death. Causes brown discoloration of the atmosphere.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood- burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).

Table 5.1-1 Criteria Air Pollutants- Summary of Common Sources and Effects

SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: ECORP 2023 (Appendix 5.1-1).

Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease, and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the Sacramento Valley Air Basin (SVAB) follow the state and federal one- and eight-hour standards.

Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_X). Motor vehicle emissions are the main source of NO_X in urban areas. NO_X is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_X increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_X such as NO and NO_2, are attributed to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or reactive organic gases (ROGs) and NO_X undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicles and other internal combustion engine exhaust. NO_X forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_X, sulfur oxides (SO_X) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease.

According to the U.S. Environmental Protection Agency (EPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

Sulfur Dioxide

SO_2 is produced by the combustion of sulfur-containing fuels, such as oil, coal, and diesel. SO_2 is a colorless gas with a strong odor. Like nitrogen dioxide, sulfur dioxide can irritate lung tissue and increase the risk of acute and chronic respiratory disease. Sulfur oxides also contribute to particulate matter formation (SACAQMD 2020). SO_2 is also generated by natural sources, such as volcanoes, and deposition in the environment contributes to soil and surface water acidification and acid rain (CAPCOA 2021).

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Most recently, the California Air Resources Board (CARB) identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

5.1.1.2 REGULATORY BACKGROUND

Federal Regulations

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the EPA to establish the National Ambient Air Quality Standards (NAAQS), with states retaining the option to adopt more stringent standards or to include other specific pollutants.

These standards are the levels of air quality considered safe, with an adequate margin of safety to protect public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. (Table 5.1-3 lists the federal attainment status of the SVAB for the criteria pollutants.)

State

California Clean Air Act

The California Clean Air Act (CCAA) allows the State to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California

Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the California Ambient Air Quality Standards (CAAQS). CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. To comply with California law, the SMAQMD has rolled out a series of air quality plans and reports that constitute the SIP for the Sacramento County portion of the SVAB. The most recent report, the *2021 Sacramento County Second 10-Year PM_{10} Maintenance Plan*, is a comprehensive strategy to update emission inventories, demonstrates maintenance efforts and updated control measures, and establishes new motor vehicle emission budgets. Additional plans include the SMAQMD *2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (including 2018 updates) and the *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento PM2.5 Nonattainment Area* (2013). These air quality planning documents present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NO_X) as well as PM emissions from stationary, area, mobile, and indirect sources.

Tanner Air Toxics Act and Air Toxics "Hot Spots" Information and Assessment Act

CARB's statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the State's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality

management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Regional Regulations

Sacramento Metropolitan Air Quality Management District

The SMAQMD is the air pollution control agency for Sacramento County, including the project site. The agency's primary responsibility is ensuring that the NAAQS and CAAQS are attained and maintained in the Sacramento County portion of the SVAB. The SMAQMD coordinates the work of government agencies, businesses, and private citizens to achieve and maintain healthy air quality for the Sacramento area. The SMAQMD develops market-based programs to reduce emissions associated with mobile sources, processes permits, ensures compliance with permit conditions and with SMAQMD rules and regulations, and conducts long-term planning related to air quality. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities.

The following is a list of noteworthy SMAQMD rules that are required of construction activities associated with the proposed project:

- **Rule 201: General Permit Requirements.** Any proposed project that includes the use of equipment capable of releasing emissions into the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a proposed project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a CARB portable equipment registration.

- **Rule 402: Nuisance.** The purpose of this rule is to limit emissions which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

- **Rule 403: Fugitive Dust.** The purpose of this rule is to require that reasonable precautions be taken so as not to cause or allow the emissions of fugitive dust from non-combustion sources from being airborne beyond the property line from which the emission originates.

- **Rule 442: Architectural Coatings.** The purpose of this rule is to limit the emissions of volatile organic compounds from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the SMAQMD.

Local Regulations

City of Rancho Cordova General Plan

The existing General Plan Air Quality Element contains the following policies that address air quality

- **Policy AQ.1.2:** Evaluate projects for compliance with State and federal ambient air quality standards and the Sacramento Metropolitan Air Quality Management District's (SMAQMD) thresholds of significance.
- **Policy AQ.2.1:** Promote strategic land use patterns for businesses that reduce the number and length of motor vehicle trips and that encourage multiple forms of transportation for employees and patrons.
- **Policy AQ.2.2:** Encourage mixed-use developments that put residences in close proximity to services, employment, transit, schools, and civic facilities/services.
- **Policy AQ.2.3:** Encourage infill development as a way to reduce vehicle trips and improve air quality.
- **Policy AQ.2.5:** Utilize the guidelines in the California Air Resources Control Board Air Quality and Land Use Handbook: A Community Health Perspective when evaluating new development requests that either would generate toxic air contaminant emissions near sensitive receptors or locate new sensitive receptors near existing sources of air toxic emissions or order to minimize health hazards, and implement all feasible best available control technology, as required by SMAQMD.

5.1.1.3 EXISTING CONDITIONS

Sacramento Valley Air Basin

CARB divides the state into air basins that share similar meteorological and topographical features. The project site lies in the SVAB, which comprises all of Butte, Colusa, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties and parts of Solano and Placer Counties. The air basin is relatively flat, bordered by mountains to the east, west, and north and by the San Joaquin Valley to the south. Air flows into the SVAB through the Carquinez Strait, moving across the Sacramento Delta, and bringing pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storm systems. From May to October, the region's intense heat and sunlight lead to high ozone pollutant concentrations. Summer inversions are strong and frequent but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

Meteorological Influences on Air Quality

Regional flow patterns affect air quality patterns by directing pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. However, the mountains surrounding the SVAB can create a barrier to airflow, which can trap air pollutants in the valley when meteorological conditions are right, and a temperature inversion exists. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical air flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog, and pollutants near the ground.

The ozone season (May through October) in the valley is characterized by stagnant morning air or light winds, with the delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north out of the valley. During about half of the days from July to September, however, a phenomenon called the Schultz Eddy prevents this from occurring. Instead of allowing the prevailing wind patterns to move north and carry the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of exceeding federal or state standards.

Ambient Air Quality

Ambient air quality at the project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. The California Ambient Air Monitoring Network consists of more than 250 monitoring stations operated by federal, State, and local agencies (CARB 2023). O_3, PM_{10}, and $PM_{2.5}$ are the pollutant species most potently affecting the project site's region. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. The Sacramento-Branch Center #2 air monitoring station (3847 Branch Center Road, Sacramento), located approximately 2.7 miles southwest of the project site, monitors ambient concentrations of PM_{10}. The Sacramento-Del Paso Manor air monitoring station (2701 Avalon Drive, Sacramento), located approximately 3.5 miles northwest of the project site, monitors ambient concentrations of O_3 and $PM_{2.5}$. Ambient emissions concentrations vary due to localized variation in emissions sources and climate conditions, but the concentrations from this air quality monitoring station should be considered "generally" representative of ambient concentrations in the area.

Table 5.1-2, *Summary of Ambient Air Quality Data*, summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} from the Sacramento-Branch Center #2 monitoring station and the Sacramento-Del Paso Manor monitoring station. O_3, PM_{10}, and $PM_{2.5}$ are the pollutant species most potently affecting the region.

Table 5.1-2 Summary of Ambient Air Quality Data

Pollutant Standards	2019	2020	2021
O3: Sacramento-Del Paso Manor Monitoring Station			
Max 1-hour concentration (ppm)	0.087	0.120	0.110
Max 8-hour concentration (ppm) (state/federal)	0.069 / 0.069	0.085 / 0.085	0.091 / 0.091
Number of days above 1-hour standard (state/federal)	0/0	4/0	7/0
Number of days above 8-hour standard (state/federal)	0/0	10/10	18/17
PM_{10}: Sacramento-Branch Center #2 Monitoring Station			
Max 24-hour concentration (µg/m3) (state/federal)	55.0 / 53.0	203.0 / 201.0	58.0 57.0
Number of days above 24-hour standard (state/federal)	* / *	* / 7.7	25.4 / 0
$PM_{2.5}$: Sacramento- Del Paso Manor Monitoring Station			
Max 24-hour concentration (µg/m3) (state/federal)	41.4 / 41.4	147.3 / 147.3	95.4 / 90.0
Number of days above federal 24-hour standard	3.0	28.1	5.0

Source: ECORP 2023 (Appendix 5.1-1)
Note: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available

Areas that do not meet the standards are classified as nonattainment areas. The NAAQS (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The CAAQS are not to be exceeded during a three-year period.

Table 5.1-3, *Attainment Status of Criteria Pollutants in the Sacramento County Portion of the SVAB*, shows that Sacramento County's portion of the SVAB is currently in nonattainment for O_3 and P_{10} under the CAAQS and in nonattainment for O_3 and $PM_{2.5}$ under the NAAQS.

Table 5.1-3 Attainment Status of Criteria Pollutants in the Sacramento County Portion of the SVAB

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Attainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: ECORP 2023 (Appendix 5.1-1).

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant.

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the project site include residences directly adjacent to the west, north, and east.

5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

5.1.2.1 SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. According to the SMAQMD, an air quality impact is considered significant if the proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SMAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 5.1-4, *SMAQMD Regional Significance Thresholds*.

Table 5.1-4 SMAQMD Regional Significance Thresholds

Air Pollutant	Construction Phase		Operational Phase	
Reactive Organic Gases (ROG)	-		65 pounds/day	
Carbon Monoxide (CO)	-		-	
Nitrogen Oxides (NO_X)	85 pounds/day		65 pounds/day	
Sulfur Oxides (SO_X)	-		-	
Coarse Particulates (PM_{10})	*80 pounds/day (If all feasible BACT/BMP applied)	*14.6 tons/year	*80 pounds/day (If all feasible BACT/BMP applied)	*14.6 tons/year
Fine Particulate Matter ($PM_{2.5}$)	*82 pounds/day (If all feasible BACT/BMP applied)	*15 tons/year	*82 pounds/day (If all feasible BACT/BMP applied)	*15 tons/year

Source: ECORP 2023 (Appendix 5.1-1).
Notes: BACT= best available control technology; BMP = best management practices
* = The allowable threshold level is 0 pounds/day or 0 tons/year unless all SMAQMD recommended BACT/BMP are Implemented.

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed any significance thresholds would not be considered cumulative considerable.

5.1.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

- **Impact 4.6.1** found that implementation of the General Plan land uses would conflict with land use assumptions used in 1994 SMAQMD Regional Ozone Attainment Plan, and policies and actions would not offset air pollution increases from new land uses. Refer to Chapter 4.6, Air Quality, in the 2006 General Plan Environmental Impact Report, for listed policies and actions.

- **Impact 4.6.2** found that implementation of the General Plan would result in construction activities that would contribute to particulate matter and regional ozone impacts. Despite the implementation of General Plan policies and action items that would provide partial mitigation they would not fully offset the air pollutant emissions from construction activities. Therefore, this impact was found to be significant and unavoidable. Refer to Chapter 4.6, Air Quality, in the 2006 General Plan Environmental Impact Report, for listed policies and actions.

- **Impact 4.6.3** found that implementation of the proposed general plan would result in operational activities that would increase air pollutant emissions that would exceed thresholds for ROG and NOx and other federal and state standards. Despite the implementation of the following mitigation measures, the mitigation measures would not fully offset the air pollutant emissions from operational activities and the EIR found the impact to be significant and unavoidable. The mitigation measures 4.6.3a and 4.6.3b describe Policy AQ.1.3 and Policy AQ 1.4 in the City's Air Quality Element. This is not a mitigation measure proposed for the Mills Crossing project.

  Mitigation Measures:
  - **MM 4.6.3a:** The following mitigation measure shall be added as a policy under General Plan Goal AQ.1: The City shall prohibit woodburning open masonry fireplaces in all new development. Fireplaces with EPA-approved inserts, EPA-approved stoves, and fireplaces burning natural gas will be allowed.

  - **MM 4.6.3b:** The following mitigation measure shall be added as a policy under General Plan Goal AQ.1: The City shall develop an incentive program to encourage homeowners to replace high pollution emitting non-EPA-certified wood stoves that were installed before the effective date of the applicable EPA regulation with newer, cleaner-burning EPA-certified wood stoves.

- **Impact 4.6.4** found that implementation of the General Plan would result in sources of toxic air contaminants that may affect nearby sensitive land uses. Mitigation measures would not offset TAC source emissions; therefore, this impact remained significant and unavoidable. The mitigation measures 4.6.4a and 4.6.4b describe a policy added as Action AQ.4.2.5 and Policy AQ.2.5 in the City's Air Quality Element. This is not a mitigation measure proposed for the Mills Crossing project.

Mitigation Measures:

- **MM 4.6.4a:** The following change is made to General Plan Policy AQ.4.2.5: Adoption of an ordinance that limits the amount of time diesel-powered trucks, buses, and other heavy vehicles may idle in accordance with California Air Resources Control Board rules for mobile TAC sources.
- **MM 4.6.4b:** The following shall be added as a new policy under General Plan Goal AQ.2: Utilize the guidelines in the California Air Resources Control Board's *Air Quality and Land Use Handbook: A Community Health Perspective* when evaluating new development requests that either would generate toxic air contaminant emissions near sensitive receptors or locate new sensitive receptors near existing sources of air toxic emissions or order to minimize health hazards.

- **Impact 4.6.5** found that implementation of the General Plan would result in exposure to sensitive receptors to construction and long-term odorous emissions. The impacts were considered less than significant with the implementation of mitigation measures that included setbacks, protection for residential neighborhoods from future land uses, and disclosure of potential odorous emissions to potential property owners. The mitigation measure 4.6.5 describes a policy added as Policy AQ.1.5 in the City's Air Quality Element. This is not a mitigation measure proposed for the Mills Crossing project.

  Mitigation Measures:

  - **MM 4.6.5:** The following mitigation measure shall be added as a new policy under General Plan Goal AQ.1: Require odor impact analyses be conducted for evaluating new development requests that either could generate objectionable odors that may violate SMAQMD Rule 402 or any subsequent rules and regulations regarding objectionable odors near sensitive receptors or locate new sensitive receptors near existing sources of objectionable odors. Should objectionable odor impacts be identified, odor mitigation shall be required in the form of setbacks, facility improvements or other appropriate measures

- **Impact 4.6.6** found that implementation of the proposed General Plan along with potential development of the Planning Area would exacerbate existing regional problems with ozone and particulate matter. Despite implementing mitigation measures, the mitigation measures would not fully offset the impacts of ozone and particulate matter. Therefore, this impact was found to be significant and unavoidable. The mitigation measures 4.6.3a, 4.6.3b, 4.6.4a, and 4.6.4b describe Policy AQ.1.3, Policy AQ 1.4, Action AQ.4.2.5, and Policy AQ.2.5 in the City's Air Quality Element. This is not a mitigation measure proposed for the Mills Crossing project.

  Mitigation Measures:

  - Implement mitigation measures MM 4.6.3a and b and MM 4.6.4a and b.

Folsom Boulevard Specific Plan (FBSP)

The proposed project is located within the Mather Mills Opportunity Site, the FBSP highlights the advantage of being near a light rail station. The proximity to this light rail station would help reduce vehicle trips and help improve air quality. The Mather Mills Opportunity Site is characterized as a compact, urban, and walkable environment for commercial and residential use. There are no mitigation measures regarding air quality listed in the FBSP that would be applicable to the proposed project.

5.1.4 Environmental Impacts

5.1.4.1 METHODOLOGY

Air quality impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated primarily using CalEEMod model defaults for Sacramento County, though the timing of construction was adjusted to reflect the anticipated construction schedule of 2024 through 2029. Operational air pollutant emissions were based on the land use mix identified in Section 1.0 of Appendix 5.1-1 and traffic trip generation rates provided by Nelson/Nygaard (2023). Two design features attributable to the proposed project are accounted for in the emissions modeling calculations, specifically the proposed project's proximity to transit and its number of affordable/below-market residential units.

5.1.4.2 IMPACT ANALYSIS

Impact 5.1-1: The proposed project is consistent with the applicable air quality management plan. [Threshold AQ-1]

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the project site is located within the SVAB, which is under the jurisdiction of the SMAQMD. SMAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. The SMAQMD is required to submit air quality plans and rate-of-progress milestone evaluations in accordance with the federal Clean Air Act. The SMAQMD air quality attainment plans and reports, which include the 2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2018), 2021 Sacramento County Second 10-Year PM_{10} Maintenance Plan, and PM2.5 Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area (2013), present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NOx) as well as PM emissions from stationary, area, mobile, and indirect sources.

A project is consistent with regional air quality planning efforts in part if it is consistent with the population and housing assumptions that were used in the development of the SMAQMD air quality plans and does nothing to inhibit the region's achievement of air quality standards. Growth projections in the City of Rancho Cordova are based largely on the City of Rancho Cordova General Plan. As such, projects that propose development consistent with the growth anticipated by the General Plan would generally be consistent with the SMAQMD regional air quality planning efforts. The project site is located within the Folsom Boulevard Specific

Plan area and has a City of Rancho Cordova General Plan land use designation of Residential Mixed- Use (FB-RMU). The site is zoned Residential Mixed-Use – Folsom Boulevard Specific Plan (RMU [FBSP]). The Folsom Boulevard Specific Plan is the primary planning tool the city uses to guide future development and redevelopment within the Specific Plan area. It seeks to increase the density of both housing and commercial activity; increase pedestrian, bicycle, and transit trips to, from, and through the area; increase the visibility of the corridor as a destination; and change the dynamic and image to that of a high demand, thriving urban area. The RMU (FBSP) zoning district is intended to designate property for the development of medium- and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the city encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development. The project site proposes a mix of uses onsite by developing residential, commercial, and recreational uses on infill and underutilized parcels. As such, the proposed project is consistent with the City's General Plan, Folsom Boulevard Specific Plan, and City Zoning Code and is therefore consistent with the types, intensity, and patterns of land use envisioned for the site. Furthermore, as shown in Table 5.1-5, *Construction-Related Emissions*, and Table 5.1-6, *Operational-Related Emissions*, all project emissions would fall below SMAQMD significance thresholds. For these reasons, the proposed project would not conflict with SMAQMD's air quality planning.

The proposed project is considered "infill development" as it proposes to redevelop a previously developed property and enhance the physical design of the urban environment. Under Public Resources Code (PRC) Section 21061.3, an "infill site" is defined as a site that "has been previously developed for qualified urban uses." In turn, a "qualified urban use" is defined, pursuant to PRC Section 21072, as "a residential, commercial, or public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses." These aspects of the proposed project would result in the generation of a reduced amount of criteria air pollutant emissions. According to the EPA, redevelopments (namely at brownfield sites such as the project site) produce 32 to 57 percent less emissions per capita relative to conventional developments; this is because the number of daily vehicle trips and daily vehicle miles traveled (VMT) associated with the redevelopment tend to be lower compared with development on vacant land.

The proposed project would be located in close proximity to the Mather Field/Mills Light Rail Station, which is directly across Folsom Boulevard from the project site and can be accessed via a pedestrian crosswalk with stop-traffic control. The public transit accessibility would result in fewer vehicle trips and VMT compared to the statewide average and encourage walking and nonautomotive forms of transportation, thus resulting in the reduction of, or no increase in, transportation-related emissions, a primary goal of SMAQMD air quality planning. Furthermore, the site is fronted by a Class II bike lane on Folsom Boulevard.

The project site can be identified for its "location efficiency." Location efficiency describes the location of the project site relative to the type of urban landscape it's proposed to fit within, such as an "urban area," "compact infill," or "suburban center." The project site represents an urban/compact infill location within an area of the city developed with residential and commercial uses. The project site is served by existing public transportation as previously described; it is within an active urban center surrounded with many existing offsite office, commercial, and residential buildings. The proposed project would locate additional residential land uses in close proximity to existing offsite office, commercial, and residential uses. Therefore, the proposed project would provide future project site's residents with potential work opportunities and commercial service options in close proximity to the site. Additionally, the proposed project would locate potential employment

opportunities for residents already living in the vicinity. The location efficiency of the project site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transportation related air pollutant emissions, a primary goal of SMAQMD air quality planning.

The proposed project would increase housing density in the vicinity over current conditions. Increased density reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies to reduce emissions, a primary goal of SMAQMD air quality planning.

Level of Significance Before Mitigation: Impact 5.1-1 would be less than significant

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.1-1 would be less than significant

Impact 5.1-2:	**The proposed project could result in a cumulatively considerable net increase of a criteria pollutant that the project region is nonattainment under federal or state ambient air quality standards (including releasing emissions which exceed quantitative threshold for ozone precursors). [Threshold AQ-2]**

Construction Phase

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation.

Construction-generated emissions associated with the proposed project were calculated using CalEEMod version 2022.1 (see Section 5.1.4.1, *Methodology*, above). See Appendix 5.1-1 for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis. Construction activities would be subject to Mitigation Measure AQ-1 (below), which would implement the SMAQMD's Basic Construction Emission Control Practices, known as Best Management Practices (BMP) during the proposed project's construction phase. The application of mitigation measure AQ-1 ensures that the construction of the proposed project will not have significant air quality impacts.

Predicted maximum daily construction-generated emissions for the proposed project are summarized in Table 5.1-5, *Construction-Related Emissions*. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Table 5.1-5 Construction-Related Emissions

Construction Year	Pollutant					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Daily (pounds per day)						
1	3.72	36.00	34.10	0.05	1.78	1.51
2	5.28	22.90	39.80	0.05	3.69	1.45
3	5.11	21.60	38.70	0.05	3.61	1.37
4	5.01	20.80	37.80	0.05	3.54	1.31
5	4.80	19.70	36.90	0.05	3.46	1.23
SMAQMD Significance Threshold	-	*85 pounds/day*	-	-	**80 pounds/day (If all feasible BACT/BMP applied)*	**82 pounds/day (If all feasible BACT/BMP applied)*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual (tons per year)						
1	0.4	3.6	3.4	<0.0	0.2	0.1
2	0.6	2.8	4.4	<0.0	0.4	0.2
3	0.7	2.8	4.6	<0.0	0.5	0.2
4	0.6	2.7	4.5	<0.0	0.5	0.2
5	0.6	2.5	4.4	<0.0	0.4	0.2
SMAQMD Significance Threshold	-	-	-	-	**14.6 tons/year*	**15 tons/year*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: ECORP 2023 (Appendix 5.1-1)
Notes:
Emission reduction/credits for construction emissions are applied based on the required implementation of SMAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include sweeping/cleaning adjacent roadway access areas daily, water exposed surfaces twice daily, and limit speeds on unpaved roads to 15 miles per hour. Emissions taken of the season, summer or winter, with the highest outputs. Building construction, paving and painting are assumed to occur simultaneously.
* = The allowable threshold level is 0 pounds/day or 0 tons/year unless all SMAQMD recommended BACT/BMP are implemented

As shown in Table 5.1-5, emissions generated during the proposed project's construction phase would not exceed the SMAQMD's daily or annual thresholds of significance with the implementation of mitigation measure AQ-1. This mitigation measure ensures that the SMAQMD's BACT/BMPs are implemented; which, according to air district regulations, allows the particulate matter significance threshold to be non-zero (allowing PM_{10} to be 80 pounds/day or 14.6 tons/year and $PM_{2.5}$ to be 82 pounds/day or 15 tons/year). Without the implementation of mitigation measure AQ-1, the proposed project's construction emissions would be over the threshold of 0 pounds/day and thus have a significant effect.

The City of Rancho Cordova General Plan's Air Quality Element, Policy AQ.1.2 1 promotes the thresholds and standards set out by the SMAQMD and ensures the enforcement of the air pollution control measures during construction periods. Specifically, Policy AQ.1.2.1 requires the evaluation of projects for compliance with SMAQMD thresholds of significance. With mitigation measure AQ-1, criteria pollutant emissions generated during the proposed project's construction phase would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard, and no health effects from project criteria pollutants would occur.

Operation Phase

Implementation of the proposed project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROGs and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. Long-terms operational emissions attributable to the proposed project are identified in Table 5.1-6, *Operational-Related Emissions*, and compared to the operational significance thresholds promulgated by the SMAQMD. The PM_{10} and $PM_{2.5}$ non-zero thresholds are reliant on the implementation of the SMAQMD's BACT/BMPs for land use development project operations. The following are the recommendations made by the SMAQMD for land use development project operations:

- Compliance with District rules that control operational PM and NO_X emissions. Reference rules regarding wood burning devices, boilers, water heaters, generators, and other PM control rules that may apply to equipment to be located at the project site.

- Compliance with mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of energy at a residential or a non-residential land use.

- Compliance with mandatory measures in the California Green Building Code (Title 24, Part 11). Current mandatory measures related to operational PM include requirements for bicycle parking, parking for fuel efficient vehicles, electric vehicle charging, and fireplaces for non-residential projects. Residential project measures include requirements for electric vehicle charging and fireplaces.

The proposed project would comply with the above recommendations in order to justify the use of a nonzero operational threshold for PM_{10} and $PM_{2.5}$. In addition, the General Plan EIR includes mitigation measures to reduce potential source air quality pollutants such as ROGs, NO_x, and PM_{10} from stationary sources.

Table 5.1-6 Operational-Related Emissions

Emission Source	Pollutant (Pounds Per Day)					
	ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer Emissions						
Area	8.76	0.16	18.60	0.01	0.02	0.02
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	17.30	15.30	168.00	0.40	36.0	9.33
Total	**26.06**	**15.46**	**186.60**	**0.41**	**36.02**	**9.35**
SMAQMD Significance Threshold	*65 pounds/day*	*65 pounds/day*	-	-	**80 pounds/day*	**82 pounds/day*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual (tons per year)						
Area	6.24	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	15.60	18.00	139.00	0.36	36.00	9.33
Total	**21.84**	**18.00**	**139.00**	**0.36**	**36.00**	**9.33**
SMAQMD Significance Threshold	*65 pounds/day*	*65 pounds/day*	-	-	**80 pounds/day*	**82 pounds/day*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: ECORP 2023 (Appendix 5.1-1).

Notes: Emission projections are predominately based on the land use mix identified in Section 1.0 of Appendix 5.1-1 and traffic trip generation rates from DKS Associates (2023).
* = The allowable threshold level is 0 pounds/day or 0 tons/year unless all SMAQMD recommended BACT/BMP are implemented.

As shown in Table 5.1-6, the proposed project's emissions would not exceed any SMAQMD thresholds for any criteria air pollutants during operation. The CEQA thresholds of significance established by the SMAQMD are designed to meet the objectives of these air quality planning documents and in doing so achieve and maintain attainment status with state and federal standards. As noted above, the proposed project would increase the emission of certain pollutants but would not exceed the thresholds of significance established by the SMAQMD for purposes of reducing air pollution and its deleterious health effects.

As identified in Table 5.1-3, the Sacramento County portion of the SVAB is listed as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, and PM_{10}. O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely affect the human respiratory system. As shown in Table 5.1-6, the proposed project would result in increased emissions of the O_3 precursor pollutants ROG and NO_x, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified (SJVAPCD 2014; SCAQMD 2014). The technical challenges include the following:

- O_3 is not formed at the location of sources/emissions, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the proposed project at this time.

  > For the so-called criteria pollutants, such as O_3, it may be more difficult to quantify health impacts. O_3 is formed in the atmosphere from the chemical reaction of NO_x and VOC in the presence of sunlight. It takes time and the influence of meteorological conditions for these reactions to occur, so O_3 may be formed at a distance downwind from the sources. (SCAQMD 2014, p.11)

- The quantity of precursor emissions is not proportional to local O_3 and secondary PM concentration, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the proposed project at this time.

  > Ground level O_3 (smog) is not directly emitted into the air but is formed when precursor pollutants such as NOx and VOCs [ROG] are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight. Once formed, O_3 can be transported long distances by wind. Because of the complexity of O_3 formation, a specific tonnage amount of NOx or VOCs [ROG] emitted in a particular area does not equate to a particular concentration of O_3 in that area. (SJVAPCD 2014, p.4)

  > Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SOx and NOx. Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area. (SJVAPCD 2014, p.5)

It is noted that the CEQA thresholds of significance established by the SMAQMD are designed to meet the objectives of these air quality planning documents and in doing so achieve and maintain attainment status with

state and federal standards. As noted above, the proposed project would increase the emission of certain pollutants, but would not exceed the thresholds of significance established by the SMAQMD for purposes of reducing air pollution and its deleterious health effects. When considering the project's emissions in the context of the total emissions inventory of the SVAB[1], it is evident that the project's contribution is minimal.[2] This negligible increase is not anticipated to delay the attainment of regional air quality standards.

The overall strategy for reducing air pollution and related health effects in the SMAQMD is contained in the *SMAQMD 2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan*, *2021 Sacramento County Second 10-Year PM10 Maintenance Plan*, and *$PM_{2.5}$ Implementation/Maintenance Plan* and *Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area*. These air quality planning documents present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NO_x) as well as PM emissions from stationary, area, mobile, and indirect sources. Each of these air quality planning documents provide control measures that reduce emissions to attain and maintain federal ambient air quality standards such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods.

Level of Significance Before Mitigation: Impact 5.1-2 would be potentially significant

Mitigation Measures

AQ-1 **Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust.** The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. The following measures are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Control of fugitive dust is required by District Rule 403 and enforced by District staff.
- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

[1] All anthropogenic emission sources in the SVAB are estimated to emit 157.6 tons of ROG daily, 129.4 tons of NOx daily, 585.7 tons of CO daily, 2.9 tons of SOx daily, 157.9 tons of PM_{10} daily, and 44.9 tons of $PM_{2.5}$ daily (CARB 2017).

[2] The project's emissions represent approximately 0.007%, 0.006%, 0.022%, 0.006%, 0.011%, 0.010% of the total SVAB emissions for ROG, NOx, CO, SOx, PM_{10}, and $PM_{2.5}$, respectively.

- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1].
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Level of Significance After Mitigation: Impact 5.1-2 would be less than significant.

Impact 5.1-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]

Sensitive receptors are children, the elderly, asthmatics, and others who are at a heightened risk of negative health outcomes due to exposure to air pollution. The locations where these sensitive receptors congregate are considered sensitive receptor locations. Sensitive Receptor locations may include hospitals, schools, daycare centers, and such other locations as the Air District Board or California Air Resources Board may determine (California Health and Safety Code § 42705.5(a)(5)). The nearest sensitive receptors to the project site include residences directly adjacent to the west, north, and east.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term proposed project-generated emissions of DPM, ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The Sacramento County portion of the SVAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. Thus, existing O_3, PM_{10} and $PM_{2.5}$ levels in the SVAB are at unhealthy levels during certain periods. However, as shown in Table 5.1-6 the proposed project would not exceed the SMAQMD significance thresholds for construction emissions and therefore no regional health effects from the proposed project criteria pollutants would occur.

The health effects associated with O_3 are generally associated with reduced lung function. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of ROG and NOx in the presence of sunlight. The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function, and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics but healthy

adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing, and pulmonary congestion

Studies show associations between short-term O_3 exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O_3 may increase the risk of respiratory-related deaths. The concentration of O_3 at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum O_3 concentration reaches 80 parts per billion. Because the proposed project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SMAQMD thresholds, which are set to be protective of human health and account for cumulative emissions in the SVAB, the proposed project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The project site would not involve construction activities that would result in CO emissions in excess of the SMAQMD thresholds. Thus, the proposed project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM and PM_{10} contains $PM_{2.5}$ as a subset. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident (OEHHA 2015). However, such assessments should be limited to the period/duration of activities associated with the project. The duration of the proposed construction activities would constitute only a fraction of the total 30-year exposure period. In addition, construction emissions would occur intermittently throughout the day and would not occur as a constant plume of emissions from the project site and would vary on a day-to-day basis. Due to this relatively short period of exposure and minimal particulate emissions on site, DPM generated by the proposed project would not result in concentrations causing significant health risks. Concentrations of mobile equipment-source DPM emissions are typically reduced by approximately 60 percent at a distance of around 300 feet (100 meters) (Zhu et al. 2002). Additionally, as shown in Table 5.1-5, the proposed project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SMAQMD's thresholds, which are set to be protective of human health and account for cumulative emissions in the SVAB. For the reasons previously described under Impact 5.1-2, the increases of these pollutants generated by the proposed project would not on their own generate an increase in the number of days exceeding the NAAQS or CAAQS standards. As previously demonstrated, project PM_{10} or $PM_{2.5}$ emissions represent approximately 0.011 percent, 0.010 percent of the total SVAB emissions for PM_{10}, and

$PM_{2.5}$, respectively. Therefore, PM_{10} and $PM_{2.5}$ emissions, when combined with the existing PM emitted regionally, would have minimal health effect on people located in the immediate vicinity of the project site.

Due to the intermittent and temporary nature of construction activities, and the dispersive properties of DPM emissions, as well as the fact that PM emissions would be far less than the SMAQMD emission threshold, short-term construction would not expose sensitive receptors to DPM emission levels that would result in a health hazard. The proposed project's emissions are not expected to cause any increase in related regional health effects for these pollutants. The proposed project's construction phase would not expose people to substantial amounts of air toxic concentrations.

Operational Air Contaminants

The health risk public-notification thresholds adopted by the SMAQMD Board is 10 excess cancer cases in a million for cancer risk and a hazard index of more than one (1.0) for non-cancer risk. Examples of projects that emit toxic pollutants over long-term operations include oil and gas processing, gasoline dispensing, dry cleaning, electronic and parts manufacturing, medical equipment sterilization, freeways, and rail yards. Operation of the proposed project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the proposed project; nor would the proposed project attract additional mobile sources that spend long periods queuing and idling at the site. As such, the project would not emit TACs during normal operations and TACs are not anticipated to be present at the project site. Thus, a formal health risk assessment will not be required for the project. Onsite project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors, and the proposed project would not have a high carcinogenic or non-carcinogenic risk during operation.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours.

However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the Sacramento County portion of the SVAB is designated as in attainment. Detailed modeling of project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast

Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control district for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards. In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight- hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other air districts when evaluating potential CO concentration impacts. Specifically, the Bay Area Air Quality Management District concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The proposed project is anticipated to result in 4,354 daily traffic trips (Appendix 5.1-1). Thus, the proposed project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day), and there is no likelihood of the project site traffic exceeding CO values.

Level of Significance Before Mitigation: Impact 5.1-3 would be less than significant

Mitigation Measures

No mitigation measures required.

Level of Significance After Mitigation: Impact 5.1-3 would be less than significant.

Impact 5.1-4: The proposed project would not result in other emissions that would adversely affect a substantial number of people. [Threshold AQ-4]

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The human nose is the primary sensing device for odors. The ability to detect odors varies considerably among the population and overall is quite subjective. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person may be perfectly acceptable to another. An unfamiliar odor is more

easily detected and is more likely to cause complaints than a familiar one. This is due to a phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor, and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor signifies the nature of the smell experience, such as flowery or sweet. Intensity, on the other hand, refers to the strength of the odor, as described by using the word "strong." Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the proposed project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

According to the SMAQMD, land uses commonly considered to be potential sources of noxious odorous emissions include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. The proposed project does not include any uses identified by the SMAQMD as being associated with odors.

Level of Significance Before Mitigation: Impact 5.1-4 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.1-4 would be less than significant.

5.1.5 Cumulative Impacts

Air pollution is largely a cumulative impact. The proposed project is not sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the proposed project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable. As identified in the analysis above, the project would not exceed significance thresholds or otherwise result in any project-level impact. Thus, the project is considered less than cumulatively considerable in terms of air quality-related impacts.

5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.1-2, 5.1-3, 5.1-4 and 5.1-5.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.1-1** The proposed project could generate short-term emissions in exceedance of SMAQMD's threshold criteria.

5.1.7 Mitigation Measures

Impact 5.1-1

AQ-1 The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. The following measures are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

5.1.8 Level of Significance After Mitigation

These mitigation measures would reduce potential impacts associated with air quality to a level that is less than significant. Therefore, no significant unavoidable adverse impacts relating to air quality have been identified.

5.1.9 References

California Air Pollution Control Officers Association (CAPCOA). 2021. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

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South Coast Air Quality Management District (SCAQMD). 2014. Brief of Amicus Curiae in Support of Neither Party and [Proposed] Brief of Amicus Curiae: Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S219783.

Zhu, Y., W. C. Hinds, S. Kim, and S. Shen. 2002. "Study of Ultrafine Particles Near a Major Highway with Heavy-Duty Diesel Traffic." *Atmospheric Environment* 36:4323–4335.

5.2 BIOLOGICAL RESOURCES

This chapter describes the regulatory framework and existing conditions in the project site related to biological resources, and the potential impacts of the project on biological resources.

The analysis in this section is based in part on the following technical report(s):

- *Biological Resources Assessment for the Mills Crossing Project*, ECORP Consulting, Inc., March 2023

A complete copy of this study is included as Appendix 5.2-1, *Biological Resource Assessment*.

5.2.1 Environmental Setting

5.2.1.1 REGULATORY BACKGROUND

This section summarizes key federal, state, and local regulations, plans, and programs that provide protection and management of sensitive biological resources to the City of Rancho Cordova and the project site.

Federal and State Regulations

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, protects and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. "Take" of endangered species is prohibited under Section 9 of the FESA. "Take" means to "harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Section 7 of the FESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS "to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened." This provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the FESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans (HCPs) for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States' commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by the California Department of Fish and Wildlife (CDFW). Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a 2081 permit or memorandum of understanding (MOU). In addition, some sensitive mammals and birds are protected by the state as "fully protected species." California "species of special concern" are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Database (CNDDB), which maintains a record of known and recorded occurrences of sensitive species. Informally listed taxa are not protected per se but warrant consideration in the preparation of biological resources assessments.

Sensitive Natural Communities

The CDFW maintains the California Natural Community List, which provides a list of vegetation alliances, associations, and special stands as defined in A Manual of California Vegetation Online along with their respective state and global rarity ranks. Natural communities with a state rarity rank of S1, S2, or S3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

Porter-Cologne Water Quality Act

The Regional Water Quality Control Board (RWQCB) implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Stormwater Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB also regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by the U.S. Army Corps of Engineers due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

California Fish and Game Code Special Protections for Birds

Sections 3800, 3513, and 3503 of the California Fish and Game Code specifically protect birds.

- **Section 3800** states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the commission or a mitigation plan approved by CDFW for mining operations.

- **Section 3503** of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 prohibits the take, possession, or destruction of any birds and their nests in the orders Strigiformes (owls) or Falconiformes (hawks and eagles).

- **Section 3513** specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA

Native Plant Protection Act

The NPPA of 1977 was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW and provided in California Fish and Game Code Sections 1900-1913. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA of 1984 (California Fish and Game Code Sections 2050–2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

Local Regulations

City of Rancho Cordova General Plan

The Natural Resources Element of the Rancho Cordova General Plan includes goals and policies for protection of natural resources. The following policies are relevant to biological resources:

- **Policy NR.1.1:** Incorporate large and interconnected wildlife corridors in new development areas to provide ample space for animal movement

- **Policy NR.1.2:** Conserve Swainson's hawk habitat

- **Policy NR.1.4:** Discourage the planting of invasive species

- **Policy NR.1.5:** Ensure the protection of wildlife through the establishment of programs to control feral pet populations.

- **Policy NR.2.1:** Require mitigation that provides for "no net loss" of wetlands.

- **Policy NR.2.2:** Ensure that direct and indirect effects to wetland habitats are minimized by environmentally sensitive project siting and design, to the maximum extent feasible.

- **Policy NR.4.1:** Conserve native oak and landmark tree resources for their historic, economic, aesthetic, and environmental value

- **Policy NR.5.1:** Promote water conservation within existing and future urban uses
- **Policy NR.5.3:** Protect surface and ground water from major sources of pollution, including hazardous materials contamination and urban runoff

Rancho Cordova Municipal Code: Chapter 19.12, Preservation and Protection of Private Trees

It is the intent of this chapter to establish regulations for the protection, removal, and preservation of landmark trees and protected trees, as defined herein, to retain as many trees as possible consistent with the purpose hereof and the reasonable economic enjoyment of all property in the city. For the purpose of this chapter, "protected tree" means the following:

- Native oak—such as valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), blue oak (*Quercus douglasii*), or oracle oak (*Quercus morehus*)—having a trunk diameter of at least six inches or greater.
- Any tree species other than a native oak having a trunk diameter of at least 12 inches or greater on nonresidential property.
- Any tree species other than a native oak having a trunk diameter of at least 24 inches or greater
- on residential property.
- Any tree planted as a requirement tree for site development, tree permit condition, landscape plan removal replacement, or other designated condition by the public works director or planning director.
- "Protected tree" does not include any trees for sale within the city sold by a nursery.

5.2.1.2 EXISTING CONDITIONS

Site Characteristics and Land Use

The project site is located on leveled flat terrain with elevations ranging from 77 to 82 feet above mean sea level. Historically, the site was developed and had several structures and associated parking lots until 2019. A few scattered trees are found in weedy patches around the perimeter of the project site.. A few scattered trees are found in weedy patches within and around the perimeter of the project site.

Aquatic Resources

An aquatic resources assessment to identify potential water of the U.S./State on the project site found no aquatic resources. Therefore, there are no potential waters of the U.S./State on the site.

Table 5.2-1, *Evaluation of Special-Status and Wildlife Species for the Project Site,* lists the special-status plant and wildlife species identified in a literature search as potentially occurring on the project site. Table 5.2-1 includes the listing status for each species, a brief habitat description, and a determination on the potential for it to occur in or near the project site.

Summary

As shown in Table 5.2-2, 10 special status plant species, 6 special status invertebrate, 11 special-status fish species, 2 special status amphibian species, 3 special status reptile species, and a special-status mammal (American badger) were identified as having the potential to occur on the project site based on literature review. However, upon further analysis and reconnaissance of site visit, all species were determined to be absent due to the lack of suitable habitat or because the project site was outside the range of the species. A total of 44 special-status bird species were identified as having the potential to occur within the project site; however, only 7 species owed this potential to either their presence in the project site or because the project site presented a suitable habitat for these species to occur.

Further descriptions of the seven special-status bird species and four special status mammals are provided following Table 5.2-1.

5. Environmental Analysis
BIOLOGICAL RESOURCES

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Valley brodiaea (*Brodiaea rosea* ssp. *vallicola*)	–	–	4.2	Occurs in old alluvial terraces and silt, sandy, or gravelly soils in vernal pools and swales within valley and foothill grassland (35'–1,100').	April–May	Absent. No suitable habitat within the project site.
Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*)	–	–	4.2	Alkaline, vernally mesic areas, and seeps in valley and foothill grassland and vernal pools, sometimes found on roadsides (0'–330').	May–October	Absent. No suitable habitat within the project site.
Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*)	–	–	4.2	Chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts (245'–3,000').	May–July	Absent. No suitable habitat within the project site.
Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*)	–	–	2B.2	Freshwater marshes and swamps (50'-920').	July–October	Absent. No suitable habitat within the project site.
Dwarf downingia (*Downingia pusilla*)	–	–	2B.2	Mesic areas in valley and foothill grassland, and vernal pools. Species has also been found in disturbed areas such as tire ruts and scraped depressions (5'–1,460').	March–May	Absent. No suitable habitat within the project site.
Stinkbells (*Fritillaria agrestis*)	–	–	4.2	Clay and sometimes serpentinite soils in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland (35'–5,100').	March–June	Absent. No suitable habitat within the project site.
Boggs Lake hedge- hyssop (*Gratiola heterosepala*)	–	CE	1B.2	Marshes, swamps, lake margins, and vernal pools (35'–7,790').	April–August	Absent. No suitable habitat within the project site.
Hogwallow starfish (*Hesperevax caulescens*)	–	–	4.2	Sometimes alkaline in mesic areas with clay soil within valley and foothill grassland and shallow vernal pools (0'–1,655').	March–June	Absent. No suitable habitat within the project site.
Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*)	–	–	1B.2	Marshes and freshwater swamps. Often in riprap on sides of levees (0'–395').	June–September	Absent. No suitable habitat within the project site.
Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*)	–	–	1B.2	Mesic areas in valley and foothill grassland. Species has an affinity for slight disturbance such as farmed fields (100'–750').	March–May	Absent. No suitable habitat within the project site.
Alkali-sink goldfields (*Lasthenia chrysantha*)	–	–	1B.1	Alkaline vernal pools (0'–655').	February–April	Absent. No suitable habitat within the project site.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Legenere (*Legenere limosa*)	–	–	1B.1	Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (5'–2,885').	April–June	Absent. No suitable habitat within the project site.
Heckard's pepper- grass (*Lepidium latipes* var. *heckardii)*	–	–	1B.2	Alkaline flats within valley and foothill grasslands (5'–655').	March–May	Absent. No suitable habitat within the project site.
Hoary navarretia (*Navarretia eriocephala*)	–	––	4.3	Vernally mesic areas in cismontane woodland and valley and foothill grassland (345'–1,310').	May–June	Absent. No suitable habitat within the project site.
Pincushion navarretia (*Navarretia myersii* ssp. *myersii*)	–	–	1B.1	Often acidic soils in vernal pools (65'–1,085').	April–May	Absent. No suitable habitat within the project site.
Slender Orcutt grass (*Orcuttia tenuis*)	FT	CE	1B.1	Vernal pools, often gravelly (115'–5,775').	May–September	Absent. No suitable habitat within the project site.
Sacramento Orcutt grass (*Orcuttia viscida*)	FE	CE	1B.1	Vernal pools (100'–330').	April–July	Absent. No suitable habitat within the project site.
Sanford's arrowhead (*Sagittaria sanfordii)*	–	–	1B.2	Shallow marshes and freshwater swamps (0'–2,135').	May–October	Absent. No suitable habitat within the project site.
Saline clover (*Trifolium hydrophilum*)	–	–	1B.2	Marshes and swamps, mesic and alkaline areas in valley and foothill grassland, and vernal pools (0'–985').	April–June	Absent. No suitable habitat within the project site.
Invertebrates						
Conservancy fairy shrimp (*Branchinecta lynchi*)	FE	–	–	Vernal pools/wetlands.	November–April	Absent. No suitable habitat within project site.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	–	–	Vernal pools/wetlands.	November–April	Absent. No suitable habitat within project site.
Crotch bumble bee *(Bombus crotchii)*	–	CC	–	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico.	March–September	Absent. No suitable habitat within project site.
Monarch butterfly *(Danaus plexippus)*	FC	–	–	Adult monarchs west of the Rocky Mountains typically overwinter in sheltered wooded groves of Monterey pine, Monterey cypress, and gum eucalyptus along coastal California, then disperse in spring throughout California, Nevada, Arizona, and parts of Oregon and Washington. Adults require milkweed and additional	Any season	Absent. No suitable habitat within project site.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				nectar sources during the breeding season. Larval caterpillars feed exclusively on milkweed.		
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	–	–	Elderberry shrubs.	Any season	Absent. No suitable habitat (Elderberry shrubs) within project site.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	–	–	Vernal pools/wetlands.	November–April	Absent. No suitable habitat within project site.
Fish						
Green sturgeon (Distinct Population Segment, [DPS]) (*Acipenser medirostris* pop. 1)	FT	–	SSC	Anadromous; undammed cold- water rivers having relatively deep pools with large substrates.	N/A	Absent. No suitable habitat within project site.
Delta smelt (*Hypomesus transpacificus*)	FT	CE	–	Sacramento-San Joaquin Delta.	N/A	Absent. No suitable habitat within project site.
River lamprey (*Lampetra ayresii*)	–	–	SSC	Spawning adults in clear gravel riffles of streams; feeding adults in estuaries and ocean. Ammocoetes in sandy and muddy pools of spawning streams.	N/A	Absent. No suitable habitat within project site.
Pacific lamprey (*Lampetra tridentata*)	–	–	SSC	Anadromous; undammed streams rivers, streams, and creeks with gravel spawning substrates.	N/A	Absent. No suitable habitat within project site.
Hardhead (*Mylopharodon conocephalus*)	–	–	SSC	Relatively undisturbed streams at low to mid elevations in the Sacramento-San Joaquin and Russian River drainages. In the San Joaquin River, scattered populations found in tributary streams, but only rarely in the valley reaches of the San Joaquin River.	N/A	Absent. No suitable habitat within project site.
Steelhead (CA Central Valley Evolutionarily Significant Unit [ESU]) (*Oncorhynchus mykiss*)	FT	–	–	Undammed rivers, streams, creeks	N/A	Absent. No suitable habitat within project site.
Chinook salmon (Central Valley fall/late fall-run ESU) (*Oncorhynchus tshawytscha*)	–	–	SSC	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems.	N/A	Absent. No suitable habitat within project site.
Chinook salmon (Central Valley spring-run ESU) (*Oncorhynchus tshawytscha*)	FT	CT	–	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems.	N/A	Absent. No suitable habitat within project site.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Chinook salmon (Sacramento River winter-run ESU) *(Oncorhynchus tshawytscha)*	FE	CE	–	Undammed reaches of the mainstem and tributaries to the Sacramento River downstream of Shasta Reservoir.	N/A	Absent. No suitable habitat within project site.
Sacramento splittail (*Pogonichthys macrolepidotus*)	–	–	SSC	San Francisco Bay estuary and Central Valley lakes and rivers. Spawns in upstream floodplains and backwater sloughs.	N/A	Absent. No suitable habitat within project site.
Longfin smelt (*Spirinchus thaleichthys*)	FC	CT	SSC	Freshwater and coastal estuaries.	N/A	Absent. No suitable habitat within project site.
Amphibians						
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	FT	CT	WL	Vernal pools, wetlands (breeding) and adjacent grassland or oak woodland; needs underground refuge (e.g., ground squirrel and/or gopher burrows). Largely terrestrial as adults.	March–May	Absent. No suitable habitat within the project site.
Western spadefoot (*Spea hammondii*)	–	–	SSC	California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley.	March–May	Absent. No suitable habitat within the project site.
Reptiles						
Northwestern pond turtle (*Actinemys marmorata*)	–	–	SSC	Requires basking sites and upland habitat up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April–September	Absent. No suitable habitat within project site.
Blainville's (Coast) horned lizard (*Phrynosoma blainvillii*)	–	–	SSC	Formerly a wide- spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Requires open areas for basking, but with bushes or grass clumps for cover, patches of loamy soil or sand for burrowing and an abundance of ants. In the northern Sacramento area, this species appears restricted to the foothills between 1000 to 3000 feet from Cameron Park (El Dorado County) north and west to Grass Valley and Nevada City.	April–October	Absent. No suitable habitat within project site.
Giant garter snake (*Thamnophis gigas*)	FT	CT	–	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range.	April–October	Absent. No suitable habitat within project site.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Birds						
Western grebe *(Aechmophorus occidentalis)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered seacoasts, freshwater lakes, and rivers. Nests on freshwater lakes and marshes with open water bordered by emergent vegetation.	Nesting: June–August	Absent. No suitable habitat within the project site.
Clark's grebe *(Aechmophorus clarkii)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered seacoasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation	Nesting: June–August	Absent. No suitable habitat within the project site.
Yellow-billed cuckoo (*Coccyzus americanus*)	FT	CE	–	Breeds in California, Arizona, Utah, Colorado, and Wyoming. In California, they nest along the upper Sacramento River and the South Fork Kern River from Isabella Reservoir to Canebrake Ecological Reserve. Other known nesting locations include Feather River (Butte, Yuba, Sutter counties), Prado Flood Control Basin (San Bernardino and Riverside counties), Amargosa River and Owens Valley (Inyo County), Santa Clara River (Los Angeles County), Mojave River and Colorado River (San Bernardino County). Nests in riparian woodland. Winters in South America.	June 15–August 15	Absent. No suitable habitat within the project site.
Black swift *(Cypseloides niger)*	–	–	BCC, SSC	In California, nests from Cascade-Sierra Nevada region south to Tulare and Mono counties; coastal ranges (Santa Cruz south to San Luis Obispo counties), San Gabriel, San Bernardino, and San Jacinto Mountains. Nests on ledges or shallow caves on steep rock faces, usually behind waterfalls. Winter range, unknown, but thought to be northern and western South America, and West Indies.	Nesting: May–September	Absent. No suitable habitat within the project site.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Vaux's swift *(Chaetura vauxi)*	–	–	BCC, SSC	In California, breeds along the coastal zone from Del Norte County south to Santa Cruz County; Yosemite National Park, possibly Warner and Whites Mountains and Sequoia National Park Nest in late stage coniferous forests and deciduous forests mixed with coniferous. Winters from central Mexico to South America.	May–August	Absent. No suitable nesting habitat within the project site.
Greater sandhill crane *(Antigone canadensis tabida)*	–	CT	CFP	Breeds in NE California, Nevada, Oregon, Washington, and BC, Canada; winters from CA to Florida. In winter, they forage in burned grasslands, pastures, and feed on waste grain in a variety of agricultural settings (i.e., corn, wheat, milo, rice, oats, and barley), tilled fields, recently planted fields, alfalfa fields, row crops and burned rice fields.	March–August (breeding); September–March (wintering)	Absent. No suitable habitat within the project site.
Marbled godwit (*Limosa fedoa*)	–	–	BCC	Nests in Montana, North and South Dakota, Minnesota, into Canada. Winter range along Pacific Coast from British Columbia south to Central America, with small numbers wintering in interior California. Wintering habitat includes coastal mudflats, meadows, estuaries, sandy beaches, sandflats, and salt ponds.	Migrant/ Wintering CA: August–April	Absent. No suitable habitat within the project site.
Short-billed Dowitcher *(Limnodromus griseus)*	–	–	BCC	Nests in Canada, southern Alaska; winters in coastal California south to South America; wintering habitat includes coastal mudflats and brackish lagoons.	Migrant/ Wintering: late-August–May	Absent. No suitable habitat within the project site.
California gull (nesting colony) *(Larus californicus)*	–	–	BCC, CDFW WL	Nesting occurs in the Great Basin, Great Plains, Mono Lake, and south San Francisco Bay. Winters along Pacific Coast from southern British Columbia south to Baja California and Mexico. In California, winters along coast and inland (Central Valley, Salton Sea).	Nesting: April–August	Absent. No suitable habitat within the project site.

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Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Black tern *(Chlidonias niger)*	–	–	BCC, SSC	Breeding range includes northeastern California, Central Valley, Great Plains of U.S. and Canada; winters in Central and South America; nesting habitat includes shallow freshwater marsh with emergent vegetation, prairie sloughs, lake margins, river islands, and cultivated rice fields.	Nesting: May–August	Absent. No suitable habitat within the project site.
California least tern *(Sternula antillarum browni)*	FE	CE	CFP	Nests along Pacific Coast from San Francisco Bay south the Mexico; nests colonially, on sand or dried mudflats, sand or shell islands, and gravel and sand pits and rarely in agricultural fields, parking lots, airports, and flat/graveled rooftops.	April–August	Absent. No suitable habitat within the project site.
Double-crested cormorant *(Nannopterum auritum)*	–	–	CDFW WL	Nests near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines and typically forages in shallow water. Non-nesters are found in many coastal and inland waters.	April–August	Absent. No suitable habitat within the project site.
Least bittern *(Ixobrychus exilis)*	–	–	SSC	Freshwater and brackish marshes with dense, tall aquatic and semiaquatic vegetation intersperse with clumps of woody vegetation and open water, and rarely salt marshes and mangrove swamps.	April–July	Absent. No suitable habitat within the project site.
Osprey (nesting) (*Pandion haliaetus*)	–	–	CDFW WL	Nesting habitat requires close proximity to accessible fish, open nest site free of mammalian predators, and extended ice-free season. The nest in large trees, snags, cliffs, transmission/communication towers, artificial nest platforms, channel markers/ buoys.	March–September	Absent. No suitable habitat within the project site.
White-tailed kite (nesting) (*Elanus leucurus*)	–	–	CFP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats.	March–August	Potential to Occur. Trees onsite and adjacent to the project site provide suitable nesting habitat.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Golden eagle (nesting and wintering) (*Aquila chrysaetos*)	–	–	BCC, CFP	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/savannah, and chaparral. Nesting occurs on cliff ledges, river banks, trees, and human-made structures (e.g., windmills, platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during winter.	Nest: (February–August); winter CV (October–February)	Absent. No suitable habitat within the project site.
Northern harrier (*Circus hudsonius*)	–	–	SSC	Nests on the ground in open wetlands, marshy meadows, wet/lightly grazed pastures, (rarely) freshwater/brackish marshes, tundra, grasslands, prairies, croplands, desert, shrub-steppe, and (rarely) riparian woodland communities.	April–September	Absent. No suitable habitat within the project site.
Cooper's hawk (nesting) (*Accipiter cooperii*)	–	–	CDFW WL	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes	March–July	Potential to Occur. Trees onsite and adjacent to the project site provide suitable nesting habitat.
Bald eagle (nesting and wintering) (*Haliaeetus leucocephalus)*	Delisted	CE	CFP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands.	February–September (nesting); October–March (wintering)	Absent. No suitable habitat within the project site
Swainson's hawk (nesting) (*Buteo swainsoni*)	–	CT	BCC	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures	March–August	Absent. There is no suitable nesting or foraging habitat present.
Ferruginous hawk (wintering) (*Buteo regalis*)	–	–	BCC, CDFW WL	Rarely breeds in California (Lassen County); winter range includes grassland and shrubsteppe habitats from Northern California (except northeast and northwest corners) south to Mexica and east to Oklahoma, Nebraska, and Texas.	September–March	Absent. No suitable habitat within the project site

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Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Burrowing owl (burrow sites) (*Athene cunicularia*)	–	–	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human- made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	February–August	Potential to Occur. Suitable habitat present within the project site.
Short-eared owl (*Asio flammeus*)	–	–	BCC, SSC	Nests in large expanses of prairie, coastal grasslands, heathlands, shrub- steppe, tundra, and agricultural areas.	March–July (breeding); August–March (wintering in Central Valley)	Absent. No suitable habitat within the project site
Nuttall's woodpecker *(Dryobates nuttallii)*	–	–	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	Nesting: April–July	Potential to Occur. Oak trees onsite represent suitable nesting habitat.
Merlin *(Falco columbarius)*	–	–	CDFW WL	Breeds in Oregon, Washington north into Canada. Winters in southern Canada to South America, including California. Breeds near forest openings, fragmented woodlots, and riparian areas. Wintering habitat includes wide variety, open forests, grasslands, tidal flats, plains, and urban settings.	September–April (wintering in the Central Valley);	Absent. No suitable habitat within the project site

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
American peregrine falcon *(Falco peregrinus anatum)*	Delisted	Delisted	BCC, CFP	In California, breeds in coastal region, northern California, and Sierra Nevada. Nesting habitat includes cliff ledges and human-made ledges on towers and buildings. Wintering habitat includes areas where there are large concentrations of shorebirds, waterfowl, pigeons or doves.	CA Residents nest in February–June	Absent. No suitable habitat within the project site.
Prairie falcon (*Falco mexicanus*)	–	–	BCC, CDFW WL	Found in open habitat at all elevations up to 3,350 meters (Steenhof 2013). Nests on cliffs and bluffs in arid plains and steppes; In California, nesting throughout state except northwest corner, along immediate coast, and the Central Valley floor. Winters throughout California, in open habitats, such as grasslands in Central Valley.	March–July (breeding); September–February (wintering in Central Valley)	Absent. No suitable habitat within the project site.
Olive-sided flycatcher *(Contopus cooperi)*	–	–	SSC, BCC	Nests in montane and northern coniferous forests, in forest openings, forest edges, semiopen forest stands. In California, nests in coastal forests, Cascade and Sierra Nevada region. Winters in Central to South America.	Nesting: May–August	Absent. No suitable habitat within the project site
Loggerhead shrike (*Lanius ludovicianus*)	–	–	BCC, SSC	Found throughout California in open country with short vegetation, pastures, old orchards, grasslands, agricultural areas, open woodlands. Not found in heavily forested habitats.	March–July	Absent. No suitable habitat within the project site
Yellow-billed magpie (nesting) (*Pica nuttalli*)	–	–	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April–June	Potential to Occur. Trees onsite provide suitable nesting habitat.
Oak titmouse (*Baeolophus inornatus*)	–	–	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (e.g., gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	Nesting: March–July	Potential to Occur. Oak trees onsite represent suitable nesting habitat.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Bank swallow (nesting) (*Riparia riparia*)	–	CT	–	Nests colonially along coasts, rivers, streams, lakes, reservoirs, and wetlands in vertical banks, cliffs, and bluffs in alluvial, friable soils. May also nest in sand, gravel quarries and road cuts. In California, breeding range includes northern and central California.	May–July	Absent. No suitable habitat within the project site
Purple martin (nesting) (*Progne subis*)	–	–	SSC	In California, breeds along coast range, Cascade-northern Sierra Nevada region and isolated population in Sacramento. Nesting habitat includes montane forests, Pacific lowlands with dead snags; the isolated Sacramento population nests in weep holes under elevated highways/bridges. Winters in South America.	May–Aug	Absent. No suitable habitat within the project site
Wrentit (*Chamaea fasciata*)	–	–	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens. Nesting: March- August	March–August (Nesting)	Absent. No suitable habitat within the project site
Song sparrow "Modesto" (*Melospiza melodia heermanni*)	–	–	BCC, SSC	Resident in central and southwest California, including Central Valley; nests in marsh, scrub habitat	April–June	Absent. No suitable habitat within the project site
Yellow-breasted chat (*Icteria virens*)	–	–	SSC	In California, breeds in Klamath Mountains, inner Northern Coast Range south to San Francisco Bay, locally distributed from Santa Clara County south to San Diego County Sacramento and San Joaquin valleys, along west slope of Sierra Nevada from the Feather River to Kern River, Mono and Inyo counties. In the west, nesting habitat includes dense riparian and shrubby.	May–August	Absent. No suitable habitat within the project site
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	–	–	SSC	In California, breeds in the Great Basin region, along Colorado River south to Baja California, Salton Sea, Kern, Ventura, Riverside, San Diego and possibly Orange, Lake counties and locally in the Central Valley, Nests are constructed over deep water in emergent vegetation of prairie wetlands, quaking aspen	April–July	Absent. No suitable habitat within project site

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				parklands, mountain meadows, forest edges, large lakes.		
Tricolored blackbird (nesting colony) (*Agelaius tricolor*)	–	–	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego Counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen Counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March–August	Absent. No suitable habitat within the project site.
Bullock's oriole (*Icterus bullockii*)	–	–	BCC	Breeding habitat includes riparian and oak woodlands.	Nesting: March–July	Potential to Occur. Oak trees onsite represent suitable nesting habitat.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	–	–	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego County.	Nesting: March–July	Absent. No suitable habitat within the project site.
Yellow warbler (*Setophaga petechia*)	–	–	SSC, BCC	Breeding range includes most of California, except Central Valley (isolated breeding locales on Valley floor, Stanislaus, Colusa, and Butte counties), Sierra Nevada range above tree line, and southeastern deserts. Nesting habitat includes riparian vegetation near streams and meadows. Winters in Mexico south to South America.	May–August	Absent. No suitable habitat within the project site

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Lawrence's goldfinch (*Spinus lawrencei*)	–	–	BCC	Breeds in Sierra Nevada and inner Coast Range foothills surrounding the Central Valley and the southern Coast Range to Santa Barbara County east through southern California to the Mojave Desert and Colorado Desert into the Peninsular Range. Nests in arid and open woodlands with chaparral or other brushy areas, tall annual weed fields, and a water source (e.g., small stream, pond, lake), and to a lesser extent riparian woodland, coastal scrub, evergreen forests, pinyon-juniper woodland, planted conifers, and ranches or rural residences near weedy fields and water.	Nesting: March–September	Absent. No suitable nesting habitat within the project site.
Grasshopper sparrow (*Ammodramus savannarum*)	–	–	SSC	In California, breeding range includes most coastal counties south to Baja California; western Sacramento Valley and western edge of Sierra Nevada region. Nests in moderately open grasslands and prairies with patchy bare ground. Avoids grasslands with extensive shrub cover; more likely to occupy large tracts of habitat than small fragments; removal of grass cover by grazing often detrimental.	May–August	Absent. No suitable nesting habitat within the project site.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	–	CE	BCC	Resident coastally from Point Conception south into Baja California; coastal salt marsh.	Year-round resident; nests March–August	Absent. No suitable nesting habitat within the project site.
Mammals						
American badger *(Taxidea taxus)*	–	–	SSC	Drier open stages of most shrub, forest, and herbaceous habitats with friable soils.	Year round resident (breeds summer–early fall).	Absent. No suitable habitat within project site.
Pallid bat (*Antrozous pallidus*)	–	–	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns,	April–September	Potential to Occur. Trees onsite provide potential roosting habitat.

Table 5.2-1 Evaluation of Special-Status Plant and Wildlife Species for the Project Site

Common Name (Scientific Name)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				porches, bat boxes, and human occupied as well as vacant buildings.		
Western red bat *(Lasiurus blossevillii)*	–	–	SSC	Roosts in foliage of trees or shrubs; Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores).	April–September	Low Potential to Occur. Trees onsite provide marginal roosting habitat.

FE FESA listed, Endangered.
FT FESA listed, Threatened.
BCC USFWS Bird of Conservation Concern
CR CESA- or NPPA-listed, Rare.
CT CESA- or NPPA-listed, Threatened
CC Candidate for CESA listing as Endangered or Threatened
CE CESA or NPPA listed, Endangered.
CFP California Fish and Game Code Fully Protected Species (Sections 3511-birds, 4700-mammals, 5050-reptiles/amphibians
1B CRPR/Rare or Endangered in California and elsewhere
2B Plants rare, threatened, or endangered in California but more common elsewhere
3 CRPR/Plants About Which More Information is Needed – A Review List
4 CRPR/Plants of Limited Distribution – A Watch List
0.1 Threat Rank/Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 Threat Rank/Moderately threatened in California (20–80% occurrences threatened/moderate degree and immediacy of threat)
0.3 Threat Rank/Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Birds

White-Tailed Kite

White-tailed kite is not listed pursuant to either the California or federal ESAs; however, the species is fully protected under Section 3511 of the California Fish and Game Code. The white-tailed kite is a common resident in the Central Valley and the entire length of the California coast and all areas up to the Sierra Nevada foothills and southern deserts. In northern California, white-tailed kite nesting occurs from March through early August, actively peaking from March through June. Nesting occurs in trees with riparian, oak woodland, savannah and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands. There are eight CNDDB occurrences of this species within five miles of the project site. In addition, the onsite and adjacent trees provide suitable nesting habitat.

Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*) is not listed pursuant to either the California or federal Endangered Species Acts. However, it is a CDFW watch list species. Typical nesting and foraging habitats include riparian woodland, dense oak woodland, and other woodlands near water. Cooper's hawk nest throughout California from Siskiyou County to San Diego County, and including the Central Valley. Breeding occurs during March through July, with a peak from May through July. There is one CNDDB occurrence of this species within five miles of the project site, and the trees onsite and adjacent provide suitable nesting habitat.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a bird of conservation concern by the USFWS and a species of special concern by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2020). This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel (*Spermophilus beecheyi*) but may also use man-made structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt. The breeding season typically occurs between February 1 and August 31. There are eight CNDDB occurrences of this species within five miles of the project site. No California ground squirrel burrows were observed during the site reconnaissance, but several cracks in the old foundations and pavement onsite were observed. While no evidence of burrowing owl presence was observed, the site reconnaissance did not constitute a protocol level survey or burrowing owl habitat assessment. The project site provides a suitable habitat for this species.

Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. They are resident from Siskiyou County to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands. Breeding occurs during April through July. There are no CNDDB occurrences of

this species within five miles of the project site; however, the oak trees on-site provide suitable nesting habitat for Nuttall's woodpecker.

Yellow-Billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures, or cropland. Nest building begins in late January to mid-February, which may take 6 to 8 weeks to complete, with eggs laid during April to May, and fledging during May to June. The young leave the nest about 30 days after hatching. Yellow-billed magpies are highly susceptible to West Nile virus, which may have been the cause of death to thousands of magpies during 2004 to 2006. There are no CNDDB occurrences of this species within five miles of the project site; however, on-site and adjacent trees provide suitable nesting habitat for the yellow-billed magpie to potentially occur.

Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either state or federal Endangered Species Acts but are considered a USFWS bird of conservation concern. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse, and Peninsular ranges and western foothills of the Sierra Nevada into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley. They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands. Nesting occurs during March through July. There are no CNDDB occurrences of this species within five miles of the project site; however, on-site trees provide suitable nesting habitat for the Oak titmouse.

Bullock's Oriole

Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal Endangered Species Acts but is currently a species of bird of conservation concern according to the USFWS. In California, Bullock's orioles are found throughout the state except the higher elevations of mountain ranges and the eastern deserts. They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees. Nesting occurs from March through July. There are no CNDDB occurrences of this species within five miles of the project site; however, on-site trees provide suitable nesting habitat for the Bullock's oriole.

Mammals

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the federal or California ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low-elevation (below

6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 feet). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, often they use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites. There are no CNDDB occurrences of this species within five miles of the project site; however, on-site trees provide a potential roosting habitat for the pallid bat.

Western Red Bat

The western red bat (*Lasiurus blossevillii*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species is considered a species of special concern by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending from southern British Columbia in Canada through Argentina and Chile in South America and including much of the western United States. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage one to two hours after sunset. This species is considered highly migratory; however, the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood. There are no CNDDB occurrences of this species within five miles of the project site. The on-site and adjacent trees provide marginal roosting habitat for the western red bat to have a low potential to occur.

Protected Trees

There are several trees within the project site that may be protected by the City of Rancho Cordova Tree Protection Plan. An initial site reconnaissance for trees has been completed. Identified trees within the project site included valley oak (*Quercus lobata*), walnut (*Juglans hindsii*) and potentially Chinese pistache (*Pistache chinensis*), and Fremont's cottonwood (*Populus fremontii*).

Riparian Habitats and Sensitive Natural Communities

Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, Northern Volcanic Mud Flow Vernal Pool, Valley Needlegrass Grassland, Elderberry Savanna, and Great Valley Oak Riparian Forest are sensitive natural communities that were identified during the literature review as occurring in the vicinity of the project site. However, no sensitive natural communities or riparian habitats were observed within the project site during the field assessment.

Critical Habitat and Wildlife Movement Corridors and Nursery Sites

There is no designated Critical Habitat mapped within the project site (USFWS 2023). The ruderal grassland in the project site is a relatively small and fragmented and close to residential development, the light rail station and is subject to regular human presence. The project site does not contain habitat areas or corridors with significant potential for wildlife movement. For the literature research, nursery sites were include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. No nursery sites have been documented within the project site and none were observed during the site reconnaissance.

5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

B-1 Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

B-3 Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

B-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

B-6 Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

- **Impact 4.10.1** found that implementation of the General Plan would lead to habitat loss for endangered, threatened, rare, proposed, candidate status species, and plant species identified by the California Native Plant Society with a rating of List 1B . Although the plan aims to partially mitigate impacts, habitat changes from the proposed Land Use Map will still cause significant and unavoidable impacts on listed species. The

EIR includes General Plan policies and action items, as well as mitigation measures in order to minimize these impacts:

- **MM 4.10.1a.** The following shall be incorporated into the Natural Resources Element as a policy under Goal NR.1: The City shall require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain listed plant and/or wildlife species based upon the City's biological resource mapping provided in the General Plan EIR or other technical materials. This evaluation shall be conducted prior to the authorization of any ground disturbance.

- **MM 4.10.1b.** The following measure shall be incorporated as an action item immediately under the above policy (MM 4.10.1a): For those areas in which special status species are found or likely to occur or where the presence of species can be reasonably inferred, the City shall require mitigation of impacts to those species. Mitigation shall be designed by the City in coordination with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), and shall emphasize a multi-species approach to the maximum extent feasible. This may include development or participation in a habitat conservation plan.

- **MM 4.10.1c.** The following measure shall be incorporated into the Natural Resources Element as a policy under Goal NR.1: The City shall encourage creation of habitat preserves that are immediately adjacent to each other in order to provide interconnected open space areas for animal movement.

- **MM 4.10.1d.** The following measure shall be incorporated into the Natural Resources Element as an action item under Policy NR.1.4: The City shall adopt and maintain a Noxious Weed Ordinance. The Noxious Weed Ordinance shall include regulatory standards for construction activities that occur adjacent to natural areas to inhibit the establishment of noxious weeds through accidental seed import.

- **MM 4.10.1e.** The following measure shall be incorporated into the Natural Resources Element as a policy under Goal NR.2: The City shall require that drainage improvements that discharge into areas of wetlands to be preserved are, to the maximum extent feasible, designed to mimic the undeveloped surface water flow conditions of the area in terms of seasonality, volume and flow velocity

- The General Plan's goals, policies, and mitigation measures aim to partially mitigate the impact on special-status listed species in the General Plan Planning Area. However, Impact 4.10.1 determined that the General Plan Land Use Map will result in significant and unavoidable habitat changes, leading to the overall loss of listed species and their habitats in the Planning Area.

- **Impact 4.10.2** determined that implementation of the General Plan would cause the overall loss of non-listed special-status species and their habitat. The EIR includes General Plan policies and action items, as well as Mitigation Measures 4.10.1a through e in order to minimize these impacts; however these policies, actions, and measures would not fully mitigate impacts to non-listed special status species in the entire General Plan Area. Therefore the impacts on listed species from the General Plan was determined significant and unavoidable.

- **Impact 4.10.3** determined that implementation of the General Plan would significantly impact foraging habitat for raptors, migratory birds, and other wildlife. The EIR includes General Plan policies, actions, and

Mitigation Measure 4.10.3 which states the City shall require that impacts to riparian habitats be mitigated at a no net loss of existing function and value based on field survey and analysis of the riparian habitat to be impacted. However, Impact 4.10.3 determined that the General Plan could still lead to the loss or degradation of large open areas used by certain species, which is considered significant and unavoidable due to the extent of urban development in the Planning Area.

- **Impact 4.10.4 d**etermined that implementation of the General Plan would cause significant adverse impacts on the U.S.'s jurisdictional waters, potentially causing a loss of wetland resources and habitat value. The EIR includes General Plan policy and actions aimed at mitigating impacts to jurisdictional waters of the U.S. However, the development within the Planning Area would affect the overall habitat value and wetland resources in the area; therefore this impact would be significant and unavoidable to jurisdictional waters of the U.S. within the Planning Area.

- **Impact 4.10.5** determined that implementation of the General Plan would substantially interfere with the movement of special status and common wildlife species. Since development of vacant areas with grassland and/or similar cover types would still occur, movement corridors would be restricted or impeded by development. The EIR includes General Plan policy and actions aimed at mitigating impacts to the movement of species throughout the Planning Area including mitigation measures:

  - **MM 4.10.5a.** Modify Policy NR.3.2 to read: Create or retain the natural topographic relief and meandering alignment of natural creek corridors in the construction of new channels and the modification of existing channels, and prohibit the placement of concrete within creeks and channels. The following mitigation measures shall be incorporated into the City of Rancho Cordova General Plan as new policies under Goal NR.1.

  - **MM 4.10.5b.** The following mitigation measures shall be incorporated into the City of Rancho Cordova General Plan as a new policy under Goal NR.1: The City shall avoid the placement of new roadways within habitat preserves to the maximum extent feasible.

  - **MM 4.10.5c.** The following mitigation measures shall be incorporated into the City of Rancho Cordova General Plan as a new policy under Goal NR.1: In such cases where habitat preserves are crossed by a roadway, or where two adjacent preserves are separated by a roadway, the roadway shall be designed or updated with wildlife passable fencing separating the roadway from the preserve and/or shall incorporate design features that allow for the movement of wildlife across or beneath the road without causing a hazard for vehicles and pedestrians on the roadway

  However Impact 4.10.5 determined that although the General Plan policies aim to minimize wildlife movement impacts in Planning Area corridors, they would not fully protect existing corridors formed by grassland and other non-riparian, non-wooded undeveloped land in the City. Further mitigation isn't feasible without prohibiting development of most undeveloped land, so overall impacts on movement corridors not associated with wooded areas or wetlands remain significant and unavoidable.

- **Impact 4.10.6** determined that implementation of General Plan would significantly impact native and landmark trees, including oaks, in the City. The EIR includes General Plan policies and action items aimed

to protect landmark and oak trees in the City as well as large wooded areas and urban trees. However, Impact 4.10.6 determined that there are no feasible mitigation measures to fully offset the loss of native trees. Therefore this impact would be significant and unavoidable.

- **Impact 4.10.7** determined that implementation of the General Plan would not conflict with a Habitat Conservation Plans, Natural Community Conservation Plans, or biological resources recovery plans of Federal or State agency since none had been adopted at the time.

- **Impact 4.10.8** determined that implementation of the General Plan, along with past and future projects, would cause a significant loss of biological resources in the region. The EIR includes General Plan policies, associated action items and mitigation measures MM 4.10.1a through e, MM 4.10.3, and MM 4.10.5a through c which would reduce the General Plan's contribution to cumulative biological impacts in the region. However, the General Plan's contribution to cumulative and significant biological resource impacts for the region would still be cumulatively considerable and is considered a significant and unavoidable impact. The only mitigation for such impacts would be to restrict the majority of development in the General Plan which is not considered feasible. Therefore, this impact was determined significant and unavoidable.

5.2.4 Environmental Impacts

5.2.4.1 IMPACT ANALYSIS

Impact 5.2-1: Development of the proposed project could significantly impact the following sensitive species: special status birds and bats. [Threshold B-1]

Development allowed by the proposed project could potentially impact special-status species.

Special Status Birds. The are seven special-status bird species with the potential to occur on the project site, including one species listed under Section 3511 of the California Fish and Game Code, one CDFW watch list species, and five species designated as birds of conservation concern by the USFWS or CDFW. In addition, non-special status migratory birds could nest in the project site. All native or naturally occurring birds and their nests are protected under both California Fish and Game Code Section 3503 (active bird nests) and the MBTA. Construction activities in or near habitat for special-status birds could result in nest disturbance or destruction, which could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Construction activities could also result in the loss of foraging habitat for several bird species. Loss of special-status and non-special status bird eggs or nests, or any activities resulting in nest abandonment, could constitute a significant impact.

Special Status Bats. The project site contains potential roosting and foraging habitat for special-status bats, including the western red bat and pallid bat. Potential impacts to bats could result from construction-related disturbance of bat roosts, destruction of active roosts, or the loss of individuals.

Development activities from the proposed project could disturb the habitat of special status species resulting in significant impact.

Level of Significance Before Mitigation: Impact 5.2-1 would be potentially significant.

Mitigation Measures

BIO-1: To protect nesting birds, no project activity shall begin from February 1 through August 31 unless a qualified wildlife biologist completes the following surveys. Separate surveys and avoidance requirements are listed below for nesting birds and raptors. If project construction begins between February 1 through August 31, a qualified biologist shall perform a preconstruction nesting bird survey within seven days prior to construction (or less if recommended by CDFW), within the project work area for all birds protected under the MBTA, including raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established by a qualified biologist in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest, or that the nest is otherwise no longer active.

BIO-2: A qualified biologist shall conduct a survey for suitable bat roosting habitat within 14 days of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat is identified and proposed for removal, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities will be required. If bats are not found during the preconstruction surveys, no further measures are necessary.

Level of Significance After Mitigation: Impact 5.2-1 would be less than significant.

Impact 5.2-2: Development of the proposed project would not result in the loss of any riparian habitat or other sensitive natural community nor on state or federally protected wetland. [Threshold B-2] [Threshold B-3]

No sensitive natural communities or riparian habitats were observed within the project site during the field assessment. There were no aquatic resources identified or observed during the field assessment. In addition, as shown in Figure 3-2, *Aerial Photograph*, there are no riparian, natural habitat, or wetlands onsite (USFWS 2023). Therefore, the proposed project would not have a substantial adverse effect on riparian habitat, sensitive natural communities, or wetlands. There would be no impact.

Level of Significance Before Mitigation: Impact 5.2-2 would have no impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.2-2 would have no impact.

Impact 5.2-3: The proposed project could affect wildlife movement of special status species. [Threshold B-4]

Corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas, such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range.

The project site is a previously disturbed/developed site that is surrounded by development and therefore does not support significant wildlife use or movement corridors. The project site does not include known nursery sites and no evidence of a wildlife nursery site was observed during the field reconnaissance. Therefore, the proposed project is not expected to impact wildlife nursery sites. Although the project site is frequently disturbed, the trees on-site could be used for special status species by birds and bats listed in Impact 5.2-1. Therefore, development allowed under the proposed project could disturb the movement of special status species resulting in potentially significant impacts.

In addition, the City's General Plan Natural Resources Element contains policies that address potential impacts on corridors, such as Policy NR 1.1 which encourages incorporation of large and interconnected wildlife corridors in new development areas to provide ample space for animal movement.

Level of Significance Before Mitigation: Impact 5.2-3 would be potentially significant.

Mitigation Measures

Implement mitigation measures BIO-1 and BIO-2.

Level of Significance After Mitigation: Impact 5.2-3 would be less than significant.

Impact 5.2-4: The proposed project would not conflict with the City's tree preservation ordinance or with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional or state habitat conservation plan. [Thresholds B-5 and B-6]

The City of Rancho Cordova Municipal Code Chapter 19.12, Preservation and Protection of Private Trees, establishes regulations for the protection, removal, and preservation of landmark trees and protected trees. The proposed project is required to comply with Chapter 19.12 for the preservation and protection of private trees once a certain size is reached. Future development within the project boundary would remove protected trees, if required. The project would follow the procedures established in Chapter 19.12, such as submitting a brief statement of the reasons for removal or major trimming written by a certified arborist and obtaining a tree removal permit from the City. The General Plan includes Policy NR.4.1 which is intended to conserve native oak and landmark tree resources for their historic, economic, aesthetic, and environmental value. Following the regulations in the City's municipal code as well as the policies in the general plan would result in a less than significant impact.

There are no HCPs, NCCPs, or other habitat conservation plans that apply to the proposed project. No impact would occur in this regard.

Level of Significance Before Mitigation: Impact 5.2-4 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.2-4 would be less than significant.

5.2.5 Cumulative Impacts

The area considered for cumulative impacts to biological resources is the project site and the City. Many other projects in the City could impact sensitive species directly and/or indirectly through impacts on those species' habitats. Other projects would be required to comply with existing laws and regulations protecting biological resources. The proposed project would have a potentially significant impact on sensitive species and their habitats; however, with the implementation of mitigation measures BIO-1 and BIO-2, impacts to biological resources would be reduced to less than significant. Therefore, the project's contribution to cumulative impacts on biological resources would not be cumulatively considerable.

5.2.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.2-2 and 5.2-4.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.2-1:** Development of the proposed project could significantly impact the following sensitive species: special status birds and bats.
- **Impact 5.2-3:** The proposed project could affect wildlife movement of special status species.

In addition, cumulative impacts would be potentially significant unless the City applies mitigation measures BIO-1 and BIO-2. All impacts including cumulative impacts would be less than significant with the application of the mitigation measures listed below.

5.2.7 Mitigation Measures

Impact 5.2-1

BIO-1 To protect nesting birds, no project activity shall begin from February 1 through August 31 unless a qualified wildlife biologist completes the following surveys. Separate surveys and avoidance requirements are listed below for nesting birds and raptors. If project construction begins between February 1 through August 31, a qualified biologist will perform a preconstruction nesting bird survey within seven days prior to construction (or less if

recommended by CDFW), within the project work area for all birds protected under the MBTA, including raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established by a qualified biologist in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest, or that the nest is otherwise no longer active.

BIO-2: A qualified biologist shall conduct a survey for suitable bat roosting habitat within 14 days of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat is identified and proposed for removal, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities will be required. If bats are not found during the preconstruction surveys, no further measures are necessary

5.2.8 Level of Significance After Mitigation

The mitigation measures would reduce potential impacts to biological resources to a level that is less than significant. No significant unavoidable adverse impacts to biological resources have been identified.

5.2.9 References

U.S. Fish and Wildlife Service (USFWS). 2023 (accessed). USFWS Resource Report List. Information for Planning and Conservation. Internet website: https://ecos.fws.gov/ipac.

5.3 CULTURAL RESOURCES

Cultural resources comprise archaeological and historical resources. Archaeology studies human artifacts, such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Historical resources include sites, structures, objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association, etc. In California, historic resources cover human activities over the past 12,000 years. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Mills Crossing Project to impact cultural resources in the City of Rancho Cordova. The analysis in this section is based in part on the following information:

- *Archeological Resources Inventory Report for the Mills Crossing Project*, ECORP Consulting Inc., March 2023

A complete copy of this report is in the technical appendices of this DEIR, Appendix 5.3-1.

5.3.1 Environmental Setting

5.3.1.1 REGULATORY BACKGROUND

Federal and State Regulations

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

Native American Graves Protection and Repatriation Act

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and state-mandated historic preservation programs in California as well as the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

State

California Register of Historical Resources

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register of Historical Resources (CRHR) is the authoritative guide to the state's significant historical and archaeological resources.

The CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA.

To be eligible for listing in the CRHR, a resource must meet at least one of the following criteria:

A. Associated with events that have made a significant contribution to broad patterns of local or regional history or the cultural heritage of California or the United States.

B. Associated with the lives of persons important to local, California or national history.

C. Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possess high artistic values.

D. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation. (PRC Section 5024.1[c])

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. In summary, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion D, it maintains the potential to yield significant scientific or historic information or specific data.

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California PRC. In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and state-mandated historic preservation programs in California as well as the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the NAHC; require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

Local

The Open Space, Parks, and Trails and Cultural and Historic Resources Element of the Rancho Cordova General Plan includes the following policies pertaining to cultural resources:

- **Policy CHR.1.2:** Establish and promote programs that identify, maintain, and protect buildings, sites, or other features of the landscape possessing historic or cultural significance.
- **Policy OSPT.2.4:** Ensure that where land designated or proposed to be designated for open space contains Native American historical, cultural and sacred sites, the City consults with the tribe as to the level of confidentiality required to protect the site and as to appropriate dignity to afford the site in any management plan.

5.3.1.2 EXISTING CONDITIONS

The project site is located within the city limits of Rancho Cordova, which is located in the lower Sierran Foothill region of California. Short grasses and oak trees are evident on the project site and portions of the property are paved with asphalt. The immediate surrounding area consists of extensive residential and commercial development and the broader surrounding area consists of gently rolling terrain. Elevations range from 75 to 80 feet above mean sea level. The American River is 4,000 feet to the west and the Cordova creek is less than 0.5 mile to the north of the project site.

5.3.1.3 CULTURAL SETTING

Regional Pre-contact History

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found but cannot definitively be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods.

Around 8,000 BP, there was a shift in focus from hunting toward a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 BP, is sometimes referred to as the Millingstone Horizon. Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to 8,000 BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period.

Archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to environments in sites dating to after about 5,000 BP. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. New peoples from the Great Basin began entering Southern California during this period. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the Late Horizon, population densities increased, and settlement became concentrated in villages and communities along the coast and interior valleys. Regional subcultures also started to develop, each with its own geographical territory and language or dialect. These were most likely the basis for the groups that the first Europeans encountered during the 18th century. Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction. The presence of small projectile points indicates the introduction of the bow and arrow into the region sometime around 2,000 BP.

Local Pre-contact History

This section provides a regional overview with contextual elements drawn from California's Central Valley Region, the Western Foothills Region, and from the transition zone itself where the project site lies. This section also references climactic changes that swept the Sierra Nevada, which were a catalyst for population movement that led to cultural change in the foothills. Archeologists and the Central California Taxonomic System (CCTS) proposed a linear, uniform sequence of cultural succession in Central California and defined Early, Middle, and Late horizons for cultural change. Archeologists recalibrated the cultural, temporal, and spatial units sequence into three broad periods: the Paleoindian Period , the three-staged Archaic period, and the Emergent Period). The three divisions of the Archaic Period correspond to climate changes. This is the most recently developed sequence and is now commonly used to interpret Central California prehistory. The aforementioned periods are characterized by the following.

Paleoindian Period

This period began when the first people began to inhabit what is now known as the California culture area. It was commonly believed these first people (i.e., hunters and gatherers) subsisted on big game and minimally processed foods, presumably with no trade networks. More recent research indicates these people may have been more sedentary, relied on some processed foods, and traded. Populations likely consisted of small groups traveling frequently to exploit plant and animal resources.

Archaic Period

This period was characterized by an increase in plant exploitation for subsistence, more elaborate burial accoutrements, and increase in trade network complexity. The three divisions that correspond to pre-contact climate change are characterized by the following aspects.

Lower Archaic Period

This period is characterized by cycles of widespread floodplain and alluvial fan deposition. Artifact assemblages from this period include chipped-stone crescents and early wide-stemmed points, marine shell beads, eastern Nevada obsidian, and obsidian from the north Coast Ranges. These types of artifacts found on the sites dating to this period indicate trade was occurring in multiple directions. A variety of plant and animal species were also utilized, including acorns, wild cucumber, and manzanita berries.

Middle Archaic Period

This period is characterized by a drier climate. The technical analysis report states that archeologists identified two distinct settlement/subsistence patterns in this period: the Foothills Tradition and the Valley Tradition. Functional artifact assemblages consisting primarily of locally sourced flaked-stone and groundstone cobbles characterize the Foothills Tradition, while the Valley Tradition was generally characterized by diverse subsistence practices and extended periods of sedentism. Sites associated with later portions of the Middle Archaic are located near the project site include CA-SAC-107 and CABUT- 233, both of which produced elaborate material culture and diverse dietary and technological assemblages.

Upper Archaic Period

This period is characterized by abrupt change to wetter and cooler environmental climate conditions. Much greater cultural diversity is evident from this period. More specialized artifacts, such as bone tools, ceremonial blades, polished and groundstone plummets, saucer and saddle *Olivella* shell beads, *Haliotis* shell ornaments, and a variety of groundstone implements are characteristic of this period.

Emergent Period

This period is most notably marked by the introduction of the bow and arrow, the emergence of social stratification linked to wealth, and more expansive trade networks signified by the presence of clam disk beads that were used as currency.

Ethnography

Prior to the arrival of Euro-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Researchers subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central. When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about one-third of the state's native population lived in the Central Valley. At least seven distinct languages of Penutian stock were spoken among these populations: Wintu, Nomlaki, Konkow, River Patwin, Nisenan, Miwok, and Yokuts. Common linguistic roots and similar cultural and technological characteristics indicate that these groups shared a long history of interaction. The Central area encompasses the current project site and includes the Nisenan or Southern Maidu. Ethnographically, the project site is in the southwestern portion of the territory occupied by the Penutian-speaking Nisenan. Nisenan inhabited the drainages of the Yuba, Bear, and American Rivers, and the lower reaches of the Feather River, extending from the east banks of the Sacramento River on the west to the mid- to high elevations of the western flank of the Sierra Nevada to the east. The territory extended from the area surrounding the current City of Oroville on the north to a few miles south of the American River in the south. The Sacramento River bounded the territory on the west, and in the east, it extended to a general area within a few miles of Lake Tahoe.

Regional History

Spanish sea explorer Juan Rodriguez Cabrillo, who was dispatched north by the Viceroy of New Spain to look for the Northwest Passage, was the first European to set foot in California in 1542. Cabrillo traveled to Catalina Island, San Pedro Bay, San Diego Bay, and the northern Channel Islands. Sebastian Vizcaino explored the coast up to Monterey in 1602, and the English explorer Francis Drake visited the Miwok Native American community at Drake's Bay or Bodega Bay in 1579. With the Spanish Portolá land expedition in 1769, Spanish missions, presidios, and pueblos were first established in California. After Mexico gained its independence in 1821, California was renamed Alta California, a Mexican province with Monterey as its capital. American trapper Jedediah Smith traversed this area in 1827.

Project Site History

The project site is in the City of Rancho Cordova, which lies west of the Sierra Nevada Mountains within the foothills. After the discovery of gold at Coloma, immigrants began to pour into the Sierra Nevada foothills. In the spring of 1848, while enroute to Sutter's Fort, two Mormon immigrants discovered gold near the confluence of the north and south forks of the American River at a site known as Mormon Island.

Virtually overnight, numerous mining camps sprang up on both sides of the American River to exploit the easily accessible placer gold deposits. Chief among them were Alabama Bar, Slate Bar, Sailor Bar, Bean's Bar, Mississippi Bar, and Negro Bar. Mississippi Bar is two miles north of the project site on the northern side of the American River.

The project site lies within the 35,000-acre Rio de los Americanos land grant along the southern bank of the American River. The Mexican governor of Alta California issued it to William Leidesdorff in 1844. Leidesdorff was a San Francisco merchant who died in 1848. Joseph L. Folsom, a former U.S. Army captain who came to San Francisco during the Gold Rush, purchased the Rio de los Americanos land grant from Leidesdorff's estate. Folsom founded the town of Granite City on the land grant. It was renamed Folsom after his death in 1855. That same year the town was being laid out, and the Sacramento Valley Railroad was completed from Sacramento to Folsom in 1856. It facilitated shipment of goods from Sacramento to the mining areas to the east. The Sacramento Valley Railroad was acquired by the Southern Pacific Railroad in 1889.

After completion of the railroad from Sacramento to Folsom, Folsom became a transportation hub and supply center for gold miners heading east into the Sierra Nevada foothills. Stage and freight lines met the train and many commercial enterprises lined Sutter Street to supply the miners. A newspaper, the *Folsom Telegraph*, has been in continuous publication since 1856. Mills Crossing Station was situated along the railroad route from Sacramento to Folsom. It was constructed in 1911 in Mills, located in present-day Rancho Cordova. It served the local farming community and travelers on their way to the Sierra Nevada Mountains. The building consisted of a grocery store, tavern, and post office, and the second floor served as a place for grand social events such as balls and weddings.

Mining

The discovery of gold initiated the 1849 California Gold Rush, bringing thousands of miners and settlers to California and the Sierra Nevada foothills. Virtually overnight, numerous mining camps sprang up on both sides of the American River to exploit the easily accessible placer gold deposits. Federal mining acts of 1866 and 1872 allowed exploration for mineral deposits on public lands and provided a means for miners to acquire ownership of mines on public lands.

Mining is the dominant historical theme in the project site and in the surrounding lands. The region later known as the Folsom Mining District was extensively placer mined during the Gold Rush. The Folsom area was originally settled in 1849 by African American miners; by 1855, Chinese miners were reworking abandoned digs, and many of them were employed at various regional mines up through the 1880s. Initially, during the early 1850s, surface deposits (usually less than 3 feet deep) were placer mined through a series of small hand-dug excavations. The surface gravels were washed by pan or by higher-volume methods that employed rockers, long toms, and/or sluice boxes. These activities were often initially concentrated along drainages and swales. Ground sluicing, a technique that uses water (not under pressure) to break down gold-bearing gravels, could have occurred any time from the 1850s until the turn of the 20th century. Low-pressure hydraulic mining took place at Rebel Hill, near Folsom, sometime between the mid-1850s and 1884.

The project site is within the boundaries of the American River Placer Mining District, which consists of smaller districts such as the Alder Creek Corridor Mining District, Prairie Diggings Mining District, and others. The district includes thousands of acres of land that was subjected to placer mining by hand and mechanical methods using water from the south fork of the American River since gold was discovered in California in 1848. The American River Placer Mining District includes extensive diggings, mining camps, and canals and ditch systems, which encompass areas inland from the American River, including the project site.

By the early 1960s all profitable mining deposits in the area had been exploited, and mining activity in the project site ceased, leaving behind hundreds of acres of mining scars, tailings, and unwanted equipment. Slowly, where possible, nature began to reclaim the property. Folsom Dam was built in 1956, providing flood control and water rights for the Sacramento Valley and creating Folsom Lake, which attracted developers to construct homes and recreational facilities, enticing many residents and recreational visitors to the area.

5.3.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

C-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.

5.3.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

- **Impact 4.11.1** deemed the disturbance of cultural resources, including prehistoric sites and human remains would be considered a potentially significant impact. The EIR proposed General Plan policies and action items as mitigation measures to minimize impacts; however, the EIR determined this impact to be significant and unavoidable due to uncertainty about avoiding or mitigating all impacts.

- **Impact 4.11.2** found that the adoption of the Rancho Cordova General Plan could result in the potential disturbance of paleontological resources. Implementation of the General Plan Action Item and Mitigation Measure MM 4.11.2 which would require conducting paleontological studies and identifying paleontological resources would ensure that potential paleontological resource impacts are mitigated to less than significant.

- **Impact 4.11.3** considered the General Plan and future development in the region could significantly disrupt cultural resources and human remains. The EIR proposed General Plan policies and action items; however, the EIR determined this impact would be significant and unavoidable due to uncertainty about avoiding or mitigating all significant impacts.

- **Impact 4.11.4** found that development through the General Plan could potentially disturb paleontological resources, such as fossils and formations. Impact 4.11.4 applied Mitigation Measure 4.11.2 and proposed policies and action items to minimize impacts to less than cumulatively considerable.

5.3.4 Environmental Impacts

5.3.4.1 METHODOLOGY

Records Search

On January 17, 2023, a cultural resources records search was conducted for the project site at the North Central Information Center (NCIC) at the California State University, Sacramento. The research included a review of all recorded historic and prehistoric archaeological sites within 0.5 mile of the project site, as well as a review of known cultural resource surveys. In addition, ECORP examined the Built Environment Resource Directory, Archaeological Resources Directory, the National Register Information System, Office of Historic

Preservation, California Historical Landmarks, California Points of Historical Interest, Directory of Properties in the Historical Resources Inventory, and the California Points of Historical Interest (CPHI), various local historic registers, and historic maps.

Additional Research

In January 17, 2023, ECORP reviewed previous cultural resources studies conducted for the project site, online historic period maps and aerials and conducted additional research.

Field Survey

On February 15, 2023, ECORP examined the ground surface for indications of cultural resources and subsurface deposits but did not conduct subsurface investigations or artifact collections during the pedestrian survey.

5.3.4.2 IMPACT ANALYSIS

Impact 5.3-1: Development of the project could impact an identified historic resource. [Threshold C-1]

According to ECORP, online research indicated that the project site is within the boundaries of the previously recorded American River Placer Mining District (P-34-335). The field surveys did not identify any features or artifacts associated with the District. The American River Placer Mining District is a Super District that includes thousands of acres of land subjected to placer mining using water from the South Fork of the American River in 1848. A portion of CA-SAC-308H (Chinese diggings only; not inside the current project site) has been evaluated as eligible for the National Register of Historic Places (NRHP). However no physical features of the District are within the project site and therefore the proposed project will not directly or indirectly alter the integrity of the characteristics of the District that make it significant.

ECORP states that the proposed project would not adversely affect districts (such as P-34-335), sites, highways, structures, or objects listed in or eligible for listing in the NRHP (40 CFR 1508.27(b)(8)). No other cultural resources would be affected by the proposed project. Under Section 106, the undertaking (issuance of a federal permit) would not directly or indirectly alter any of the characteristics of the historic property (P-34 335) that qualify the property for inclusion in the National Register by diminishing the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Because there are no physical characteristics of the American River Placer Mining District within the Area of Potential Effect (APE), their integrity cannot be diminished (Appendix 5.3-1). Because the thresholds in 36 CFR 800.5(a)(1) have not been met, the project would not affect a historic property.

Currently, no structures exist on the project site, so no built structures on the project site would be demolished as part of the proposed project. Therefore, the proposed project would not impact historic resources; no impacts would occur.

Level of Significance Before Mitigation: Impact 5.3-1 would have no impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.3-1 would have no impact.

Impact 5.3-2: Development of the project could impact archaeological resources. [Threshold C-2]

Due to the presence of alluvium along the American River and given the likelihood of pre-contact archaeological sites along perennial waterways, there exists a low potential for buried pre-contact archaeological sites in the project site. While the aerial photographs and topographic maps depict structures on the property starting in the 1950s, the development of a shopping center in the 1960s and subsequent demolition of those buildings by 2009 removed any evidence of those structures. Additionally, structures constructed in urban areas after the 1940s had indoor plumbing and regular trash service, so the likelihood of buried deposits associated with structures constructed after that time is low. However there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural and archeological resources. Therefore impacts would be potentially significant.

Level of Significance Before Mitigation: Impact 5.3-2 would be potentially significant

Mitigation Measures

CUL-1 If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

Level of Significance After Mitigation: Impact 5.3-2 would be less than significant

Impact 5.3-3: Grading activities could potentially disturb human remains. [Threshold C-3]

The project site is currently undeveloped and would require ground disturbing and construction activities in order to accommodate the proposed project. California Health and Safety Code, Section 7050.5; CEQA Section 15064.5; and Public Resources Code, Section 5097.98, mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Specifically, California Health and Safety Code, Section 7050.5, requires that if human remains are discovered on a project site, disturbance of the site shall remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 the Public Resources Code. Impacts would be potentially significant.

Level of Significance Before Mitigation: Impact 5.5-3 would be potentially significant.

Mitigation Measures

CUL-2 If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (Section 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Level of Significance After Mitigation: Impact 5.5-3 would be less than significant

5.3.5 Cumulative Impacts

The area considered for cumulative impacts to historic and archaeological resources is within a 0.5-mile radius of the project site, the same area as the records search. Other projects in the region could demolish or otherwise alter historical and archaeological resources. Other projects would be required to comply with CEQA

Guidelines Section 15064.5, which requires the lead agency to determine if discovered resources are unique or historically significant, and if so, to avoid or mitigate impacts to such resources in accordance with the provisions of PRC Section 21083.2.

5.3.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.3-1.

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.3-2: The proposed project could impact archeological resources.
- Impact 5.3-3:The proposed project could impact human remains.

5.3.7 Mitigation Measures

Impact 5.3-2

CUL-1 If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

Impact 5.3-2

CUL-2 If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per Section 7050.5 of the

Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (Section 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

5.3.8 Level of Significance After Mitigation

With the implementation of Mitigation Measures CUL-1 and CUL-2, impacts would be less than significant.

5.3.9 References

ECORP. 2023, March. Archaeological Resources Inventory Report for the Mills Crossing Project. Appendix 5.3-1.

5.4 ENERGY

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Mills Crossing project (proposed project) to result in impacts related to the consumption of energy resources, in accordance with Appendices F and G of the CEQA guidelines. Additionally, this section identifies and analyzes the potential impacts associated with the installation of energy infrastructure, per the Utilities and Service Systems threshold. The analysis in this section is based in part on the following technical report(s):

- *Air Quality & Greenhouse Gas Emissions Assessment for Mills Crossing*, ECORP Consulting, Inc., June 2023
- *Energy Calculations for Mills Crossing*, PlaceWorks, August 2023.

Complete copies of these reports are included in the technical appendices to this Draft EIR (Appendix 5.1-1 and Appendix 5.4-1, respectively).

A comment was received during the public review period for the Notice of Preparation (NOP) regarding this topic from the Sacramento Municipal Utility District (January 7, 2023). This comment is included in Appendix 2-2 and addressed in this section.

5.4.1 Environmental Setting

Section 21100(b)(3) of CEQA requires that an EIR include a detailed statement setting for the mitigation measures proposed to minimize significant effects on the environment, including but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, an EIR should include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

In accordance with Appendix F and G of the State CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the proposed project and summarize its anticipated energy needs, impacts, and conservation measures. Information found herein, as well as related aspects of the proposed project's energy implications, are discussed in greater detail elsewhere in this EIR, including Sections 5.1, *Air Quality*, 5.5, *Greenhouse Gas Emissions*, and 5.12, *Transportation*.

5.4.1.1 REGULATORY BACKGROUND

Federal Regulations

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of U.S. crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE Standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. In addition, on March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards, which will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 miles per gallon for passenger vehicles and light trucks for model year 2026, which will be a 10 miles per gallon increase relative to model year 2021 (NHTSA 2023).

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased CAFE Standards; the Renewable Fuel Standard; appliance energy efficiency standards; building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration (USEPA 2023).

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

State Regulations

California Energy Commission

The California Energy Commission (CEC) was created in 1974 under the Warren-Alquist Act as the State's principal energy planning organization in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecast statewide electricity needs.
- License power plants to meet those needs.
- Promote energy conservation and efficiency measures.
- Develop renewable energy resources and alternative energy technologies.

- Promote research, development and demonstration.
- Plan for and direct the state's response to energy emergencies.

California Public Utilities Commission

In September 2008, the California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020;
- All new commercial construction in California will be zero net energy by 2030;
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the State's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of State's electricity and gas use.

The CPUC and CEC have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Renewables Portfolio Standard

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

The California Renewables Portfolio Standard (RPS) Program was established in 2002 under Senate Bills (SB) 1078 (Sher) and 107 (Simitian). The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the State's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). The CPUC is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the State. For year 2020, the three largest retail energy utilities provided an average of 43 percent of its supplies from renewable energy sources. Community choice aggregators provided an average of 41 percent of their supplies from renewable sources (CPUC 2021).

Senate Bill 350

Governor Jerry Brown signed SB 350 on October 7, 2015, establishing tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill also establishes an overall State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires

all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods (CEC 2017).

Title 24, Part 6, Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (California Code of Regulations Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020. The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings are generally 30 percent more energy efficient compared to the 2016 standards, and single-family homes are generally 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018).

Furthermore, on August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the 2019 standards on January 1, 2023. The 2022 standards require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission (CBSC) adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen")

was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the governor. The mandatory provisions of CALGreen became effective January 1, 2011. The 2019 CALGreen standards became effective on January 1, 2020, while the 2022 CALGreen standards became effective on January 1, 2023.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (CBSC 2019).

Title 13 Article 4.8, Chapter 9, Section 2449, General Requirements for In-Use Off-Road Diesel-Fueled Fleets

Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9 was adopted on May 2, 2008 and limits non-essential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary. The airborne toxic control measure helps reduce public exposure to oxides of nitrogen, diesel particulate matter, and other criteria pollutant emissions from off-road diesel-fueled vehicles and reduces unnecessary diesel fuel consumption.

Green Building Executive Order S-20-04

In 2004, Executive Order (EO) S-20-04 was signed by the Governor, committing the State to take aggressive action to reduce State building electricity usage by retrofitting, building, and operating the most energy- and resource-efficient buildings by taking all cost-effective measures described in the Green Building Action Plan for facilities owned, funded, or leased by the State and to encourage cities, counties, and schools to do the same. It also calls for State agencies, departments, and other entities under the direct executive authority of the Governor to cooperate in taking measures to reduce grid-based energy purchases for State-owned buildings by 20 percent by 2015, through cost-effective efficiency measures and distributed generation technologies. These measures include, but are not limited to:

- Designing, constructing and operating all new and renovated State-owned facilities paid for with State funds as "LEED Silver" or higher certified buildings.
- Identifying the most appropriate financing and project delivery mechanisms to achieve these goals.

- Seeking out office space leases in buildings with a U.S. Environmental Protection Agency (EPA) Energy Star rating.

- Purchasing or operating Energy Star electrical equipment whenever cost-effective.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent was to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required the California Air Resources Board (CARB) to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Sacramento Area Council of Governments (SACOG) is the MPO for the Sacramento region, which includes the City of Rancho Cordova. Pursuant to the recommendations of the Regional Transportation Advisory Committee (RTAC), CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

Executive Order N-79-20

On September 23, 2020, Executive Order N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs (zero-emission vehicles) sold in the California toward the target of 100 percent of in-state sales by 2035.

- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035.

- Strategies to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.

On August 25, 2022, CARB adopted the Advanced Clean Cars II (ACC II) regulations that codifies the EO goal of 100 percent of in-state sales of new passenger vehicles and trucks be ZE by 2035. Starting in year 2026, ACC II requires that 35 percent of new vehicles sold be ZE or plug-in hybrids.

Local Regulations

City of Rancho Cordova Municipal Code

Chapter 16.26, Energy Code, of the City Municipal Code adopts the 2022 California Energy Code (24 CCR Part 6). Chapter 10.64, Trip Reduction Programs, of the Municipal Code requires employers in the city to obtain a trip reduction permit which is intended to reduce worker vehicle trips and fuel consumption.

City of Rancho Cordova General Plan

The City's General Plan includes the following policies in the Air Quality Element that are relevant to reducing impacts related energy and fuel consumption:

- **Policy AQ.2.1:** Promote strategic land use patterns for businesses that reduce the number and length of motor vehicle trips and that encourage multiple forms of transportation for employees and patrons.
- **Policy AQ.2.2:** Encourage mixed-use developments that put residences in close proximity to services, employment, transit, schools, and civic facilities/services.
- **Policy AQ.2.3**: Encourage infill development as a way to reduce vehicle trips and improve air quality.
- **Policy AQ.3.2:** Promote mass transit as an alternative to single-occupant motor vehicle travel.
- **Policy AQ.3.3**: Involve local businesses in creating, maintaining, or promoting mass transit opportunities and reducing vehicle emissions.
- **Policy AQ.3.4**: Emphasize "demand management" strategies that seek to reduce single occupant vehicle use in order to achieve state and federal air quality plan objectives.
- **Policy AQ.4.1**: Promote improved air quality benefits through energy conservation measures for new and existing development.
- **Policy AQ.4.2**: Support vehicle improvements and the use of clean vehicles that reduce emissions and improve air quality.
- **Policy AQ.4.4**: Support SMAQMD's program of retrofitting construction equipment.

The Natural Resources Element includes the following policies relevant to energy consumption:

- **Policy NR.7.1**: Increase energy conservation Citywide.
- **Policy NR.7.2**: Promote the development and use of advanced energy technology and building materials in Rancho Cordova.
- **Policy NR.7.3**: Encourage the development of energy efficient buildings and subdivisions.

- **Policy NR.7.4**: Promote energy rebate programs offered by local energy providers (e.g., SMUD, PG&E) as a way to bring energy efficiency into older neighborhoods and developments.

5.4.1.2 EXISTING CONDITIONS

This section presents information on the energy providers for the study area and the existing energy demand of the project site. The study area for this section includes the project site, as well as the jurisdiction of the City of Rancho Cordova, and the service areas of energy providers.

Energy Providers

Sacramento Municipal Utility District

The Sacramento Municipal Utility District (SMUD) is the nation's sixth largest community-owned, not-for-profit electric service. SMUD serves approximately 1.5 million customers in Sacramento County and would provide electric service to the proposed project. SMUD's 2030 Zero Carbon Plan (ZCP) was approved by the SMUD Board in April 2021 which aims for carbon naturality by 2030. As seen in Table 2 of the ZCP, "SMUD's 10-Year Planning Demand Forecast (GWh)," SMUD anticipates the electricity demand for its service area to be 11,747 gigawatt hours (GWh) by 2030. However, with implementation of the ZCP, SMUD expects this demand to be offset by increases in energy efficiency and rooftop solar, resulting in a reduction of 145 GWh. The focus of the ZCP includes eliminating greenhouse gas emissions from SMUD power plants; expanding investment in proven clean technologies including solar, wind and geothermal energy and battery storage; launching pilot projects and programs to test and prove new and emerging technologies and develop paths for prioritizing technology adoption and scaling; and identifying savings and pursuing partnerships and grants that support the ZCP (SMUD 2021).

In 2022, SMUD offered five 100 percent renewable energy programs for residential and commercial customers. SMUD's general mix, according to its 2022 Power Content Label, consists of 23.7 percent eligible renewable, 25.4 percent large hydroelectric, 45.6 percent natural gas, 1.6 percent nuclear, and 3.7 percent other or unspecified (SMUD 2022). SMUD's total energy generation fluctuates hourly and daily. For example, according to SMUD's Current and Expected Energy Use live data tool, at noon on October 23, 2023, SMUD's total energy was generated by 73 percent natural gas, 23 percent solar, and 3 percent large hydro (SMUD 2023).

Existing Energy Use and Infrastructure

Currently, there are no built structures on the project site and therefore no existing energy demands.

On January 7, 2023, SMUD submitted a letter in response to the Notice of Preparation for the proposed project. SMUD identified the following electrical infrastructure on the project site (see Appendix 2-1):

- Existing 69/12 kilovolt (kV) overhead and underground facilities south of Folsom Boulevard.
- Existing 12 kV overhead and underground facilities on the project site.

Other aspects of this comment letter are addressed in the impact discussion below.

5.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

E-1 Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

E-3 Require or result in the relocation or construction of new or expanded energy facilities, the construction or relocation of which could cause significant environmental effects.

5.4.3 Plans, Programs, and Policies

2006 General Plan EIR

The 2006 General Plan EIR determined that impacts associated with energy use and energy infrastructure as a result of development under the General Plan would be less than significant. As described in the 2006 EIR, development under the General Plan would be required to comply with CCR Title 24, which would minimize impacts with regard to inefficient, wasteful, and unnecessary consumption of energy. The 2006 EIR also noted that SMUD and PG&E did not anticipate any capacity shortages or problems in meeting the buildout demands associated with the Rancho Cordova General Plan. Impacts with regard to electrical infrastructure were determined to be less than significant.

5.4.4 Environmental Impacts

5.4.4.1 METHODOLOGY

Based on CEQA Guidelines Appendix F, to ensure energy implications are considered in project decisions, EIRs include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources. Environmental effects may include the proposed project's energy requirements and its energy use efficiencies by amount and fuel type during construction and operation; the effects of the proposed project on peak- and base-period demands for electricity and other forms of energy; the degree to which the proposed project complies with existing energy standards; the effects of the proposed project on energy resources; the proposed project's projected transportation energy use requirements; and its overall use of efficient transportation alternatives, if applicable. The provided energy and fuel usage information provided in this section are based on the following criteria.

- **Energy**: The CalEEMod default energy rates and mixed-fuel assumptions were utilized for the proposed project. It is anticipated that all uses onsite would be all-electric.
- **On-Road Vehicle Fuel Usage**: Fuel usage associated with operation-related vehicle trips are based on fuel usage data obtained from EMFAC2021, Version 1.0.2.

5.4.4.2 IMPACT ANALYSIS

Impact 5.4-1: Project construction and operation would not cause wasteful, inefficient, or unnecessary energy use. [Threshold E-1]

Short-Term Construction Impacts

Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels compared to existing conditions and would result in short-term transportation-related energy use.

Electricity use during construction would vary during different phases of construction. Table 5.4-1, *Construction Energy Consumption*, summarizes the levels of energy consumption and worker/vendor VMT associated with the construction of the project by construction year. Construction of the proposed project would not require electricity to power most construction equipment. The majority of construction equipment during demolition and grading would be gas or diesel powered, and the later construction phases would primarily require electrical equipment for interior construction and architectural coatings. For the purposes of this analysis, construction equipment is assumed to use diesel, consistent with the default construction equipment identified in the proposed project's CalEEMod model output (see Appendix 5.1-1).

An estimated 369,661 gallons of gasoline and 318,953 gallons of diesel fuel would be used during construction of the project (see Appendix 5.4-1). An estimated 95,492 kilowatt hours of electricity use would be associated with worker vehicle trips. As seen in Table 5.4-1, the proposed project is estimated to result in approximately 5.7 million VMT across all fuel types. Overall, the use of electricity would be temporary and would fluctuate according to the phase of construction; it would not represent wasteful or unnecessary use of electricity.

Table 5.4-1 Construction Energy Consumption

	Gasoline		Diesel		Electricity	
Year	VMT	Gallons	VMT	Gallons	VMT	kWh
2024	52,733	2,027	110	41,842	1,998	732
2025	1,133,326	71,943	98,962	67,475	36,703	14,660
2026	1,304,514	114,575	116,361	70,015	47,666	19,269
2027	1,299,121	104,090	116,427	69,589	52,763	29,650
2028	1,268,890	77,027	114,707	70,032	56,673	31,181
Total	**5,058,584**	**369,661**	**446,567**	**318,953**	**195,803**	**95,492**

Source: Calculations by PlaceWorks (Appendix 5.1-1) using CalEEMod modeling data generated by ECORP (Appendix 5.1-1).
Note: Gasoline gallons include on-road gallons from worker and vendor trips. Diesel gallons include off-road equipment and on-road gallons from worker and vendor trips. Electricity usage includes on-road consumption from worker trips.
kWh = kilowatt hours

The energy needs for project construction would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Associated energy consumption would be typical of that associated with commercial and residential projects of this size in an urban setting. Automotive fuels would be consumed to transport people to and from the project site. Energy would be required for construction elements and to transport construction materials. The

one-time energy expenditure required to construct the physical infrastructure associated with the project would be nonrecoverable. There is no atypical construction related energy demand associated with the proposed project. Nonrenewable energy would not be consumed in a wasteful, inefficient, and unnecessary manner when compared to other construction activity in the region.

The proposed project would also be required to comply with several state regulations that would reduce energy and fuel consumption during construction. This includes Section 2449 of the California Code of Regulations Title 13, Article 4.8, Chapter 9 idling restrictions, which limit the amount of time for which diesel-fueled or alternative diesel-fueled off-road engines can idle. Additionally, state efforts to transition off-road vehicles toward zero-emissions under Executive Order N-79-20 would further reduce diesel and gasoline consumption of construction equipment and worker vehicles.

Long-Term Operation Impacts

Operation of the proposed project would create additional demands for electricity compared to existing conditions and would result in increased transportation energy use. Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, use of on-site equipment and appliances; and indoor, outdoor, and parking lot lighting.

Electrical Energy

Table 5.4-2, *Project Annual Electricity Demand,* shows the projected electricity demand of the proposed project buildings based on CalEEMod default electricity rates. The proposed project is anticipated to be all electric. Additionally, all electricity would be provided by SMUD, which anticipates providing 100 percent renewable energy-sourced electricity by 2030 under its Zero Carbon Plan. However, as discussed in Section 5.4.1.2, *Existing Conditions*, SMUD's current energy generation source is dominated by natural gas. Furthermore, the proposed project would be required to demonstrate compliance with the current CBSC and CALGreen standards, which would ensure efficient use of energy in project buildings. This includes design practices like orienting buildings with the long sides facing south and north and protecting buildings with landscape features to reduce thermal loss, compliant with Section A5.106, Site Development, of the 2022 CBSC. Therefore, proposed project buildings would not result in inefficient or wasteful electricity use during operation.

Table 5.4-2 Project Annual Electricity Demand

CalEEMod Land Use Type[1]	Electricity (kWh/yr)
Medical Office Building	752,082
Library	165,539
Strip Mall	998,053
High Turnover (Sit Down Restaurant)	308,299
Condo/Townhouse	559,693
Unenclosed Parking with Elevator	366,340
Apartments Mid Rise	416,315
Total	**5,058,584**

Source: ECORP 2023 (Appendix 5.1-1).
[1] Based on the default CalEEMod, v2020.4.0, electricity rates and mixed-fuel assumptions.

Transportation Energy

The proposed project would consume transportation energy during operations from the use of motor vehicles. The efficiency, such as the average miles per gallon, of these motor vehicles is unknown. Estimates of transportation energy use are based on overall VMT and its associated transportation energy use. As seen in Table 5.4-3, *Project Annual Operation-Related Fuel Usage*, the annual VMT for the proposed project is estimated to be 10,565,798 miles. The proposed project is expected to generate 4,353 daily vehicle trips on a typical weekday (ECORP 2023). Additionally, as discussed in Section 8.6, *Transportation*, the proposed project has been screened from VMT analysis under the City of Rancho Cordova Transportation Impact Guidelines because it is within a ½ mile of the Sacramento Regional Transit Agency Gold Line. This indicates that the number of trips under the proposed project may be fewer than anticipated due to the project site's proximity to a major transit stop. The proposed project is therefore assumed to have a less-than-significant VMT impact.

Furthermore, the proposed project would be required to implement the Sacramento Metropolitan Air Quality Management District's Tier 1, Best Management Practice that requires the proposed project to meet current CALGreen Tier 2 standards, specifically regarding the installation of electric-vehicle-capable spaces. This would further reduce gasoline and diesel fuel use. Thus, it is expected that operation-related fuel usage associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than similar development projects.

Table 5.4-3 Project Annual Operation-Related Fuel Usage

	Gasoline		Diesel		Electricity		Compressed Natural Gas	
	VMT	Gallons	VMT	Gallons	VMT	kWh	VMT	Gallons
Passenger Vehicles	9,392,909	356,219	468,617	47,045	689,740	240,718	14,531	2,329

Source: EMFAC2021 v. 1.0.2. Annual VMT for project operations are based information found in Appendix 5.1-1.

Summary

As described previously, the proposed project would be designed and constructed without natural gas infrastructure, and natural gas usage would be limited to only the operation-related fuel usage of the proposed project, as shown in Table 5.4-3. Electricity and liquid fuels use during construction and operation of the proposed project would not be considered inefficient, wasteful, or unnecessary. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Impact 5.4-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.4-1 would be less than significant.

Impact 5.4-2: The proposed project would not conflict with a State or local plan for renewable energy or energy efficiency. [Threshold E-2]

California Renewable Portfolio Standard Program

Electrical needs to the project site would be provided by SMUD. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as SMUD, whose compliance RPS requirements would contribute to the state objective of transitioning to renewable energy. SMUD obtains electricity from conventional and renewable sources throughout California. For example, according to SMUD's Current and Expected Energy Use live data tool, total energy generation in the afternoon of October 23, 2023, SMUD's total energy was generated by 73 percent natural gas, 23 percent solar, and 3 percent large hydro (SMUD 2023). As discussed above, by the proposed project's anticipated operational year of 2029, the percentage of renewable energy generation is expected to be closer to 100 percent under SMUD's 2030 Zero Carbon Plan. The project would also be required to adhere to applicable energy efficiency code requirements, including the 2022 CALGreen standards (24 CCR Part 11). The net increase in power demand associated with the proposed project is anticipated to be within the service capabilities of SMUD, as discussed below under Impact 5.4-3, and would not impede SMUD's ability to implement California's renewable energy goals. Therefore, the proposed project would not obstruct implementation of the California RPS Program.

Level of Significance Before Mitigation: Impact 5.4-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.4-2 would be less than significant.

Impact 5.4-3: The proposed project would not require the relocation or construction of new or expanded energy facilities that would result in significant environmental effects. [Threshold E-3]

The proposed project would require electrical services totaling an estimated 5,058,584 kilowatt-hours per year, as described under Impact 5.4-1. This electricity consumption level is typical for projects of this size and represents a modest increase in electricity demand when considered in the context of SMUD's service area. In addition, the proposed project would be required to comply with energy efficiency standards in Title 24 of the California Administrative Code and the Appliance Efficiency Regulations. The project would also comply with CALGreen requirements related to energy and water conservation. These measures would help to decrease electricity consumption and the proposed project's demand on SMUD electrical infrastructure. The proposed project would be all-electric.

As discussed in Chapter 3, *Project Description*, the proposed project would adhere to SMUD's specifications for the electrical infrastructure required under the proposed project. These potential electrical infrastructure improvements are a part of the proposed project and therefore are analyzed within the impact discussions of this DEIR. Therefore, the proposed project would not result in the relocation or construction of new or expanded energy infrastructure that would cause a significant environmental impact. Impacts would be less than significant.

Level of Significance Before Mitigation: Impact 5.4-3 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.4-3 would be less than significant.

5.4.5 Cumulative Impacts

The area considered for cumulative impacts to electricity supplies is the service area of SMUD. Like the proposed project, other projects within SMUD's service area would be required to comply with the Building Energy Efficiency Standards and CALGreen, which would contribute to minimizing wasteful energy consumption and promoting renewable energy sources. As discussed in impact discussion Impact 5.4-1, construction- and operation-related energy impacts caused by the proposed project would be less than significant and would not be considered inefficient, wasteful, or unnecessary. The proposed project would therefore not contribute to any cumulative energy impacts when considered together with cumulative development projects. Therefore, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

5.4.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

5.4.7 Mitigation Measures

No mitigation measures are required.

5.4.8 Level of Significance After Mitigation

All impacts related to energy are less than significant.

5.4.9 References

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5.5 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed project to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis.

The analysis in this section is based in part on the following technical report:

- *Air Quality & Greenhouse Gas Emissions Assessment Mills Crossing*, ECORP Consulting, Inc., June 2023.

A complete copy of this report is included in the technical appendices to this DEIR (Appendix 5.1-1).

Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a GHG absorbs relative to a molecule of carbon dioxide (CO_2) over a given period of time (20, 100, and 500 years). CO_2 has a GWP of 1.
- **Carbon dioxide equivalent (CO_2e).** The standard unit to measure the amount of GHGs in terms of the amount of CO_2 that would cause the same amount of warming. CO_2e is based on the GWP ratios between the various GHGs relative to CO_2.
- **MTCO2e.** Metric ton of CO_2e.
- **MMTCO2e.** Million metric tons of CO_2e.

5.5.1 Environmental Setting

5.5.1.1 REGULATORY BACKGROUND

State Regulations

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code Section 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required the California Air Resources Board (CARB) to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the Renewables Portfolio Standard (RPS), certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350 (de Leon) was signed into law in September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of

all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008, which became effective in January 2009, helps facilitate AB 32's GHG reduction goals by addressing the emissions from passenger vehicles. The main objectives of the bill aim to reduce GHG emissions through extensive transportation, housing, and land use planning. SB 375 directs CARB to establish regional targets to reduce GHG emissions from passenger vehicle use. CARB administers 2035 targets for each of the regions throughout the state. The corresponding metropolitan planning organizations (MPOs) in each region are required to prepare and adopt a Sustainable Communities Strategy (SCS) that helps to adhere to the CARB administered targets. SCSs play a vital role in regional transportation plans by allowing transportation, land use, and housing strategies to align with the State's GHG emission goals. Project plans that are consistent with their region's SCS may be subject to a more streamlined California Environmental Quality Act (CEQA) process.

2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building Energy Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence, and climate change issues. The 2022 California Building Codes include provisions related to energy efficiency to reduce energy consumption and GHG emissions from buildings. Some of the key energy-efficiency components of the codes are:

1. **Energy Performance Requirements:** The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components.

2. **Lighting Efficiency:** The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures.

3. **HVAC Systems:** The codes establish requirements for heating, ventilation, and air conditioning (HVAC) systems, including the use of high-efficiency equipment, duct sealing, and controls.

4. **Building Envelope:** The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort.

5. **Renewable Energy:** The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on nonrenewable energy sources.

6. **Commissioning:** The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently.

Overall, the energy efficiency provisions of the 2022 California Building Codes aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The 2022 Building Energy Efficiency Standards improve on the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The exact amount by which the 2022 Building Codes are more efficient compared to the 2019 Building Codes would depend on the specific provisions that have been updated and the specific building being considered. However, in general, the 2022 Building Codes have been updated to include increased requirements for energy efficiency, such as higher insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 standards are a major step toward meeting Zero Net Energy.

Local Regulations

Sacramento Metropolitan Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has established operational GHG reduction thresholds as well as construction-related thresholds. The GHG targets and reduction recommendations made by the SMAQMD have taken into consideration reports and guidelines from various state agencies and organizations, such as the California Air Pollution Control Officers Association CEQA & Climate Change guidelines, the CARB Scoping Plan, the California Natural Resource Agency's CEQA Guidelines, and other reputable sources. In February 2021, SMAQMD revised the Greenhouse Gas Emissions Chapter in their CEQA Guide.

SMAQMD has both construction and operational thresholds for GHG emissions in their CEQA Guide. Their construction thresholds establish a bright-line threshold of 1,100 metric tons per year. Similarly, SMAQMD recommends a comparison of a project's annual operational GHG emissions to a significance threshold of 1,100 metric tons per year, though coupled with implementation of SMAQMD Tier 1 Best Management Practices (BMPs). Specifically, if a project's annual operational GHG emissions are calculated to fall under 1,100 metric tons and the project implements all SMAQMD Tier 1 BMPs, GHG-related impacts would be less than significant. If the threshold is exceeded, or in the case the project does not implement the Tier 1 BMPs, then the project may have a cumulatively considerable contribution to a significant cumulative environmental impact.

The Tier 1 BMPs are:

- BMP 1 – projects shall be designed and constructed without natural gas infrastructure; and

- BMP 2 – projects shall meet the current CalGreen Tier 2 standards,[1] except all electric vehicle capable spaces shall instead be electric vehicle ready.

If Tier 1 BMPs are not fully implemented, then emissions, including natural gas emissions, should be estimated and the project should mitigate any natural gas emissions and require all prewiring necessary so that the building is ready for a future retrofit to all-electric (e.g., such that electric space heating, water heating, drying, and cooking appliances could be installed). If emissions still exceed 1,100 metric tons of CO_2e per year, then the project must implement SMAQMD's Tier 2 BMP 3:

- Office projects must achieve a 15 percent reduction in vehicle miles traveled (VMT) per worker compared to the existing average VMT per capita for the county.
- Residential projects must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in the county.
- Retail projects must achieve no net increase in total VMT.

If the project achieves BMP 3, then the operational impact is considered less than significant, and no further analysis is needed. If a project cannot incorporate the required BMPs, other reductions or purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required. Carbon offsets are instruments that can be bought, sold, and traded. Like a stock or equity that represents a unit of ownership in a company, a carbon offset represents a unit of GHG emissions reductions. Each offset is essentially a certification that a certain quantity of GHG emissions has been avoided, prevented, or sequestered. Offset registries that the SMAQMD may approve have developed a broad consensus around the standards that are necessary to ensure that offsets are environmentally sound, namely, that offsets be real, permanent, quantifiable, verifiable, enforceable, and additional. Approved registries may include, but are not limited to, any of the following: (i) the Climate Action Reserve, the American Carbon Registry and Verra, which are all approved by CARB; (ii) any entity approved at any time by CARB to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.

Sacramento Area Council of Government's Metropolitan Transportation Plan/Sustainable Communities Strategy 2020

The Sacramento Area Council of Government's (SACOG's) Metropolitan Transportation Plan/Sustainable Communities Strategy 2020 (MTP/SCS) is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for the year 2035, and thus establishes an overall GHG target for the region beyond 2020 applicable to these subsectors of the transportation sector. CARB assigned SACOG a 19 percent GHG reduction target from 2005 levels by 2035. The GHG reduction target is the percentage reduction in passenger vehicle GHG emission per capita, compared to year 2005. This

[1] CalGreen contains voluntary "Tier 1" and "Tier 2" standards that are not mandatory statewide but could be required by a City or County. These are 'reach' standards, related to energy efficiency, that can be adopted by local jurisdictions and may be incorporated as mandatory standards in future code cycles.

change represents a reduction from just over 23 pounds per capita on a given weekday in 2005, to just under 19 pounds by 2035.

City of Rancho Cordova General Plan

The existing General Plan does not contain goals or policies directly aimed at reducing GHG emissions. However, goals and policies in the Air Quality Element, Circulation Element, and Urban Design Element indirectly affect or reduce GHG generation by requiring or promoting alternative transit infrastructure as well as mixed-use and infill development.

Air Quality Element

- **Policy AQ.2.1:** Promote strategic land use patterns for businesses that reduce the number and length of motor vehicle trips and that encourage multiple forms of transportation for employees and patrons.
- **Policy AQ.2.2:** Encourage mixed-use developments that put residences in close proximity to services, employment, transit, schools, and civic facilities/services.
- **Policy AQ.2.3:** Encourage infill development as a way to reduce vehicle trips and improve air quality.

Circulation Element

- **Policy C.2.2:** Require bicycle and pedestrian connections to public transit systems at stops, stations, and terminals; carpool/vanpool park-and-ride lots; and activity centers (e.g., schools, community centers, medical facilities, senior residences, parks, employment centers, high-density residential areas, commercial centers).

Urban Design Element

- **Policy UD.1.5:** Encourage project compatibility, interdependence, and support with neighboring uses, especially between commercial and mixed-use centers and the surrounding residential neighborhoods. Uses should relate to one another with pedestrian connections, shared parking, landscaping, public spaces, and the orientation and design of buildings.
- **Policy UD.3.3:** Promote the incorporation of public spaces and pedestrian amenities into all commercial and mixed-use projects.
- **Policy UD.4.3:** Promote infill projects that are designed as catalysts for change in accordance with the desired character of the City.

5.5.1.2 EXISTING CONDITIONS

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies

emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together.

The primary GHGs attributed to global climate change include CO_2, CH_4, and N_2O.

- **Carbon dioxide (CO_2)** is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.

- **Methane (CH_4)** is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about 12 years.

- **Nitrous oxide (N_2O)** is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs

298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in CO_2e, which weigh each gas by its GWP. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.

Sources of Greenhouse Gas Emissions

In 2022, CARB released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO_2e, including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO_2e in 2020, though the intensity of this decrease was most likely from light duty vehicles after shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level as in 2019 despite a 44 percent decrease in in-state hydropower generation (due to below average precipitation levels), which was more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second-largest source of the state's GHG emissions in 2020, accounting for 23 percent.

Currently, there are no built structures on the project site. The project site does not generate GHG emissions from natural gas used for energy, electricity usage, vehicle trips, and area sources such as landscaping or consumer cleaning products.

5.5.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The CEQA Guidelines Appendix G thresholds for GHG emissions do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards" (14 CCR 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4(c)). CEQA Guidelines Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130). As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

According to CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated

waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the Sacramento Valley Air Basin (SVAB) is the SMAQMD, the regional air pollution control officer for the basin. As previously stated, to provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SMAQMD has set thresholds and required BMPs to implement throughout the project construction and operations. The numeric bright-line thresholds and BMPs described in Section 5.5.1.1, *Regulatory Background*, under *Local Regulations*, Sacramento Metropolitan Air Quality Management District, were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

The significance of the proposed project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the proposed project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The City of Rancho Cordova may set a project-specific threshold based on the context of each particular project, including using the SMAQMD expert recommendation. For the proposed project, SMAQMD's 1,100 metric tons of CO_2e per year threshold and implementation of SMAQMD BMPs are used as the significance threshold for the proposed project. Additionally, the proposed project is assessed for consistency with SACOG's MTP/SCS. As previously described, the MTP/SCS is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for the year 2035, and thus establishes an overall GHG target for the region beyond 2020 applicable to these subsectors of the transportation sector. CARB assigned SACOG a 19 percent GHG reduction target from 2005 levels by 2035.

5.5.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

In 2007, SB 97, CEQA: Greenhouse Gas Emissions, required the Governor's Office of Research and Planning to adopt amendments to the CEQA Guidelines that require the analysis and mitigation of GHGs, as discussed under Section 5.5.2, *Thresholds of Significance*. These amendments became effective on March 18, 2010. As such, the City's 2006 General Plan EIR does not include an analysis of GHGs. See Chapter 5.1, *Air Quality*, for a summary of the 2006 EIR's impacts on air quality.

Folsom Boulevard Specific Plan

The proposed project is in the Mather Mills Opportunity Site, where the Specific Plan highlights the advantage of being near a light rail station. The proximity to this light rail station would help reduce vehicle trips and help improve air quality. The Mather Mills Opportunity Site is characterized as a compact, urban, and walkable environment for commercial and residential use. Creating mixed sites that are within walking distance of a light rail station reduces the amount of vehicle trips and thus reduces the amount of GHG emissions.

5.5.4 Environmental Impacts

5.5.4.1 METHODOLOGY

GHG impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where GHG emission quantification was required, emissions were modeled using the CalEEMod software, version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. The project site's construction phase generated GHG emissions were calculated primarily using CalEEMod model defaults for Sacramento County, though the timing of construction was adjusted to reflect the anticipated construction schedule of 2024 through 2029. Operational GHG emissions were based on the land use mix identified in Appendix 5.1-1 and traffic trip generation rates provided by Nelson/Nygaard. Two design features attributable to the proposed project are accounted for in the emissions modeling calculations, specifically the proposed project's proximity to transit and its number of affordable/below-market residential units.

5.5.4.2 IMPACT ANALYSIS

Impact 5.5-1: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. [Threshold GHG-1]

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 5.5-1, *Construction-Related Greenhouse Gas Emissions*, illustrates the specific construction generated GHG emissions that would result from construction of the proposed project. Once construction is complete, the generation of these GHG emissions will cease.

Table 5.5-1 Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Calendar Year One	499
Calendar Year Two	890
Calendar Year Three	973
Calendar Year Four	963
Calendar Year Five	939
SMAQMD Annual Construction Significance Threshold	*1,100*
Exceeds SMAQMD Threshold?	No

Source: ECORP 2023 (Appendix 5.1-1)

As shown in Table 5.5-1, the proposed project's construction would result in the maximum generation of 973 metric tons of CO_2e over the third calendar year of construction, which is below the SMAQMD significance threshold. Once construction is complete, the generation of these GHG emissions will cease.

Operation

Operation of the proposed project would result in an increase in GHG emissions primarily associated with motor vehicle trips and on-site energy sources. Long-term operational GHG emissions attributed to the proposed project are identified in Table 5.5-2, *Operational-Related Greenhouse Gas Emissions*.

As previously described, SMAQMD specifies that all projects must adhere to the Tier 1 BMP requirements to be considered less than significant. To ensure compliance with the SMAQMD guidelines, this proposed project is subject to Mitigation Measure GHG-1 (see below), which will ensure that Tier 1 BMPs are implemented. The long-term operational GHG emissions identified in Table 5.5-2 account for SMAQMD Tier 1 BMP 1, which requires that all development be designed and constructed without natural gas infrastructure. Due to limitations in the modeling software, GHG reductions resulting from Tier 1 BMP 2, which requires projects to meet the current CalGreen Tier 2 standards with the exception that all electric vehicle capable spaces be electric vehicle ready, are unable to be quantified.

Table 5.5-2 Operational-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Area	8
Energy	608
Mobile	5,136
Waste	190
Refrigeration	2
Total	5,963
SMAQMD Annual Construction Significance Threshold	*1,100*
Exceeds SMAQMD Threshold?	Yes

Source: ECORP 2023 (Appendix 5.1-1)
Notes: Emission projections are predominately based on the land use mix identified in Appendix 5.1-1 and traffic trip generation rates from Nelson/Nygaard (2023). SMAQMD Tier 1 BMP 1, which requires that all development be designed and constructed without natural gas infrastructure, is included in the modeling calculations per Mitigation Measure GHG-1.

As shown in Table 5.5-2, the proposed project's operational GHG emissions would be approximately 5,963 metric tons of CO_2e per year, which exceeds the SMAQMD significance threshold of 1,100 metric tons of CO_2e per year. Projects that exceed 1,100 metric tons of CO_2e per year after implementation of the Tier 1 BMPs must also implement SMAQMD Tier 2 BMPs. As previously discussed, the SMAQMD's Tier 2 BMP are as follows:

- Office projects must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for the county.
- Residential projects must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in the county.
- Retail projects must achieve no net increase in total VMT.

If the proposed project achieves this SMAQMD Tier 2 BMP, then the operational impact is considered less than significant, and no further analysis is needed. If a project site cannot incorporate the required BMPs, other reductions or purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required, as listed in Mitigation Measure GHG-2. Carbon offsets are instruments that can be bought, sold, and traded. Like a stock or equity that represents a unit of ownership in a company, a carbon offset represents a unit of GHG emissions reductions. Each offset is essentially a certification that a certain quantity of GHG emissions has been avoided, prevented, or sequestered. Offset registries that the SMAQMD may approve have developed a broad consensus around the standards that are necessary to ensure that offsets are environmentally sound, namely that offsets be real, permanent, quantifiable, verifiable, enforceable, and additional.

Level of Significance Before Mitigation: Impact 5.5-1 could be potentially significant.

Mitigation Measures

GHG-1 **Implement SMAQMD Tier 1 Best Management Practices.** The implementing agency will require the proposed project to implement Sacramento Metropolitan Air Quality Management District Tier 1 Best Management Practices:

- **BMP 1**: projects shall be designed and constructed without natural gas infrastructure.
- **BMP 2**: projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

GHG-2 **Implement SMAQMD Tier 2 Best Management Practices.** The implementing agency will require the proposed project to implement Sacramento Metropolitan Air Quality Management District Tier 2 Best Management Practices:

- **BMP 3**: The project applicant shall coordinate with the City of Rancho Cordova to implement feasible transportation demand management (TDM) strategies, which would decrease the vehicle miles traveled generated by the proposed project as follows:
  - The project community office space component must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for Sacramento County.
  - The project residential component must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in Sacramento County.
  - The project retail component must achieve no net increase in total VMT.

  Examples of potential measures include (but are not limited to): paid parking, employee telecommuting, employee shuttle service, expansion of transit service coverage/subsidized transit fares, enhanced bicycle and pedestrian connections, and flexible work schedules.

  In the case that the necessary VMT reductions are infeasible, the purchasing and retiring GHG/carbon offsets from a SMAQMD-approved registry is required. Approved registries may include, but are not limited to, any of the following: (i) the Climate Action Reserve, the

American Carbon Registry and Verra; (ii) any entity approved at any time by the California Air Resources Board to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.

Level of Significance After Mitigation: Impact 5.5-1 would be less than significant.

Impact 5.5-2: The proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. [Threshold GHG-2]

SACOG's MTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks. As shown in Table 5.5-2, GHG emissions resulting from project-related transportation sources are one of the most potent sources of emissions, and therefore comparison to the MTP/SCS is an appropriate indicator of whether the project site is consistent with the MTP/SCS. Since the development site is classified as a "Center and Corridor Community" in the MTP/SCS, it is included in an area where urban development is predicted by SACOG. According to the MTP/SCS, land uses in Center and Corridor Communities are typically higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, suburban or urban commercial corridors, rail station areas, central business districts, or town centers. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the communities surrounding them. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types. The proposed project is consistent with the "Center and Corridor Community" classification in the MTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the MTP/SCS with implementation of the future development in the project site.

Level of Significance Before Mitigation: Impact 5.5-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.5-2 would be less than significant.

5.5.5 Cumulative Impacts

As described in Section 5.5.4, GHG emission impacts are inherently cumulative and therefore the analysis under Impacts 5.5-1 and 5.5-2 describes the cumulative impacts of the proposed project. These impacts would include the increase of GHGs from construction and operation of the proposed project. The proposed project would not have a significant impact on the environment with mitigation measures in place and would have a less-than-significant impact on GHGs. The applied mitigation measures implement SMAQMD best management practices, which works to reduce natural gas infrastructure and reduce VMT. Impacts would have a less-than-significant impact in regard to applicable plans related to GHGs.

5.5.6 Level of Significance Before Mitigation

After implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: Impact 5.5-2.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.5-1:** The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

5.5.7 Mitigation Measures

Impact 5.5-1

GHG-1 **Implement SMAQMD Tier 1 Best Management Practices.** The implementing agency will require the proposed project to implement Sacramento Metropolitan Air Quality Management District Tier 1 Best Management Practices:

- **BMP 1**: projects shall be designed and constructed without natural gas infrastructure.
- **BMP 2**: projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

GHG-2 **Implement SMAQMD Tier 2 Best Management Practices.** The implementing agency will require the proposed project to implement Sacramento Metropolitan Air Quality Management District Tier 2 Best Management Practices:

- **BMP 3**: The project applicant shall coordinate with the City of Rancho Cordova to implement feasible transportation demand management (TDM) strategies, which would decrease the vehicle miles traveled generated by the proposed project as follows:
  - The project office space component must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for Sacramento County.
  - The project residential component must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in Sacramento County.
  - The project retail component must achieve no net increase in total VMT.

5.5.8 Level of Significance After Mitigation

After implementation of mitigation measures, impacts would be less than significant.

5.5.9 References

ECORP Consulting Inc. (ECORP). 2023, June. *Air Quality & Greenhouse Gas Emissions Assessment- Mills Crossing, Rancho Cordova, California.* Appendix 5.1-1 to this DEIR.

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5.6 HAZARDS AND HAZARDOUS MATERIALS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed Mills Crossing project on human health and the environment due to exposure to hazardous materials or conditions associated with the project site, project construction, and project operations.

The analysis in this section is based in part on the following technical report(s):

- *Site Cleanup Plan, Former Lily Company Property*, Tetra Tech, Inc., March 16, 2023.
- *Site Cleanup Plan Addendum, Former Lily Company Property,* Tetra Tech, Inc., August 30, 2023.
- *Sewer Line Removal and Soil Excavation and Backfill,* Tetra Tech, Inc., November 1, 2023.

Complete copies of these technical reports are included as Appendices 5.6-1, 5.6-2, and 5.6-3, respectively, to this DEIR.

5.6.1 Environmental Setting

5.6.1.1 REGULATORY BACKGROUND

Federal Regulations

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their communities. EPCRA Sections 301 through 312 are administered by the U.S. Environmental Protection Agency's (EPA) Office of Emergency Management. The EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention program.

Comprehensive Environmental Response, Compensation, and Liability Information System

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) was developed to protect water, air, and land resources from the risks created by past chemical disposal practices. Under CERCLA, the EPA maintains a list, known as the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), of all contaminated sites in the nation that have in the past or are currently undergoing cleanup activities. CERCLIS contains information on current hazardous waste sites, potential hazardous waste sites, and remedial activities. This includes sites that are on the National Priorities List (NPL) or being considered for the NPL ("Superfund").

Hazardous Materials Transportation Act

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act, which is administered by the Research and Special Programs Administration of the U.S. Department of Transportation (DOT). The act provides DOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property that is inherent in the commercial transportation of hazardous materials. The Hazardous Materials Transportation Act governs the safe transportation of hazardous materials by all modes, excluding bulk transportation by water. DOT regulations that govern the transportation of hazardous materials apply to any person who transports, ships, causes to be transported or shipped, or is involved in any way with the manufacture or testing of hazardous materials packaging or containers. DOT regulations on the actual movement of hazardous materials govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing.

Occupational Safety and Health Act

The Occupational Safety and Health Act of 1970 authorizes each state (including California) to establish its own safety and health programs with the U.S. Department of Labor, Occupational Safety and Health Administration's (OSHA) approval. The California Department of Industrial Relations regulates implementation of worker health and safety in California.

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

The Resource Conservation and Recovery Act (RCRA) establishes a framework for national programs to achieve environmentally sound management of both hazardous and nonhazardous wastes. RCRA was designed to protect human health and the environment, reduce or eliminate the generation of hazardous waste, and conserve energy and natural resources. RCRA also promotes resource recovery techniques. A waste can legally be considered hazardous if it is classified as ignitable, corrosive, reactive, or toxic. Under RCRA, the EPA regulates hazardous waste from the time that the waste is generated until its final disposal ("cradle to grave"). The Hazardous and Solid Waste Amendments of 1984 expanded the scope of RCRA and increased the level of detail in many of its provisions. The Hazardous Waste Management subchapter of RCRA deals with a variety of issues regarding the management of hazardous materials, including the export of hazardous waste, state programs, inspections of hazardous waste disposal facilities, enforcement, and the identification and listing of hazardous waste.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that: 1) provides the mechanism for coordinating the delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant

event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires state and local governments to prepare mitigation plans that identify hazards, potential losses, mitigation needs, goals, and strategies. It is intended to facilitate cooperation between state and local governments.

Pipeline Safety Improvement Act of 2002

The Pipeline Safety Improvement Act mandates that the DOT, Department of Energy, and National Institute of Standards and Technology in the Department of Commerce carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities (US DOT 2002). The purpose of the Research and Design Program is to identify safety and integrity issues and develop methodologies and technologies to characterize, detect, and manage risks associated with natural gas and hazardous liquid pipelines.

Pipeline Inspection, Enforcement, and Protection Act of 2006

The Pipeline Inspection, Enforcement, and Protection Act confirms the commitment to the Integrity Management Program and other programs enacted in the Pipeline Safety Improvement Act of 2002. The 2006 legislation includes provisions on:

- Preventing excavation damage to pipelines through the enhanced use and improved enforcement of State "One-Call" laws that preclude excavators from digging until they contact the State One-Call system to locate the underground pipelines.
- Minimum standards for Integrity Management Programs for distribution pipelines (including installation of excess flow valves on single-family residential service lines based on feasibility and risk).
- Standards for managing gas and hazardous liquid pipelines to reduce risks associated with human factors (e.g., fatigue).
- Authority for the Secretary to waive safety standards in emergencies.
- Authority for the Secretary to assist in restoration of disrupted pipeline operations.
- Review and update incident reporting requirements.
- Requirements for senior executive officers to certify operator integrity management performance reports.
- Clarification of jurisdiction between states and Pipeline and Hazard Safety Administration for short laterals that feed industrial and electric generator consumers from interstate natural gas pipelines (US Congress 2006).

State Regulations

California Hazardous Waste Control Act

Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., the Department of Toxic Substance Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, provides for the investigation and remediation of hazardous substances pursuant to State law.

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 and California Code of Regulations (CCR), Title 19, Section 2729 describe the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material inventory disclosing hazardous materials stored, used, or handled on-site. A business that uses hazardous materials, or mixtures containing them, in certain quantities must establish and implement a business plan.

CCR Title 8 provides standards for workers dealing with hazardous materials (including hazardous wastes). The DTSC and Cal/OSHA are the agencies that are responsible for overseeing that appropriate measures are taken to protect workers from exposure to potential groundwater contaminants. At sites known or suspected to have soil or groundwater contamination, a site Health and Safety Plan (HASP) must be prepared. The HASP establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Tanner Act (Assembly Bill 2948)

Although numerous State policies deal with hazardous waste, the most comprehensive is the Tanner Act (California Civil Code Section 1793.22), which was adopted in 1986. The Tanner Act governs the preparation of hazardous waste management plans and the siting of hazardous waste facilities in California. To comply with the Tanner Act, local or regional hazardous waste management plans need to include provisions that define: (1) the planning process for waste management, (2) the permit process for new and expanded facilities, and (3) the appeals process to the State available for certain local decisions.

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC) (24 CCR Part 2). The most recent CBC is the 2022 edition and is adopted by reference in Chapter 16.02.050, Amendments to the 2022 California Building Code, of the Rancho Cordova Municipal Code. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local

conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Fire Code

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code (CFC), included as Part 9 of that title. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. The CFC is adopted by reference in Chapter 17.04, Fire Code, of the Rancho Cordova Municipal Code.

Underground Storage Tank Program

Releases of petroleum and other products from underground storage tanks (UST) are the leading source of groundwater contamination in the United States. RCRA, Subtitle I establishes regulations governing the storage of petroleum products and hazardous substances in USTs and the prevention and cleanup of leaks. In EPA Region 9, which covers California, Arizona, Hawaii, Nevada, the Pacific Islands, and over 140 tribal nations, the UST program operates primarily through state agency programs with EPA oversight. In California, the State Water Resources Control Board (SWRCB), under the umbrella of CalEPA, assists local agencies in enforcing UST requirements. The purpose of the UST program is to protect public health and safety and the environment from releases of petroleum and other hazardous substances. The program consists of four elements: leak prevention, cleanup, enforcement, and tank tester licensing. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs, including groundwater analytical data, the surveyed locations of monitoring wells, and other data. The SWRCB's GeoTracker system currently has information submitted by responsible parties for over 10,000 leaking UST (LUST) sites statewide and has been extended to include all SWRCB groundwater cleanup programs, including the LUST, non-LUST (i.e., Spill, Leaks, Investigation, and Cleanup), Department of Defense, and landfill programs.

Hazardous Materials Disclosure Programs

Both the federal government (Code of Federal Regulations, EPA, SARA, and Title III) and the State (Health and Safety Code, Division 20, Chapter 6.95, Section 2500-25520; 19 CCR, Chapter 2, Subchapter 3, Article 4, Sections 2729–2734) require all businesses that handle more than specified amount of hazardous materials or extremely hazardous materials, termed a "reporting quantity," to submit a hazardous materials emergency/contingency plan (also known as a "hazardous materials business plan") to their local Certified Unified Program Agency (CUPA). The responsible CUPA for Rancho Cordova is Sacramento County's Environmental Management Department which is responsible for conducting compliance inspections of regulated facilities in the county and its incorporated cities (Sacramento 2024a).

Senate Bill 673: Hazardous Waste

Senate Bill (SB) 673 made updates to the California Health and Safety Code Section 25200.21 to improve DTSC's permitting process for hazardous waste facilities and increase community protection through stronger permit criteria. Specifically, this Bill directed DTSC to update its criteria to consider "the vulnerability of, and existing health risks to, nearby populations" when deciding whether to issue new or modified permits or permit renewals of hazardous waste facilities. SB 673 also authorizes the DTSC to consider the use of "minimum setback distances from sensitive receptors" in making a permitting decision (DTSC 2021). As part of its implementation framework, DTSC identified seven key elements for addressing community vulnerability and impacts during the permitting process for hazardous waste uses, which are described in the SB 673, Cumulative Impacts and Community Vulnerability Regulatory Framework (DTSC 2021).

Regional Regulations

Central Valley Regional Water Quality Control Board

The Site Cleanup Program (SCP) regulates and oversees the investigation and cleanup of contaminated sites that are polluting, or threaten to pollute surface and/or groundwater. In the Central Valley Region, there are over 29 technical and administrative staff overseeing investigation and cleanup actions at sites that have been impacted by releases of pollutants to soil, soil gas, groundwater, surface water, sediments and indoor air. SCP sites include pollution from recent or historical surface and subsurface releases at large industrial facilities, military bases, railyards, and oil refineries. SCP sites also include smaller facilities such as dry cleaners, plating shops, pesticide distribution facilities, and equipment repair facilities (CVRWQCB 2024).

The Sacramento Operational Area Plan

The Sacramento Operational Area Plan addresses planned methods for managing information, resources, and priorities during a multi-jurisdiction response in the operational area to extraordinary emergency situations associated with natural and human-caused disasters. This plan is an adjunct to local jurisdiction emergency and disaster plans and does not apply to normal day-to-day emergencies or the established procedures used to cope with such emergencies (SCES 2019).

Mather Airport Land Use Compatibility Plan

This airport land use compatibility plan (ALUCP or Compatibility Plan) has been prepared by the Sacramento Area Council of Governments (SACOG), in its capacity as the Airport Land Use Commission (ALUC) for Sacramento County, as required under the State Aeronautics Act (Pub. Util. Code, § 21670 et seq.). The policies contained in this document are designed to promote compatibility between Mather Airport and surrounding land uses "to the extent that these areas are not already devoted to incompatible uses" (Pub. Util. Code, § 21674(a)(2)). As adopted by SACOG, these policies provide the foundation through which the ALUC can execute its duty to review land use development in areas around the Airport (SACOG 2022).

Local Regulations

City of Rancho Cordova Municipal Code

Chapter 17.04: Fire Code

This chapter states that the City has adopted the latest California Fire Code and standards are hereby incorporated as fully as if set out at length herein, unamended, and collectively shall be known as the fire code of the city of Rancho Cordova.

City of Rancho Cordova General Plan

The General Plan's Land Use, Safety, and Natural Resources Elements include policies that relate to hazards and hazardous materials, fire, and airport safety.

Land Use Element

- **Policy LU.3.9:** Ensure that land uses adjacent to or near Mather Airport are subject to the location, use, and height restrictions of the most recently adopted CLUP/ALUP at the time of development consideration, except when the CLUP/ALUP is under an update process. In the circumstance of a CLUP/ALUP update, coordinate with the County in the review of development projects to determine the most appropriate development restrictions for the continued operation of the airport.

Natural Resources Element

- **Policy NR.5.3:** Protect surface and ground water from major sources of pollution, including hazardous materials contamination and urban runoff.

Safety Element

- **Policy S.1.1:** Maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Rancho Cordova.

- **Policy S.1.5:** The City shall require written confirmation from applicable local, regional, state, and federal agencies that known contaminated sites have been deemed remediated to a level appropriate for land uses proposed prior to the City approving site development or provide an approved remediation plan that demonstrates how contamination will be remediated prior to site occupancy. This documentation will specify the extent of development allowed on the remediated site as well as any special conditions and/or restrictions on future land uses.

- **Policy S.5.1:** Work with public agencies and private companies to identify and work towards elimination of potential hazardous releases through compliance with State and Federal law.

- **Policy S.5.2:** Consider the potential impact of hazardous facilities on the public and/or adjacent or nearby properties posed by reasonably foreseeable events. The City considers an event to be "reasonably foreseeable" when the probability of the event occurring is greater than one in one million per year.

- **Policy S.5.3:** Regulate the storage of hazardous materials and waste consistent with State and Federal law.
- **Policy S.5.5:** Separate hazardous or toxic materials from the public.
- **Policy S.5.6:** Ensure that procedures are in place to reduce the chance of accidents in the transport of hazardous materials.
- **Policy S.6.1:** Promote safe air operations at Mather Airport through cooperative implementation of the Mather Airport CLUP and similar plans and programs.
- **Policy S.9.1:** Cooperate with the Sacramento Metropolitan Fire District (SMFD) to reduce fire hazards, assist in fire suppression, and ensure efficient emergency medical response.

5.6.1.2 EXISTING CONDITIONS

Hazardous Materials

Hazardous Materials Sites

An environmental database search was conducted for the project site. Table 5.6-1, *Hazardous Materials Within 0.25-Mile of the Project Site,* summarizes database listings within a 0.25-mile radius of the project site. The search area uses online environmental databases, including SWRCB's GeoTracker and DTSC's EnviroStor.

Table 5.6-1 Hazardous Materials within a 0.25-mile of the Project Site

Site Name	Site Type	Status
GeoTracker		
7-Eleven Store #14098	LUST Cleanup Site	Case Closed as of 6/8/2007
Beacon #3603	LUST Cleanup Site	Case Closed as of 9/7/2012
Exxon #7-0244	LUST Cleanup Site	Case Closed as of 10/30/2006
Jiffy Lube	LUST Cleanup Site	Case Closed as of 12/20/1988
Lili Company	Cleanup Program Site	Open- Remediation as of 7/10/2012
Shell	Lust Cleanup Site	Case Closed as of 1/7/1992
EnviroStor		
Mills Station Crossing	Evaluation	Inactive-Needs Evaluation as of 10/4/2010
Veteran Martinizing Cleaners	Evaluation	Refer to the SWRCB 2024b
Source: DTSC 2024a; SWRCB 2024a.		

As shown in Table 5.6-1, DTSC and SWRCB report on the same site requiring further evaluation (DTSC 2024a; SWRCB 2024b). Additional information on the site is detailed below.

Historical Hazards in the Project Site

A former dry-cleaning site was located on the northwest corner of the project site and operated from 1971 through 2003, as shown on Figure 5.6-1, *Project Site Remediation Map*. Tetrachloroethylene (PCE) was stored and dispensed from a 45-gallon container near the former dry cleaning site, and in an above-ground tank and drums

near the facility's back, near four surface drains. These drains flow to the sewer line at the rear of the former facility. Figure 5.6-1 shows the approximate sewer line locations. This sewer line is being removed as part of the remediation work detailed in Appendix 5.6-3.

The City of Rancho Cordova intends to remediate the project site for mixed-use and primarily support new residential construction. The most recent soil vapor sampling data suggest that in the former dry cleaner area and the former parking lot area (see Figure 5.6-1), the PCE concentrations exceed the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESL)[1] for vapor intrusion consideration, which corresponds to a carcinogenic risk of 10-6. As a result, the City intends to conduct additional site remediation to address the residual PCE in the vadose zone, which is believed to be the source of PCE exceedances in the soil vapor (Appendix 5.6-1, pg. 6).

Previous Site Investigations

The presence of PCE in the subsurface at the project site was first identified in 2008 during a Phase II environmental site assessment (Appendix 5.6-1, pg. 2). Subsequent investigations included soil gas sampling to 46 feet ground below-ground surface (bgs) in 2008, a soil vapor extraction (SVE) pilot test in 2010, and remedial investigations in 2010 (Appendix 5.6-1, pg. 2). The project site underwent remedial activities, including SVE and groundwater extraction, and from 2019 to 2022, additional soil gas sampling was conducted due to rebounded concentrations (Appendix 5.6-1, pg. 2).

Previous Remediation Activities

Previous remediation activities at the project site included SVE and groundwater extraction from 2010 to 2017. The extracted groundwater was piped to a nearby sewer cleanout and conveyed to the Sacramento Regional County Sanitation District for treatment through the sewer line system in the Sacramento area. The concentrations of PCE in groundwater fell below the Sanitation District discharge limits, and therefore it was discharged without onsite treatment. Groundwater extraction was subsequently discontinued at the project site after the power supply was damaged by vandalism (Appendix 5.6-1, pg. 3).

Current Site Conditions

Soil

Soil impact was found within the footprint of a former dry cleaner and near the sewer line section downstream, at the northwest corner of the project site. The 2008 Phase II ESA detected PCE at four locations with concentrations ranging from 5.0 to 34 micrograms/kilogram (µg/kg). In 2021, PCE was detected at five locations along the sewer line with concentrations ranging from 1.4 to 54 µg/kg. Low concentrations of PCE were detected in all five locations evaluated. These soil detections were below the ESLs for human health under residential and commercial land use scenarios (Appendix 5.6-1, pg. 50).

[1] ESLs are environmental safety measures developed to identify and evaluate potential environmental concerns at contaminated sites. They have been developed for over 100 commonly detected constituents and are designed to protect human health, water quality, and the environment. ESLs provide thresholds for commercial and residential use, focusing on human inhalation and toxicity, and address attenuation factors for other media like soil, groundwater, and indoor air (SFB RWQCB 2024).

Soil impact was observed along the sewer line section downstream of the former dry cleaner area. The depth of impact was identified to be up to 14 feet bgs. One other soil sample was collected at a deeper depth (up to 37 feet bgs); however, PCE was not detected in this deeper soil sample (Appendix 5.6-1, pg. 4). The technical reports state that, based on the available data, the known soil impact historically was within the footprint of the former dry cleaner and near the sewer line section downstream of the former dry cleaner at the northwest corner of the project site (Appendix 5.6-1, pg. 4).

Soil Vapor

The 2019-2021 soil vapor samples were collected after remediation work and site closure. The 2019 event showed a rebound in PCE concentrations after the 2016 confirmation sampling for the SVE system shutdown, which triggered subsequent sampling events. At the time the SVE system was shut down, the average SVE system-influent PCE concentration in 2016 was 230 microgram per cubic meter (µg/m^3), suggesting there was still residual PCE in the vadose zone (Appendix 5.6-1, pg. 6). The vadose zone is Earth's terrestrial subsurface, extending from the surface to the regional groundwater table, containing surface soil, unsaturated subsurface materials, and a transiently inundated capillary fringe, including partially weathered soils and unweathered parent material (Holden and Fierer 2005). The 2021 soil vapor data show that PCE concentrations in soil vapor exceed the San Francisco Bay RWQCB ESLs of 15 µg/m^3 for vapor intrusion consideration at 54 µg/m^3 in the former dry cleaner (Appendix 5.6-1, pg.50). The former dry cleaner area's elevated soil vapor concentrations are likely due to residual PCE in the vadose zone. The PCE concentrations exceeded the residential ESL for vapor intrusion consideration, which corresponds to a carcinogenic risk of 10-6 (Appendix 5.6-1, pg. 6).

Groundwater

The project site's groundwater impact was limited to the northwest corner, with the highest PCE concentration detected before remediation at 320 micrograms per liter (µg/L) near the backdoor of a former dry cleaner in 2010. The highest PC concentration at the permanent well before remediation was 52 µg/L near the western project site boundary and the sewer line in 2010. After five years of SVE and three years of groundwater extraction, the PCE concentration near the western project site boundary and the sewer line decreased to 13.7 µg/L in 2019. PCE concentrations also decreased at other monitoring wells after site remediation (Appendix 5.6-1). Compared to the potential impact from the residual PCE in the vadose zone, the elevated soil vapor concentrations detected since 2019 are not likely to be a result of the volatilization of residual PCE in the groundwater, based on its reported PCE concentration in groundwater and the depth of the groundwater at the project site (Appendix 5.6-1, pg. 6)

The most recent soil vapor sampling data suggest that in the former dry cleaner area and the former parking lot area, the PCE concentrations exceed the residential ESL for vapor intrusion consideration, which corresponds to carcinogenic risk. As a result, the City intends to conduct additional site remediation to address the residual PCE in the vadose zone, which is believed to be the source of PCE exceedances in the soil vapor (Appendix 5.6-1, pg. 6). The City's corrective actions are described in Appendices 5.6-1 through 5.6-3.

Additional Site Remediation

Former Dry Cleaner and Sewer Line Area

The remediation area is approximately 1.1 acres and includes the northwest corner of the project site where PCE vapor intrusion, along with the former dry cleaner footprint and on-site sewer lines. Soil from this area will be excavated to a depth of 15 feet bgs and stockpiled and covered just east and south of the excavation area. (Additional information is provided in Section 3.5, *Soil Excavation and Stockpiling*, of Appendix 5.6-1). The portions of the sewer line outside of the excavation area footprint will also be removed to approximately two feet below the base of the sewer. The excavation work will be completed by a licensed excavation contractor, with oversight provided by the City of Rancho Cordova or Tetra Tech representative. The excavation contractor will employ a competent person, as defined by OSHA, to design a safe excavation, implementing soil sloping or shoring as applicable. The onsite treatment will be conducted by adding a dry chemical oxidant (potassium permanganate) to the soil as it's returned to the excavation for backfill and compaction (Appendix 5.6-1, pg. 7). The oxidant is intended to treat any residual PCE in soil. The oxidant dosing will be determined via a bench-scale test (Appendix 5.6-1, pg. 7). The Bench Scale Test Laboratory Result is provided in Appendix 5.6-2.

Former Parking Area

The remediation area includes an approximately two-acre area outside the planned excavation footprint that exhibited soil vapor PCE concentrations above 15 µg/m^3 (vapor intrusion risk greater than 10-6 for residential use). Since the soil vapor concentrations in the former parking lot area were determined to be relatively low and near the former dry cleaner area, the PCE in the soil vapor in the former parking area is determined to be from the migration of the soil vapor plume from the former dry cleaner area (Appendix 5.6-1, pg. 8). As noted, the two-acre area is outside of the planned excavation footprint so additional study is unnecessary. However, HAZ-1 requires short-term SVE to be conducted to remove the impacted soil vapor that migrated to this area. Up to 15 SVE wells will be installed and operated as extraction and/or venting wells to expedite the pore volume flushing of the vadose zone (Section 3.9) for an approximate duration of two months. Remediation is included in Appendix 5.6-1 for PCE if detected.

Airports

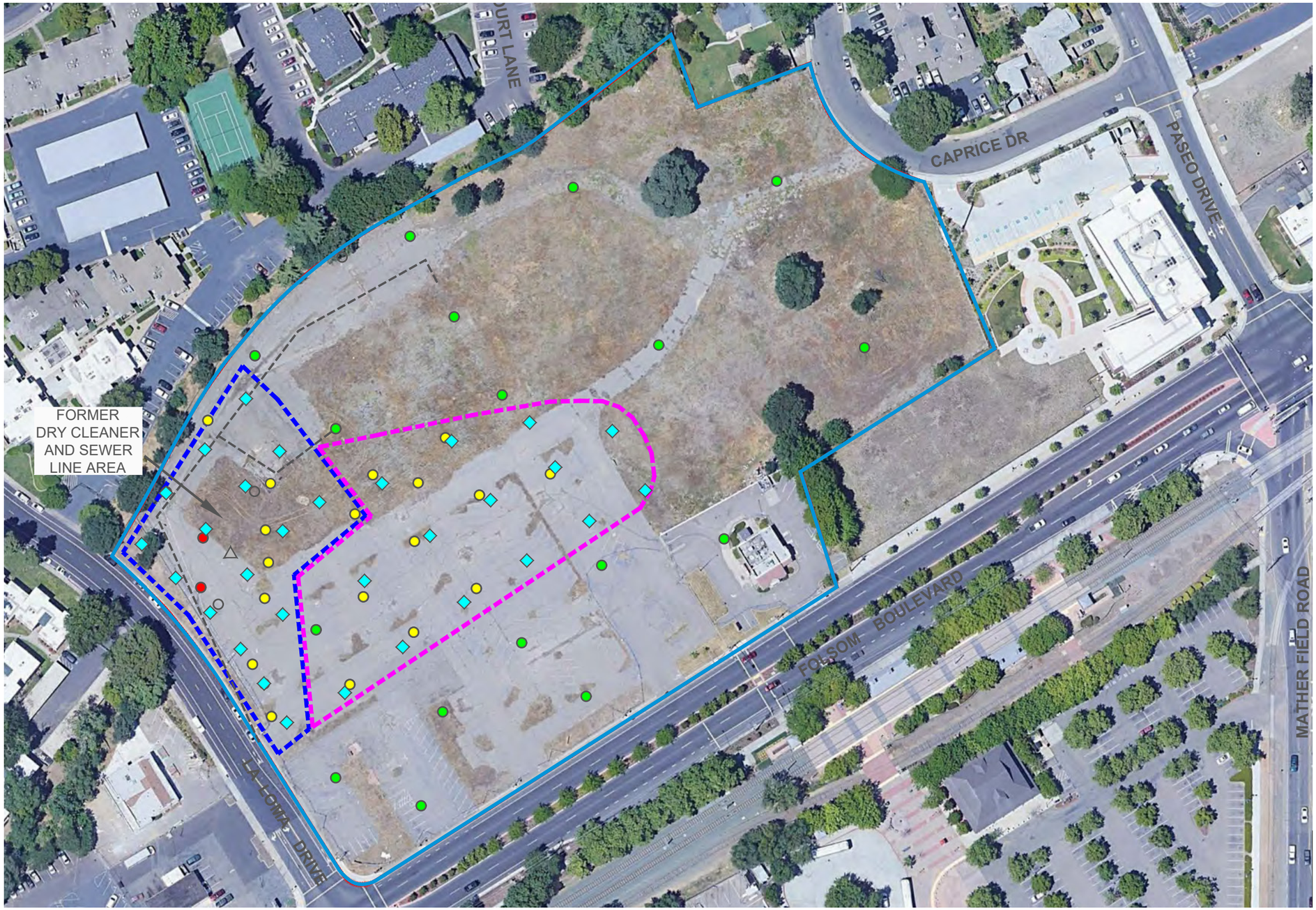
The project site is 1.35 miles north of the Sacramento Mather Airport.

Proximity to Schools

The Folsom Lake College-Rancho Cordova is 0.02 mile east of the project site. The Cordova Meadows Elementary School is 0.4 miles north of the project site, and White Rock Elementary School is one mile southeast of the project site.

Wildfires

There have been four fires that border the city limits: the Russell Fire in 1973, the Grantline Fire in 1974, the Grant Fire in 2018, and another Grant Fire in 2020 (CAL FIRE 2020). The project site is not within a Fire Hazard Severity Zone (CAL FIRE 2024).



Source: City of Rancho Cordova 2022.

0 120
Scale (Feet)

PLACEWORKS

Figure 5.6-1
Project Site Remediation Map

5.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

H-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.

H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.

H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires

5.6.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

- **Impact 4.4.1** found that the implementation of the General Plan would include the routine transportation of hazardous materials on Planning Area roadways, however with the implementation of the general plan policies and actions this impact would be less than significant. Refer to Chapter 4.4, Hazards and Human Health, in the 2006 General Plan Environmental Impact Report, for listed policies and actions.

- **Impact 4.4.2** found that the Planning Area consists of land uses having the potential to result in an increased risk of release of hazardous materials. The implementation of the general plan policies and mitigation measures would reduce the level of significance to less than significant. The mitigation measure 4.4.2 describes a policy that has been added as Policy S.1.5 in the City's Safety Element. This is not a mitigation measure proposed for the Mills Crossing project. Refer to Chapter 4.4, Hazards and Human Health, in the 2006 General Plan Environmental Impact Report, for listed policies and actions.

Mitigation Measures:

- MM 4.4.2: The following shall be added as a policy to the Safety Element under Goal SA.1: The City shall require written confirmation from applicable local, regional, state, and federal agencies that known contaminated sites have been deemed remediated to a level appropriate for land uses proposed prior to the City approving site development or provide an approved remediation plan that demonstrates how contamination will be remediated prior to site occupancy. This documentation will specify the extent of development allowed on the remediated site as well as any special conditions and/or restrictions on future land uses.

- **Impact 4.4.3** found that the implementation of the General Plan would locate development within an airport land use plan, potentially resulting in a safety hazard for people residing or working in the area. However, with the implementation of the general plan policies and actions this impact would be less than significant. Refer to Chapter 4.4, Hazards and Human Health, in the 2006 General Plan Environmental Impact Report, for listed policies and actions.

- Impact 4.4.4 found that the implementation of the proposed General Plan could impair the implementation of or physically interfere with the Sacramento County Multi-Hazard Disaster Plan (SCMDP). Impact 4.4.4 states that the proposed roadway system under the General Plan would improve city roadway connectivity, offering more escape routes and emergency access options. This impact was considered less significant as it would improve emergency vehicle access to residences and evacuation routes for area residents.

- **Impact 4.4.5** found that persons could be exposed to contaminated soil or groundwater during the development of previously contaminated sites or sites undergoing remediation; however, with the implementation of the general plan policies and actions this impact would be less than significant. Refer to Chapter 4.4, Hazards and Human Health, in the 2006 General Plan Environmental Impact Report, for listed policies and actions.

5.6.4 Environmental Impacts

Impact 5.6-1: The project could potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. [Threshold HAZ-1]

As indicated in the 2006 EIR, there would be minimal routine transport of hazardous materials on City roadways, and California Highway Patrol, Caltrans, US Department of Transportation, and other regulatory agencies provide standards designed to avoid releases. The proposed project would introduce a mix of uses on the project site, which is in an urbanized portion of the City. The hazardous materials handled during the remediation of the proposed project site would be temporary and the potentially hazardous materials used during operational activities would be typical of residential and commercial uses. As indicated in the 2006 EIR, the proposed project would be required to comply with the provisions set forth by the local, state, and federal regulatory agencies.

The project site's additional site remediation for the former parking lot area is expected to have low PCE concentrations in stockpiled soil, which can be treated and returned to the ground. However, if the soil is found

to have PCE concentrations greater than San Francisco Bay RWQCB's ESL for residential Soil Direct Exposure Human Health Risk Screening, the soil will be disposed of offsite at an appropriately classed hazardous waste disposal facility such as Kettleman Hills Landfill, which is 226 miles south of the project site. Therefore the project's remediation work could have potentially significant impacts regarding the transport, use, and disposal of hazardous materials if PCE concentrations are found greater than San Francisco Bay RWQCB's ESL for residential Soil Direct Exposure Human Health Risk Screening. As specified in the report, if any soil is disposed of off-site as a regulated waste (non-hazardous Class II waste or hazardous Class I waste), copies of disposal manifests and/or landfill weight tags will be included to document proper disposal and the weight of soil disposed of (Appendix 5.6-1, pg. 17). The proposed project would also need to comply with state and federal regulations such as Title 40 of the Code of Federal Regulations (CFR) in part 262.30, Packaging, which states that before transporting hazardous waste a generator must package the waste following the applicable Department of Transportation regulations on packaging.

The Central Valley RWQCB–approved Site Cleanup Plan includes a HASP that outlines site-specific health and safety provisions for drilling, sampling, soil excavation, stockpiling, backfill, oxidant treatments, and short-term soil vapor extraction. For example, to prevent spills, the following practices should be employed (Appendix 5.6-1, 192):

- Make sure that all containers are appropriately labeled and that material safety data sheets are available. Before handling operating and analysis materials or hazardous waste, appropriate precautions should be in place to prevent spills and exposure to individuals.

- Store chemicals in appropriate locations. Make sure that incompatible chemicals are not stored in the same area.

- When transporting chemicals, ensure that the containers are properly closed, secured, and labeled. Do not carry more than one container at a time. If this is required, place containers within totes.

- Only keep the necessary quantity of each chemical on hand. For ease of use, keep chemicals in working containers that are appropriately sized for handling.

The HASP also includes an Air and Dust Monitoring Plan that addresses methods for monitoring potential fugitive dust and volatile organic compound (VOC) emission-laden dust around the perimeter of the project site during soil excavation and trenching activities for the proposed project's remediation work. Routine real-time air and dust monitoring will be conducted during all excavation, stockpiling, and backfilling activities, with laboratory air samples collected three times during the excavation phase of the work at selected depth intervals. The perimeter air and dust monitoring aims to protect members of the public from being exposed to elevated concentrations of dust and VOC contaminants. At the same time, soil is being excavated and stockpiled on-site. Residential development is immediately west and north of the proposed excavation (Appendix 5.6-1).

The project site would need to comply with the procedures in the reports prepared by Tetra Tech as mentioned in mitigation measure HAZ-1, which includes safe work practices that would reduce impacts from the transport and disposal of hazardous materials from the project site. In addition, the RWQCB must confirm that remediation has reduced PCE concentrations to levels the RWQCB deems satisfactory before the City can

begin construction on the remediation site. RWQCB may also require ongoing mitigation measures, which have been agreed upon by the City and RWQCB and can be referenced in Appendices 5.6-1 through 5.6-3, before the City can begin construction. Therefore, impacts would be less than significant with mitigation measures.

Level of Significance Before Mitigation: Impact 5.6-1 would be potentially significant.

Mitigation Measures

HAZ-1 **Implement Central Valley Regional Water Quality Control Board-approved Site Cleanup Plan**. Prior to the issuance of construction permits, the project applicant shall complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech (Appendix 5.6-1, dated March 16, 2022, and Appendix 5.6-2, August 30, 2023) for the proposed project into the project's construction plans. Short-term soil vapor extraction (SVE) will be conducted to remove the impacted soil vapor that migrated to this area. Up to 15 SVE wells will be installed and operated as extraction and/or venting wells to expedite the pore volume flushing of the vadose zone (Section 3.9) for an approximate duration of two months. The City Engineer will transmit testing results to the Central Valley Regional Water Quality Control Board for review and concurrence before issuing construction permits. The City will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Documentation will be part of the mitigation monitoring and reporting program.

Level of Significance After Mitigation: Impact 5.6-1 would be less than significant.

Impact 5.6-2: The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. [HAZ-2]

The proposed project's additional remediation efforts would include the potential to store, use, and transport hazardous materials. Since the project site needs additional remedial efforts to address hazardous materials presently onsite, there is a potential for the accidental release of hazardous materials into the environment. The handling of hazardous materials during remediation activities could expose nearby sensitive receptors to toxic emissions. As the remediation is currently ongoing as a distinct process, the outcomes cannot be determined until its completion. Therefore, the priority is to prevent any ground disturbance until the remediation concludes. Therefore the proposed project would need to comply with the hazard safety plan and safe work practices detailed in mitigation measure HAZ-1.

The HASP and safe work practices include precautions and procedures that would reduce the potential for hazardous materials to be released into the environment. For example, Tetra Tech is implementing site-specific training for all personnel and site visitors working at the site. This training covers emergency response procedures, site and operation hazards, personal protective equipment requirements, and other contents within

the HASP. The training covers evacuation and assembly points, site and operation hazards, personal protective equipment requirements, and the Safety Data Sheet contents.

In addition, the proposed project would also result in residential and commercial uses which typically use small amounts of hazardous materials for cleaning and maintenance purposes, such as cleaners, solvents, paints, degreasers, pesticides, fertilizers, and other custodial products. With compliance with local, state, and federal regulations governing hazardous materials during construction and operation, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

Level of Significance Before Mitigation: Impact 5.6-2 would be potentially significant.

Mitigation Measures

Implement Mitigation Measure HAZ-1.

Level of Significance After Mitigation: Impact 5.6-2 would be less than significant.

Impact 5.6-3: The proposed project could potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. [HAZ-3]

The Folsom Lake College-Rancho Cordova is directly east of the project site, less than 0.25 miles from the site. The proposed project involves handling, storing, and transporting hazardous materials, which could expose the school to hazardous materials. Mitigation measure HAZ-1 would implement precautions for the safe handling of hazardous materials, decreasing the likelihood of releasing hazardous materials to the public, including students.

CEQA mandates consultation with school districts within a quarter-mile radius of projects that may emit hazardous air emissions or handle extremely hazardous substances posing risks to individuals at the school (Pub. Res. Code § 21151.4; Cal. Code Regs. Tit. 14 ["Guidelines"] § 15186). While CEQA does not specify a formal consultation process, it requires discussions concerning the project's potential impact on the school (Guidelines § 15186(b)(1)). Additionally, the lead agency must notify the school district in writing at least 30 days before EIR approval, which, if fulfilled, deems the EIR compliant (Guidelines §§ 15186(b)(2), (d)). The City of Rancho Cordova has informally consulted the Folsom Lake College and Los Rios Community College District regarding the proposed project, as well as the remediation work being carried out independently of the project.

The City held regular weekly or biweekly meetings with the school district between July 23, 2021, and September 15, 2022, to coordinate City and District activities and, starting in 2022, the City's plans for remediation activities. In an informal consultation with the Los Rios Community College District, the City discussed the soil remediation challenge and the proposed Equitable Communities Revitalization Grant (ECRG) facilitated by DTSC. In addition, Folsom Lake College provided a letter of support to the City on April 1, 2022, endorsing the City's ECRG application. Subsequently, in 2023, the City engaged in further consultations with Los Rios staff, specifically concerning the timing of remediation work. This discussion aimed to align the remediation

schedule with the anticipated soil stockpiles and construction lay-down space for the planned Los Rios Phase 2 building construction, which ultimately did not proceed. This informal consultation, together with the City's compliance with the 30-day notice requirement, satisfies the CEQA Guidelines Section 15186 consultation requirements.

In addition, Tetra Tech is implementing site-specific training for all personnel and visitors working at the site, covering emergency response procedures, site and operation hazards, personal protective equipment requirements, and other contents within the HASP. The training covers evacuation and assembly points, site and operation hazards, personal protective equipment requirements, and the Safety Data Sheet contents. As mentioned in Impact 5.6-1, the RWQCB must confirm that remediation has reduced PCE concentrations to levels deemed satisfactory by the RWQCB before the City can begin construction on the remediation site. RWQCB may also require ongoing measures, which have been agreed upon by the City and RWQCB and can be referenced within Appendices 5.6-1 through 5.6-3 before the City can begin construction. Compliance with the hazard safety plan and safe work practices detailed in mitigation measure HAZ-1 would reduce this impact to less than significant.

Level of Significance Before Mitigation: Impact 5.6-3 would be potentially significant.

Mitigation Measures

Implement Mitigation Measure HAZ-1.

Level of Significance After Mitigation: Impact 5.6-3 would be less than significant.

Impact 5.6-4: The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5, and, as a result, would create a significant hazard to the public or the environment. [HAZ-4]

The required lists of hazardous material release sites are commonly referred to as the "Cortese List". Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on websites hosted by the boards or departments referenced in the statute, including DTSC's online EnviroStor database and the SWRCB's online GeoTracker database. These two databases include hazardous material release sites, along with other categories of sites or facilities specific to each agency's jurisdiction (Cal EPA 2024).

As shown in Table 5.6-1, DTSC and SWRCB report on the same site, which is the former dry cleaner site in the northwest portion of the project site. The former dry cleaner had a release of PCE into the soil, soil gas, and groundwater. The project site would include additional remediation activities to remove hazardous materials. The proposed project would be required to comply with Mitigation Measure HAZ-1, which includes the approved Central Valley RWQCB's site cleanup plan to remove hazardous materials from the project site. Once the materials are removed, the project applicant must adhere to the post-excavation effectiveness sampling and reporting detailed in the site cleanup plan (Appendix 5.6-1, 16). The results of the samples will

need to be determined by the CVRWQCB, ensuring compliance with both state and federal regulations during disposal.

The City's General Plan also includes the following policies to which the proposed project would need to adhere:

- **Policy S.1.1:** Maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards in Rancho Cordova.
- **Policy S.1.5:** The City shall require written confirmation from applicable local, regional, state, and federal agencies that known contaminated sites have been deemed remediated to a level appropriate for land uses proposed prior to the City approving site development or provide an approved remediation plan that demonstrates how contamination will be remediated prior to site occupancy. This documentation will specify the extent of development allowed on the remediated site as well as any special conditions and/or restrictions on future land uses.
- **Policy S.5.1:** Work with public agencies and private companies to identify and work towards elimination of potential hazardous releases through compliance with State and Federal law.
- **Policy S.5.3:** Regulate the storage of hazardous materials and waste consistent with State and Federal law.
- **Policy S.5.5:** Separate hazardous or toxic materials from the public.

The policies and mitigation measures would ensure that the proposed project would remediate hazardous materials from the project site and thus not create a significant hazard or the environment. Adhering to the mitigation measures HAZ-1 and policies in the General Plan would reduce impacts to less than significant.

Level of Significance Before Mitigation: Impact 5.6-4 would be potentially significant.

Mitigation Measures

Implement Mitigation Measure HAZ-1.

Level of Significance After Mitigation: Impact 5.6-4 would be less than significant.

Impact 5.6-5: The proposed project would not conflict with an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area. [HAZ-5]

The project site is approximately 1.35 miles north of the Sacramento Mather Airport. The project site is within Review Area 2, according to the Mather Airport Land Use Compatibility Plan Update (SACOG 2022). Sites within Review Area 2 are composed of airspace protection and overflight notification areas. The Mather Airport Land Use Compatibility Plan Update states that under Review Area 2, Subpart C of 14 CFR Part 77, Obstruction Standards, establishes standards for determining obstructions to air navigation (SACOG 2022).

The five types of imaginary surfaces for civil airports defined by 14 CFR Part 77 are primary surface, approach surface, transitional surface, horizontal surface, and conical surface (SACOG 2022). The project site is within a conical surface which has a height limit for the surface range from 150 feet above the airport elevation at the inner edge to 350 feet at the outer edge (SACOG 2022). In addition, Subpart B of the 14 CFR Part 77 regulations mandates notification of any proposed construction or alteration of objects within 20,000 feet of a runway and height exceeding a 100:1 imaginary surface (SACOG 2022). The project is not within the runway and does not exceed the height for notification to be required. Also objects over 200 feet in height, regardless of proximity to an airport, also require notification (SACOG 2022).

As the proposed project's zoning designation has a height limit of 65 feet, the proposed project would not obstruct air navigation and would not conflict with a land use compatibility plan.

The 2006 EIR indicated that adherence to federal regulations, the Comprehensive Land Use Plan, Mather Airport Planning Area provisions, and implementation of policies from the General Plan would reduce impacts. Therefore, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

Level of Significance Before Mitigation: Impact 5.6-5 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.6-5 would be less than significant

Impact 5.6-6: The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. [HAZ-6]

The Sacramento County Office of Emergency Services' Sacramento County Evacuation Plan is the emergency evacuation plan for the City of Rancho Cordova. The Sacramento County Evacuation Plan states that any management of evacuation is coordinated by the City of Rancho Cordova (SCES 2022). The proposed project would include construction closures for trenching and utility extension, which could physically interfere with the Sacramento County Evacuation Plan. Mitigation Measure HAZ-1 states before the initiation of any site work, evacuation procedures will be discussed, with evacuation routes based on the work location and the circumstances necessitating evacuation. Therefore, the proposed project would be reviewed by the City to ensure proper emergency response and evacuation plans.

The operation of the proposed project would introduce up to 120 housing units to the project site and generate approximately 322 residents in the area. In addition, the proposed project would introduce up to 140,000 square feet of commercial uses, thus attracting approximately 280 employees and people to the area. Development of the proposed project would not impact the functionality of public safety access routes because it will not block roadways, nor would the development of the proposed project introduce any roadways or infrastructure that would bisect or transect surrounding uses. In addition, the City of Rancho Cordova has not designated any evacuation routes. Therefore, project temporary road closures during construction would not impact existing

evacuation routes. The permitted residential uses under the proposed project also do not have any characteristics that would physically impair or otherwise interfere with an adopted emergency response plan or emergency evacuation plan.

Therefore, development accommodated by the proposed project would not impair the implementation of or physically interfere with the City's emergency response plan or any other emergency response plan.

Therefore impacts would be less than significant with mitigation measure HAZ-1.

Level of Significance Before Mitigation: Impact 5.6-6 would be potentially significant.

Mitigation Measures

Implement Mitigation Measure HAZ-1.

Level of Significance After Mitigation: Impact 5.6-6 would be less than significant.

Impact 5.6-7: The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. [HAZ-7]

The entire city, including the project site, is not within a Very High Fire Hazard Severity Zone (CAL FIRE 2024). The project site is within an urbanized portion of the city. The proposed project would be required to comply with all applicable local, state, and federal regulations pertaining to fire safety, such as compliance with the 2022 CBC and CFC. Therefore, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

Level of Significance Before Mitigation: Impact 5.6-7 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.6-7 would be less than significant

5.6.5 Cumulative Impacts

As part of the proposed project, the project applicant would need to remediate the site of existing hazardous materials to build future uses. The proposed project does not combine with other projects to create a cumulatively significant impact regarding these potential hazards. As shown in Table 5.6-1, there are no other hazardous sites within a 0.25-mile radius of the project site. In addition, the project site is located within residential and other public land uses that do not typically have high use of hazardous materials. Therefore, the proposed project's contribution to cumulative impacts related to hazardous materials and waste, as well as any health hazards, remains less than significant and less than cumulatively considerable.

5.6.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, Impacts 5.6-5 and 5.6-7 would be less than significant.

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.6-1:** The project could potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- **Impact 5.6-2:** The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- **Impact 5.6-3:** The proposed project could potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- **Impact 5.6-4:** The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5; which could create a significant hazard to the public or the environment.
- **Impact 5.6-6:** The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

5.6.7 Mitigation Measures

HAZ-1 **Implement Central Valley Regional Water Quality Control Board approved Site Cleanup Plan.** Prior to the issuance of construction permits, the project applicant shall complete all recommendations from the Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech (Appendix 5.6-1, dated March 16, 2022, and Appendix 5.6-2, August 30, 2023) for the proposed project into the project's construction plans. Short-term soil vapor extraction (SVE) will be conducted to remove the impacted soil vapor that migrated to this area. Up to 15 SVE wells will be installed and operated as extraction and/or venting wells to expedite the pore volume flushing of the vadose zone (Section 3.9) for an approximate duration of two months. The City Engineer will transmit testing results to the Central Valley Regional Water Quality Control Board for review and concurrence before issuing construction permits. The City Engineer will also ensure that the project's construction plans incorporate all applicable recommendations of the Site Cleanup Plan and comply with all applicable requirements of the Central Valley Regional Water Quality Control Board. The City inspectors will ensure that the procedures and requirements included in the construction plans are followed and documented. Documentation will be part of the mitigation monitoring and reporting program.

5.6.8 Level of Significance After Mitigation

Upon implementation of mitigation measures, impacts would be less than significant:

5.6.9 References

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5.7 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts on land use in the City of Rancho Cordova from the implementation of the proposed Mills Crossing project. Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans, including habitat for wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR.

5.7.1 Environmental Setting

5.7.1.1 REGULATORY BACKGROUND

Regional Regulations

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba, and the 22 cities within. SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to pertaining to the region's long-range transportation plan, SACOG is responsible for developing the methodology for allocating the Regional Housing Needs Allocation (RHNA) housing units to each city and county in the region. SACOG also assists in planning for transit, bicycle networks, clean air, and airport land uses.

2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)

The 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the Sacramento region proactively links land use, air quality, and transportation needs. The MTP/SCS is federally required to be updated every four years. SACOG adopted the 2020 MTP/SCS and accompanying documents at a special board meeting on November 18, 2019.

Local Regulations

Rancho Cordova General Plan

The Land Use Element of the Rancho Cordova General Plan includes goals and policies to guide future development in the City of Rancho Cordova. The following policies and actions are relevant to land use:

- **Policy LU.1.3:** Maintain a strong jobs-housing ratio, with a diverse job base and corresponding housing stock, within the Planning Area. Improve the relationship and proximity of jobs to housing and commercial services.

- **Action LU.1.3.2:** Designate new and existing office developments as mixed-use to encourage the compatible integration of residential and commercial retail and service uses in proximity to jobs.

- **Policy LU.1.5:** Maintain consistency between the land use categories of this General Plan and the City Zoning Code.

- **Policy LU.1.7:** Promote higher density and intensity land uses that support transit within one-half mile of major transit stations. Development should be pedestrian- and transit friendly with direct connections to transit. Large, expansive parking fields that separate the retail from the station are prohibited.

- **Policy LU.5.4:** Give priority to residential and mixed-use development on vacant or underutilized sites within existing urban areas that have infrastructure capacity available. Currently targeted areas are some portions of Folsom Boulevard, Olsen Drive, Sunrise Boulevard, Bradshaw Road, and Coloma Road.

- **Policy LU.6.4:** Revitalize Folsom Boulevard consistent with the Folsom Boulevard Planning Area.

5.7.1.2 EXISTING CONDITIONS

Existing Land Use Designations and Zoning

The 9.85-acre project site currently includes paved areas with patches of vegetation areas and trees. The project site is in the Folsom Specific Plan area, specifically in the Mather opportunity site. The 2006 Rancho Cordova General Plan identified the Folsom Boulevard planning area with a total of 1,629 acres, with the potential to contain 10,476 dwelling units. Based on the Folsom Boulevard Specific Plan (FBSP), the project site has a land use designation of Residential Mixed Use (FB-RMU). This designation permits medium- and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. The Mills Mathers opportunity site has additional development standards, as seen in Table 5.7-1, *Mather Mills Opportunity Site: Additional Development Standards*; remaining standards are provided in Table 5-2 of the FBSP.

Table 5.7-1 Mather Mills Opportunity Site: Additional Development Standards

Standard	FB-RMU
Density	6.1–40 dwelling unit/acre
Floor-Area Ratio	No Minimum No Maximum
Front Setback Standards	Along the north side of Folsom Boulevard and along Paseo Drive, there is no minimum front setback. The maximum shall be no more than 10 feet, except where there is outdoor dining, a plaza, a building entry, or a courtyard between the building and the street. Exceptions can be granted for building façades with garage access.
Primary Building Height	65 feet /4 stories maximum[1]

Source: Rancho Cordova 2013.
[1] No maximum height or number of stories for vertical mixed-use integration where residential use is above nonresidential. Defer to Transit-Oriented Development Overlay if applicable.

Transit-Oriented Development Overlay District

The FBSP Transit-Oriented Development (TOD) Overlay Zone applies to properties within one-quarter mile of an existing or planned light rail station or bus transit station. Properties in the FBSP TOD have the opportunity to choose the additional development standards, identified in Table 5.7-2, *Transit-Oriented Development Overlay Zoning District Development Standards* (Rancho Cordova 2013, 2006).

Table 5.7-2 Transit-Oriented Development Overlay Zoning District Development Standards

Standard	Local TOD	Regional TOD
Density		
Minimum	18.0 du/ac	
Maximum	80.0 du/ac	
Floor-Area Ratio		
Minimum	0.50	0.65
Maximum	2.5	3.0
Height (maximum)	80 feet	No Maximum[1]

Source: Rancho Cordova 2006.
[1] While the Land Use Element does not establish height limitations for uses in the downtown, the regulations of the Federal Aviation Administration limit the height of structures to between 150 and 350 feet based on location. See the Safety Element for more information. Outside of the Downtown District, the maximum height shall be limited to 80 feet.
du/ac = dwelling unit per acre

Surrounding Land Uses and Zoning

The project site is in and surrounded by the Mather Mills opportunity site, with residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova Center to the east, light industrial uses to the south, and commercial and residential uses to the west (see Figure 3-2, *Aerial Photograph)*. The area is in close proximity to the Mather Mills Light Rail Station.

The zoning designations of the properties surrounding the project site include residential (RD-20, RD-10) to the north, residential (RD-20) and commercial mixed-use district (FB-CMU) to the east, office industrial mixed-use district (FB-OIMU) and transit (FB-T) to the south, and commercial mixed use (FB-CMU) and residential (RD-20) zoning designations to the west (Rancho Cordova 2023).

5.7.2 Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant effect on the environment if the project would:

LU-1 Physically divide an established community.

LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

5.7.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR of Rancho Cordova was prepared to evaluate and provide the public information about the potential environmental effects of the general plan, in accordance with CEQA. The Land Use Element provides the central framework for the General Plan and serves as a compass to guide planners, the general public, and decision makers on the desired pattern of development in Rancho Cordova. It describes both existing and future land use activity, the latter of which was designed to achieve the City's long-range goals for physical development. The Land Use Element also identifies the distribution, location, and intensity of all land use types in the city.

Folsom Boulevard Specific Plan

The FBSP would guide and establish the long-term redevelopment of the Folsom Boulevard Planning Area. The FBSP is approximately four miles long from Sunrise Boulevard to Bradshaw Road, encompassing areas to the north and south of Folsom Boulevard. The FBSP would follow the General Plan's goals and policies of increasing mixed-use density and TOD. The Specific Plan identifies four opportunity sites for concentrated commercial activity, new residential mixed-use development, and employment uses. Opportunity sites include the Kassis opportunity site, Mather Mills opportunity site, Olson Island opportunity site, and the Sunrise opportunity site. Each opportunity site has a vision and set of standards.

5.7.4 Environmental Impacts

The following analyzes impacts of the proposed project on land use and planning.

Impact 5.7-1: Project implementation would not divide an established community. [Threshold LU-1]

The closest established residential communities are the adjacent condominium neighborhoods and single-family homes north of the site. As shown in Figure 3-2, *Aerial Photograph*, these neighborhoods are physically separated from the project site by a roadway for the condominium neighborhood and a downhill slope covered with vegetation and large trees. Folsom Lake College, as identified by Figure 3-3, *Conceptual Site Plan*, would remain. The remaining sides of the project boundary are bounded by Folsom Boulevard and La Loma Drive. Currently, the project site does not have any built structures on-site and is occupied by paved areas with patches of vegetated areas. The proposed project would be considered infill development and would not divide any established communities. Thus, impacts would be less than significant.

Level of Significance Before Mitigation: Impact 5.7-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Impact 5.7-2: Project implementation would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. [Threshold LU-2]

The proposed project is under the jurisdiction of the City of Rancho Cordova and its land use plans and policies. The Rancho Cordova General Plan land use map identifies the project site is in the Folsom Boulevard Planning Area, a 1,629-acre high-intensity development center for TOD and regional town centers.

The FBSP, adopted on December 26, 2013, is the leading planning document for the Folsom Boulevard Planning Area. The 9.85-acre project site is currently zoned FB-RMU and is in the Mather Mills Opportunity Site, which includes additional development standards, as seen in Table 5.7-1, *Mather Mills Opportunity Site: Additional Development Standards*. In addition, the project site is in the FBSP TOD Overlay Zone, which applies to properties in a quarter mile of a light rail or bus transit station, allowing the proposed project to select additional development standards from Table 5.7-2.

The proposed project would require the site to be rezoned as Commercial Mixed-Use (CMU), Medium Density Residential (MDR), and High-Density Residential (HDR) with the remaining RMU areas dedicated as a public right-of-way (see Figure 3-4, *Zoning Option 1*, and Figure 3-5, *Zoning Option 2*, which show the potential new configuration for the project site). Table 5.7-3, *Proposed Rezone Development Standards for the Project Site*, shows the development standards for the proposed rezones for the project site.

Table 5.7-3 Proposed Rezone Development Standards for the Project Site

Development Standards	CMU	MDR	HDR
Density	10-18 du/acre	6.1-18 du/acre	20.01-40.0 du/acre
Floor-Area Ratio	0.25-1.5	N/A	N/A
Front Setback Standards	Lots less than 15 acres in size, at least 50% of the lot width is occupied by primary building frontage and/or pedestrian features between 0 and 30 feet from the front property line.	18 feet	18 feet
Primary Building Height	50 feet maximum	60 feet	30 feet

du/acre = dwelling unit per acre

As shown in Table 5.7-3, the proposed rezones have either similar standards or non-conflicting development standards as the existing FB-RMU zone and TOD Overlay District, as shown in Table 5.7-1 and Table 5.7-2, respectively. The purpose of the rezones is to make the proposed uses (community-commercial buildings and housing) more conducive to the zoning.

The existing FB-RMU zone's development standards indicate that there is no minimum or maximum floor-area ratio (FAR) for the project site. The proposed CMU zone would require a 0.25 minimum and 1.5 maximum FAR; however, this would still allow the proposed project to develop the approximately 140,000-square-foot community-commercial buildings. In addition, the FB-RMU zone has a height limit of 65 feet and four stories; the proposed project rezones would not exceed the height limit set for the FB-RMU zone. The proposed project community-commercial buildings, parking structure, and affordable multifamily development would adhere to the Mather Mills opportunity site height limit, even with the new rezones. As seen in Figure 3-3, *Conceptual Site*

Plan, the majority of development would not exceed three stories, and the affordable multifamily development would be four stories and not exceed the height limit of 65 feet.

The proposed project would comply with City General Plan policies that seek high-density residential and mixed-use development within 0.25 miles of a transit stop and for a strong job-housing ratio. Additionally, the proposed project would be consistent with the goals and policies of the SACOG 2020 MTP/SCS, which include supporting new housing and employment opportunities in existing urban communities, TODs, infill development, and job/housing balance (SACOG 2020). The proposed project would not conflict with applicable plans adopted to avoid or mitigate an environmental effect. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation: Impact 5.7-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

5.7.5 Mitigation Measures

No mitigation measures are required.

5.7.6 Level of Significance After Mitigation

Impacts would be less than significant.

5.7.7 Cumulative Impacts

A cumulative impact would be considered significant if the project, taken together with past, present, and reasonably foreseeable projects in the identified area, would conflict with applicable land use plans, policies, or regulations. The proposed project includes the development of mixed-use community-commercial buildings.

As discussed previously in this section, the development of the proposed project would not physically divide an existing community. Further, the proposed project would be consistent with existing land uses and zoning and would not change any land use designation or zoning. The proposed project does not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the proposed project would not contribute to a cumulative land use and planning impact, and the impact would be less than significant.

5.7.8 References

Rancho Cordova. 2023, July 25 (accessed). City of Rancho Cordova – Zoning Viewer. https://ranchocordova.maps.arcgis.com/apps/webappviewer/index.html?id=f08b409f526741b0a5571e1fa90a6842.

———.2013, December 16. *Folsom Boulevard Specific Plan*. https://www.cityofranchocordova.org/home/showpublisheddocument/18717/638090302647500000.

———.2006, June 26. *Rancho Cordova General Plan*. https://www.cityofranchocordova.org/home/showpublisheddocument/14279/636820350426270000.

Sacramento Area Council of Governments (SACOG). 2020. *Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)*. https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy.

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5.8 MINERAL RESOURCES

This section of the Draft Environmental Impact Report (DEIR) is focused on mineral resources, which are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Minable minerals or an "ore deposit" is defined as a deposit of ore or mineral having a value materially in excess of the cost of developing, mining, and processing the mineral and reclaiming the project area.

5.8.1 Environmental Setting

5.8.1.1 REGULATORY BACKGROUND

This section summarizes key federal, State, and local regulations and programs related to the proposed project.

Federal Regulations

Mining and Mineral Policy Act of 1970

The Mining and Mineral Policy Act of 1970 is intended to promote and expand the development of a domestic mineral industry. This statute established a federal policy regarding mineral resources across the United States, covered hard rock mining and oil and gas production, and established modern federal policy in regard to mineral resources nationally. The act applies to all minerals, including aggregate (sand and gravel), coal, geothermal, and oil and gas, that are subject to federal jurisdiction, including the Bureau of Land Management and United States Forest Service (Code of Federal Regulations, Title 30, Section 21).

State Regulations

Surface Mining and Reclamation Act

California's Surface Mining and Reclamation Act of 1975, referred to as SMARA, was enacted to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. Requirements for SMARA are codified under Public Resource Code Section 2710 et. seq. Under State law, all mining operations are required to obtain permits prior to commencing operations and abide by local and State operating requirements. Mining operations are also required to have appropriate reclamation plans in place, provide financial assurances, and abide by State and local environmental laws.

Classification

The California Geological Survey (CGS) Mineral Resources Project provides information about California's non-fuel mineral resources. The Mineral Resources Project classifies lands throughout the state that contain regionally significant mineral resources per SMARA. Non-fuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. Development generally results in a demand for minerals, especially construction aggregate. Urban preemption

of prime deposits and conflicts between mining and other uses throughout California led to passage of SMARA, which requires all cities and counties to incorporate in their General Plans the mapped designations approved by the State Mining and Geology Board.

The classification of mineral resources is a joint effort of State and local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four Mineral Resource Zones (MRZs), described below.

- MRZ-1: A Mineral Resource Zone where adequate information indicates that no significant mineral deposits are present or likely to be present.
- MRZ-2: A Mineral Resource Zone where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence and development should be controlled.
- MRZ-3: A Mineral Resource Zone where the significance of mineral deposits cannot be determined from the available data.
- MRZ-4: A Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.

As part of the classification process, an analysis of site-specific conditions is used to calculate the total volume of aggregates in individually identified Resource Sectors. Resource Sectors are those MRZ-2 areas identified as having regional or statewide significance. The CGS separates regions of the state into Product-Consumption (P-C) Regions and the anticipated aggregate demand in the P-C Regions for the next 50 years is then estimated and compared to the total volume of aggregate reserves identified in the P-C Region.

Designation

Once a classification report has been completed, the State Mining and Geology Board, may choose, based on recommendations from the State Geologist, to proceed with the second step in SMARA's mineral land identification process, designation of those mineral deposits that are of regional or statewide significance. In contrast to classifications, which inventories mineral deposits without regard to land use or land ownership, the purpose of a designation is to identify those deposits that are potentially available from a land-use perspective and are of prime importance in meeting future needs of the region or state.

California Department of Conservation Geologic Energy Management Division

California Department of Conservation Geologic Energy Management Division (CalGEM) is responsible for monitoring the drilling, operation, maintenance, and abandonment of oil, gas, and geothermal wells with the intention of environmental protection, protecting public health and safety, and general environmental conservation. CalGEM is also responsible for collecting groundwater, oil, gas, and geothermal resource data for maintaining a record of all drilled and abandoned well locations.

California State Mining and Geology Board

The California State Mining and Geology Board (SMGB) operates within the California Department of Conservation. The SMGB serves as the regulatory, policy, and appeals body to represent the State's interest in the reclamation of mined lands, geology, geologic and seismologic hazards, and the conservation of mineral resources.

Local Regulations

Rancho Cordova General Plan

Development in the City of Rancho Cordova is guided by goals, policies, standards, and actions of the 2006 General Plan. The City of Rancho Cordova General Plan includes the following goal and policies on minerals:

Goal NR.6: Support the environmentally sensitive extraction of minerals and the subsequent reclamation of mined areas.

- **Policy NR.61:** Ensure that the environmental effects of mining and reclamation on aquifers, streams, scenic views, and surrounding residential uses are prevented or minimized.
- **Policy NR.6.2:** Eliminate residual hazards to the public health and safety.

City of Rancho Cordova Municipal Code

Chapter 20.04 – Surface Mining and Reclamation

Section 20.04.170, Mineral Resource Protection, states the objectives of Mineral Resources Overlay District are:

- Mine development is encouraged in compatible areas before encroachment of conflicting uses. Except mineral resource areas classified by the state Department of Conservation's Division of Mines and Geology, State Mining and Geology Board or an existing surface mining operation shall be protected by incompatible land uses.
- Land use decisions within the city would be guided by identifiable mineral resources of regional significance.
- Recordation on property titles of the presence of important mineral resources within the identified mineral resource areas may be encouraged as a condition of approval of any development project in the impacted area.
- Prior to approving a use that would otherwise be incompatible with mineral resource protection, conditions of approval may be applied to encroaching development projects to minimize potential conflicts.

5.8.1.2 EXISTING CONDITIONS

The MRZ classification areas in Rancho Cordova are shown in the CGS resources map, "Mineral Land Classification of Cement Aggregate in the Greater Sacramento Area Production-consumption Region," which shows that the City falls in MRZ-1 Zone, MRZ-2 Zone, MRZ-3 Zone, and MRZ-4 Zone (CGS 2018).

The proposed project is classified as MRZ-3 and MRZ-4. As indicated previously, MRZ-3 zones are zones where the significance of mineral deposits cannot be determined from the available data and MRZ-4 zones are where there is insufficient data to assign any other MRZ designation. Additionally, areas directly west and south of the project site are classified as MRZ-2, an MRZ where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence and development should be controlled.

5.8.2 Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant effect on the environment if the project would:

M-1 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

M-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

5.8.3 Plans, Programs, and Policies

2006 General Plan Environmental Impact Report

Impact 4.8.5 concluded that development of the 2006 General Plan would result in the loss of availability of aggregate resources and would be considered a significant impact. Due to the expected growth under the General Plan, the demand for the aggregate products is expected to increase. Approximately, 6,076 acres in the City of Rancho Cordova and 8,229 acres of the Planning Area outside the city limits are identified as MRZ-2; a mineral resource zone where significant mineral deposits are present, or a likelihood of their presence and development should be controlled. In addition, the 2006 General Plan conflicts with the Sacramento County General Plan Mineral Overlay Designations. Implementation of the General Plan could cause additional resources to become unavailable and create land use conflicts between urban and mining operations, thus resulting in the closing of mining operations (Rancho Cordova 2006, pg. 4.8-27). The EIR includes General Plan policies as well as Mitigation Measure 4.8.5, which states that the City will introduce a new policy under Goal NR.8 that acknowledges the right of mining activities to continue, requiring setbacks, buffers, screening, and other measures to ensure the continued operation of these activities. The implementation of General Plan policies and Mitigation Measure 4.8.5 can reduce the loss of crucial mineral resources in the Planning Area. However, the proposed General Plan's buildout will still result in the ultimate loss of these resources, making this impact significant and unavoidable.

5.8.4 Environmental Impacts

This section analyzes impacts of the proposed project on mineral resources.

Impact 5.8-1: The proposed project would not result in the loss of availability of a known mineral resource nor the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. [Thresholds M-1 and M-2]

The CGS produces Mineral Land Classification studies that identify areas with potentially important mineral resources that should be considered in local and regional planning (CDC 2024). These classifications include MRZ-1, MRZ-2, MRZ-3, and MRZ-4. The City of Rancho Cordova has a significant amount of land in the MRZ-2 zone, where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence and development should be controlled. As indicated in Figure 4.8-1, *Mineral Resource Zones and Aggregate Operations within the General Plan Planning Area*, of the City's General Plan EIR, the proposed project is in the MRZ-2 zone (Rancho Cordova 2006, pg. 4.8-12). However, updated mineral resource maps indicate the project site is in MRZ-3 (CGS 2018). MRZ-3 zones are zones where the significance of mineral deposits cannot be determined from the available data.

Considering the previous urban uses (commercial and retail properties) of the project site, it is unlikely the proposed project would contribute to the loss of availability of a known mineral resource of value that was not discovered from previous ground-disturbing activities in the project site. In addition, the project site is in an urban area with residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova Center to the east, light industrial uses and the Mather Field Mills Light Rail station to the south, and commercial and residential uses to the west. Although the project site is in an MRZ-2 zone, the proposed project's development is more compatible with the surrounding environment than if a mineral operation such as a quarry were proposed. Furthermore, since the project site did not reveal any mineral resources from previous development and the proposed project would be compatible with the surrounding environment, the impact on mineral resources would be less than significant.

Level of Significance Before Mitigation: Impact 5.8-1 would be less than significant.

5.8.5 Cumulative Impacts

The cumulative context for mineral resources is the City of Rancho Cordova and the Sacramento region as Rancho Cordova provides mineral resources to areas outside the city. The City of Rancho Cordova's development is guided by the 2006 General Plan, which includes goals and policies regarding mineral resources. Goal NR.6 supports environmentally sensitive extraction and reclamation of mined areas; Policy NR.61 prevents or minimizes environmental effects on aquifers, streams, scenic views, and residential uses; and Policy NR.6.2 aims to eliminate residual hazards to public health and safety. While the General Plan EIR found that the impact on mineral resources would be significant and unavoidable, the proposed project site would not result in a significant impact on mineral resources. Further, project demand would not contribute substantially to the demand for mineral resources such that availability would be substantially reduced. Therefore, the

proposed project's contribution to cumulative impacts on mineral resource availability would be less than cumulatively considerable.

5.8.6 Level of Significance Before Mitigation

After implementation of regulatory requirements and standard conditions of approval, Impact 5.8-1 would be less than significant.

5.8.7 Mitigation Measures

No mitigation measures are required.

5.8.8 Level of Significance After Mitigation

All impacts would be less than significant. Since all impacts would be less than significant, there are no mitigation measures that have been incorporated.

5.8.9 References

Rancho Cordova. 2006. *Rancho Cordova General Plan Draft Environmental Impact Report*. https://www.cityofranchocordova.org/home/showpublisheddocument/11097/635900974765170000

California Geological Survey (CGS). 2018. Mineral Land Classification Mapper, Mineral Land Classification of Cement Aggregate in the Greater Sacramento Area Production-consumption Region. O'Neal, Matt D. and Gius, Fredw. (Map SR245 Plate 1). https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

California Department of Conservation (CDC). 2024, accessed. Mineral and Mineral Resources. https://maps.conservation.ca.gov/mineralresources/.

5.9 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Mills Crossing Project (proposed project) to result in noise impacts in the City of Rancho Cordova. The analysis in this section is based in part on the following technical report:

- *Noise Impact Assessment*, prepared by ECORP Consulting, Inc., June 2023

A complete copy of this report is included in the technical appendices to this DEIR (Appendix 5.9-1).

5.9.1 Environmental Setting

5.9.1.1 NOISE AND VIBRATION FUNDAMENTALS

Noise is defined as unwanted sound and, when overexposed, is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms, such as "noisiness" or "loudness." Following are brief definitions of terminology used in this section.

Glossary

- **Sound.** A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level and energy averaged over the measurement period.
- **L_{max}.** The maximum root-mean-square noise level during a measurement period.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m., and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.

- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).

Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel. The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more like a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale performs this compensation by weighting frequencies in a manner approximating the sensitivity of the human ear.

Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

Noise is defined as unwanted sound, and, when overexposed, is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local

governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Sound Measurement

Sound pressure is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard-site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. These "Ln" values are typically used to demonstrate compliance for stationary noise sources with a city's or county's noise ordinance, as discussed below. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law, cities, and counties require that, for planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (DNL or L_{dn}).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure, functions of the heart, and the nervous system. Extended periods of noise exposure above 90 dBA can result in permanent hearing damage. When the noise level reaches 120 dBA, even short-term exposure causes a tickling sensation in the ear, called the threshold of feeling. As the

sound reaches 140 dBA, the tickling sensation becomes painful, called the threshold of pain. Table 5.9-1, *Typical Noise Levels*, shows typical noise levels from familiar noise sources.

Table 5.9-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: ECORP 2023 (Appendix 5.9-1).

Vibration Fundamentals

Vibration is an oscillating motion in the earth. Like noise, vibration is transmitted in waves, but through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can be natural—such as earthquakes, volcanic eruptions, or landslides—or human-made, such as explosions, heavy machinery, or trains. Both natural and human-made vibration may be continuous, such as from operating machinery, or impulsive, as from an explosion.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude can be characterized in three ways—displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position; for the purposes of soil displacement, is typically measured

in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Table 5.9-2, *Human Reaction to Typical Vibration Levels*, presents the human reaction to various levels of peak particle velocity.

Table 5.9-2 Human Reaction to Typical Vibration Levels

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling—houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: ECORP 2023 (Appendix 5.9-1).
in/sec = inches per second

Vibrations also vary in frequency, and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common, but possible, to measure traffic frequencies above 30 Hz.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

5.9.1.2 REGULATORY BACKGROUND

Federal Regulations

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Administration (OSHA) regulates on-site noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an eight-hour work shift (29 Code of Federal Regulations [CFR] 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

National Institute of Occupational Safety and Health

A division of the US Department of Health and Human Services, the National Institute for Occupational Safety and Health (NIOSH) has established a construction-related noise level threshold as identified in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998. NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3 dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. The intention of these thresholds is to protect people from hearing losses resulting from occupational noise exposure.

Federal Interagency Committee on Noise

The Federal Interagency Committee on Noise (FICON) thresholds of significance assist in the evaluation of increased traffic noise. The 2000 FICON findings provide guidance as to the significance of changes in ambient noise levels due to transportation noise sources. FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of people highly annoyed by the noise. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g., residential) are less than 60 dBA Ldn and the project creates a readily perceptible 5 dBA Ldn or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or

- If the existing noise levels range from 60 to 65 dBA Ldn and the project creates a barely perceptible 3 dBA Ldn or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or

- If the existing noise levels already exceed 65 dBA Ldn and the project creates a community noise level increase of greater than 1.5 dBA Ldn.

State Regulations

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines, published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/Ldn contours. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

California Department of Transportation

In 2020, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual. The manual provides general guidance on vibration issues associated with the construction and operation of projects concerning human perception and structural damage. Table 2 of the manual presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Local

City of Rancho Cordova General Plan Noise Element

The Noise Element of the General Plan provides policy direction to protect its citizens and community from noise disturbances. By quantifying existing noise sources and identifying noise policies and actions, the City ensures comfortable and safe noise levels throughout the community. The main goals of the document are to improve the noise environment for its residents, employees, visitors, and other people. The City's existing noise ordinance establishes allowable exterior and interior noise levels for affected land uses. The Noise Element notes that activities that are generally considered to be exempt from the noise standards include construction activities (provided that they occur within the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday), school athletic and entertainment events, activities conducted on public parks and playgrounds, and transportation noise.

- **Policy N 1.2:** Ensure that the indoor and outdoor areas of new projects will be located, constructed, and/or shielded from noise sources in compliance with the City's noise standards to the maximum extent feasible (reproduced in Table 5.9-3, *City of Rancho Cordova Noise Standards*).

Table 5.9-3 City of Rancho Cordova Noise Standards

Land Use Category	Outdoor Activity Areas L_{dn}[1], dB	Interior L_{dn} dB
Residential	60[3]	45
Transportation Residential[2]	60[3]	40[5]
Transient lodging	60[4]	45
Hospitals, nursing homes	60[3]	45
Theaters, auditoriums, music halls	--	--
Churches, meeting halls	60[3]	--
Office buildings	--	--
Schools, libraries, museums	--	--
Playgrounds, neighborhood parks	70	--

Source: ECORP 2023 (Appendix 5.9-1).
Notes:
1 Where the location of outdoor activity areas is unknown; the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
2 Transportation Residential applies to residences that are subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (e.g., the passing of a single train).
3 Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn} or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels comply with this table.
4 In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.
5 The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

- **Policy N 1.3:** Ensure that proposed non-residential land uses likely to exceed the City's standards do not create noise disturbances in existing noise-sensitive areas.

- **Policy N.1.4:** Mitigate noise created by proposed non-transportation noise sources to comply with the City's noise standards to the maximum extent feasible.
  - **Action N.1.4.1** - Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted in proximity to residential uses.

- **Policy N.1.7:** To the extent feasible and appropriate, the City shall require the use of temporary construction noise control measures for public and private project that may include the use of temporary noise barriers, temporary relocation of noise-sensitive land uses or other appropriate measures.

5.9.1.3 EXISTING CONDITIONS

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools,

churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise-sensitive receptors to the project site are single-family residences approximately 49 feet from the proposed project's northeastern boundary, fronting El Caprice Drive. Furthermore, there are several residential apartments on Bettencourt Lane and La Loma Drive that are along the project site's north and western boundaries, with the closest location being 56 feet away.

Existing Ambient Noise Measurements

The project site is currently undeveloped land surrounded mainly by residential and commercial land uses. To quantify existing ambient noise levels in vicinity of the project site, ECORP Consulting, Inc. conducted three short-term noise measurements (15 minutes) in the surrounding areas and one long-term noise measurement (24 hours) on the project site on April 11, 2023. The 15-minute measurements were taken between 10:54 a.m. and 11:54 a.m. on April 11, 2023, and are representative of typical existing noise exposure within and immediately adjacent to the project site during the daytime. The long-term measurement was taken from 12:28 p.m. on April 11 to 12:28 p.m. on April 12, 2023. This 24-hour noise measurement is representative of typical existing noise exposure on the project site during a typical 24-hour day. The average noise levels measured at each location are listed in Table 5.9-4, *Existing (Baseline) Noise Measurements*.

Table 5.9-4 Existing (Baseline) Noise Measurements

Location Number	Location	Leq dBA	Ldn dBA	Lmin dBA	Lmax dBA	Time
Short-Term Measurements						
1	End of cul-de-sac of White Rock Road adjacent to Aspen Grove Mobile Home Park	54.0	N/A	50.3	68.2	10:54 a.m. – 11:09 a.m.
2	On La Verta Court adjacent to the Ashbury Court Apartments	47.9	N/A	39.7	62.9	11:39 a.m. – 11:54 a.m.
3	On La Loma Drive behind the project site adjacent to the Meadows Apartments	61.8	N/A	44.9	74.4	11:16 a.m. – 11:31 a.m.
4	North end of project site	57.1	60.9	38.3	83.2	12:28 p.m. – 12:28 p.m.

Source: ECORP 2023 (Appendix 5.9-1).
Notes:
Leq is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. Lmin is the minimum noise level during the measurement period and Lmax is the maximum noise level during the measurement period.

As shown in Table 5.9-4, the ambient recorded noise levels range from 47.9 to 61.8 dBA L_{eq} over the course of the three short-term noise measurements taken in the proposed project vicinity. The ambient noise levels recorded by the long-term measurement indicate that the project site currently experiences a noise level of 60.9 dBA L_{dn}. The most common noise in the project site vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) on Folsom Boulevard, noise from light rail train activity, and noises from residential activity.

Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the project site vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Appendix 5.9-1) and traffic volumes from the Mills Crossing Local Traffic Analysis. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 5.9-5, *Existing Roadway Noise Levels*.

Table 5.9-5 Existing Roadway Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway
Folsom Boulevard		
West of Mather Field Road	Commercial	64.1
East of Mather Field Road	Commercial	65.7
Between La Loma Drive and Paseo Drive	Commercial	64.1
Routier Road		
South of Folsom Boulevard	Residential	59.1
La Loma Drive		
North of Folsom Boulevard	Commercial and Residential	51.9
Paseo Drive		
North of Folsom Boulevard	Commercial and Residential	50.7
Mather Field Road		
South of Folsom Boulevard	Commercial and Residential	65.5

Source: ECORP 2023 (Appendix 5.9-1).
Notes:
Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by DKS Associates (2023). The most relevant roadway segments were chosen by DKS Associates. Refer to Appendix 5.9-1 for traffic noise modeling assumptions and results.

As shown in Table 5.9-5, the existing traffic-generated noise level on roadways in the proposed project vicinity currently ranges from 50.7 to 65.7 dBA L_{dn} at a distance of 100 feet from the centerline. As previously described, L_{dn} is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at night. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}. It should be noted that the modeled noise levels depicted in Table 5.9-5 may differ from measured levels in Table 5.9-4 because the measurements represent noise levels at different locations around the project site vicinity and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise levels are reported in L_{dn}).

5.9.2 Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant effect on the environment if the project would result in:

N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

N-2 Generation of excessive groundborne vibration or groundborne noise levels.

N-3 For a project in the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

5.9.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

- Impact 4.7.1 of the 2006 General Plan EIR states that implementation of the General Plan would result in construction noise levels that would exceed the noise standards established by the City of Rancho Cordova. Despite the proposed General Plan policies, action items, and goals that aim to reduce noise levels, the impact was determined to be significant and unavoidable. The General Plan EIR Impact 4.7.2 states that implementation of the General Plan would result in traffic noise levels that would exceed the noise standards established by the City of Rancho Cordova; therefore, this impact was determined significant and unavoidable.

- The 2006 General Plan EIR found that implementation of the General Plan would result in future stationary noise levels that would exceed the noise standards for non-transportation-related noise sources. Even with the inclusion of mitigation measures, some stationary noise impacts cannot be mitigated to less than significant; therefore, this impact was determined significant and unavoidable.

- The 2006 General Plan EIR found that implementation of the General Plan would result in the creation of new noise-sensitive land uses within an over-flight area, which presents the potential for annoyance from a single noise event would be considered a significant impact. The implementation of mitigation measures and action items would not fully mitigate the single-event aircraft noises; therefore, this impact was determined significant and unavoidable.

- The 2006 General Plan EIR found that implementation of the General Plan could expose future land uses and residents to light rail and public transit-related noises. With the implementation of the General Plan action items, this impact was determined to be less than significant.

- The 2006 General Plan EIR found that implementation of the General Plan in combination with regional growth and traffic conditions (passthrough traffic) would increase transportation noise along area roadways; therefore, this impact was determined significant and unavoidable.

- The 2006 General Plan EIR found that implementation of the General Plan, in combination with regional growth in surrounding communities outside of the Planning Area, would increase stationary noise; therefore, this impact was determined significant and unavoidable.

- The 2006 General Plan EIR found that implementation of the General Plan, in combination with regional growth in the Planning Area and surrounding communities, would subject more noise-sensitive land uses to airport noise; therefore, this impact was determined to be cumulatively considerable.

Folsom Boulevard Specific Plan

The Folsom Boulevard Specific Plan (FBSP) does not include any noise level standards that future development under this plan is required to follow.

5.9.4 Environmental Impacts

5.9.4.1 METHODOLOGY

This analysis of the existing and future noise environments is based on noise-prediction modeling. To estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the project site vicinity, predicted construction noise levels were calculated using the FHWA's Roadway Construction Noise Model (2006). Groundborne vibration levels associated with construction-related activities for the proposed project were evaluated using typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, considering the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

Transportation-source noise levels associated with the proposed project were calculated using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) with trip-generation rates from the Mills Crossing Local Traffic Analysis. On-site stationary source noise levels associated with the proposed project have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings, and barriers.

5.9.4.2 IMPACT ANALYSIS

Impact 5.9-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project. [Threshold N-1]

On-Site Construction Noise

Construction noise associated with the proposed project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, building construction, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower-power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest existing noise-sensitive receptors to the project site are several residences on the northern boundary of the project site, approximately 49 feet away. As previously mentioned, construction is exempt from the noise standards, provided that the construction occurs between the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday. Outside of the provided times when construction is exempt, construction activities are subject to the City's noise standards. Furthermore, City General Plan Noise Element Action N.1.4.1 limits construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted in proximity to residential uses. The project site is in proximity to existing residential land uses and is therefore required to adhere to the construction timing limitations established by Noise Element Action N.1.4.1 (7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends). However, in order to be considered exempt from City noise standards, the proposed project's construction must be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday.

Outside of the provided times when construction is exempt, construction activities are subject to the City's noise standards. As shown in Table 5.9-6, *Construction Average (dBA) Noise Levels at Nearest Receptors*, the proposed project's construction noise would surpass the City's protective standard of 60 dBA and therefore must be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday in order to be considered a less-than-significant impact.

To estimate the worst-case on-site construction noise levels that may occur at the nearest noise-sensitive receptor and to evaluate the potential health-related effects (physical damage to the ear, psychological effects) from construction noise, the construction equipment noise levels were calculated using the Roadway Noise Construction Model and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by NIOSH. A division

of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise-level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

It is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the project site and at various distances from sensitive receptors. Therefore, this analysis employs the Federal Transit Administration (FTA) guidance for calculating construction noise, which recommends measuring construction noise produced by all construction equipment from the center of the project site, which in this case is approximately 341 feet from the closest residence on Bettencourt Lane. The anticipated short-term construction noise levels generated for the necessary equipment for each phase of construction are presented in Table 5.9-6*, Construction Average (dBA) Noise Levels at Nearest Receptors*.

Table 5.9-6 Construction Average (dBA) Noise Levels at Nearest Receptors

Construction Phase	Estimated Exterior Construction Noise Level at Nearest Sensitive Receptor (dBA L_{eq})	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Pavement Excavation	69.8	*85*	No
Site Preparation	70.9	*85*	No
Grading	70.1	*85*	No
Building Construction, Paving and Painting	73.8	*85*	No

Source: Appendix 5.9-1.
Notes: Construction equipment used during construction derived from the California Emissions Estimator Model (CalEEMod) version 2022.1. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted to identify such parameters. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the project site (Appendix 5.9-1), which is 341 feet from the nearest residence. Construction, paving, and painting are assumed to occur simultaneously.
Leq = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 5.9-6, construction activities would not exceed the 85 dBA NIOSH construction noise threshold during any phase of construction at the nearby noise-sensitive receptors. It is noted that construction noise was modeled on a worst-case basis. Project site construction would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and these trips would cease upon completion of the proposed project.

Off-Site Construction Worker Traffic Noise

Project site construction would result in additional traffic on adjacent roadways over the period that construction occurs. According to the California Emissions Estimator Model (CalEEMod), which is used to predict the maximum number of construction related vehicle trips traveling to and from the project site, the

maximum number of construction related trips traveling to and from the project site during a single construction phase would not exceed 298 trips in total (241 construction worker commute trips and 57 vendor trips). According to Caltrans' *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (Caltrans 2013), doubling of traffic on a roadway is likely to result in an increase of 3 dB (outside of the laboratory, a 3 dBA change is considered a just-perceivable difference). During construction, the project site would be accessible from Folsom Boulevard. According to analysis done in conjunction with the proposed project's Traffic Report from Appendix 5.9-1, the portion of Folsom Boulevard between Mather Field Road and La Loma Drive, which includes the project site, currently accommodates approximately 19,136 average daily trips (ADT). Thus, the project site construction would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and these trips would cease upon completion of the proposed project.

Level of Significance Before Mitigation: Impact 5.9-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.9-1 would be less than significant.

Impact 5.9-2: The proposed project would not result in a substantial permanent increase in ambient noise levels in excess of City standards during the project's operation phase. [Threshold N-1]

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest existing noise-sensitive receptors to the project site are several residences on the northern boundary of the project site, approximately 49 feet away.

The proposed project would include the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers. Operational noise sources associated with the proposed project include mobile and stationary (i.e., people talking, car door opening and closing, parking garage noise, park activities, the unloading of trucks, typical neighborhood noise, and internal circulation) sources.

Project Land Use Compatibility

The City's General Plan establishes the use of exterior and interior noise standards as seen in Table 5.9-1. The City's noise level standards are applicable to new projects and act as a tool to gauge the compatibility of new land uses relative to existing noise levels. Table 5.9-1 identifies the exterior noise level standards for various land uses, including residential, meeting hall, and community park uses such as those associated with the proposed project. In the case that the noise levels identified at the proposed project site fall below the protective noise limits presented in the General Plan, the proposed project is considered compatible with the existing noise environment. As previously stated, the proposed project is proposing the construction of a community center

with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers.

The long-term noise measurement taken by ECORP Consulting Inc. on April 11 and April 12, 2023, can be used to quantify existing ambient noise levels in the project area. The ambient noise levels recorded by the long-term measurement indicate that the project site currently experiences a noise level of 60.9 dBA L_{dn}. According to the City's noise level standards table, presented in Table 5.9-1, this noise level falls above the exterior noise standard for residential and meeting hall land uses (60 dBA). However, as noted in the General Plan, where it is not possible to reduce noise in outdoor activity areas to 60 dBA L_{dn} or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dBA L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels follow the standards identified in Table 5.9-1. As such, the project site currently experiences an ambient noise level of 60.9 dBA L_{dn}, which is just over the exterior noise standard of 60 dBA L_{dn} for residential and meeting hall land uses, yet below the maximum standard of 65 dBA L_{dn} when the application of the best-available noise reduction measures is implemented.

The maximum standard of 65 dBA L_{dn}, to be applied to proposed projects that employ the best-available noise reduction measures, is appropriate for the proposed project. According to the proposed project's site plans, the proposed project's design and layout would reduce off-site transportation noise sources at the proposed noise-sensitive residential land uses. Specifically, the community commercial, art center, event center, and health and wellness buildings would be on the southern portion of the project site directly fronting Folsom Boulevard, while the northern portion of the site, farthest from Folsom Boulevard, would accommodate the residential component. As such, the layout of the proposed project's nonresidential buildings would effectively shield the residential receptors from off-site traffic noise occurring on Folsom Boulevard. According to the FHWA (2006), when a receiver is shielded from a noise source with a barrier (such as a building) with some gaps, it experiences a 5 dBA noise reduction from the source. Thus, the residents on the northern portion of the project site would have an approximate 5 dBA reduction from the traffic noise on Folsom Boulevard due to the positioning of the other proposed nonresidential buildings on site. This would result in an exterior ambient noise level of approximately 55.9 dBA L_{dn}, which would be under the City's exterior standard for residences. Thus, the project site design of placing the proposed nonresidential buildings between the predominate source of noise in the project site area, Folsom Boulevard, and the proposed noise-sensitive residential buildings, represents the best-available noise reduction measure to reduce noise on the project site. Furthermore, the exterior-to-interior reduction of newer residential units is generally 30 dBA or more. With this reduction, the exterior to interior noise environment would be reduced so that interior noise levels would be maintained below the City's protective interior standards of 45 dBA. For these reasons, the proposed project complies with the City's noise/land use compatibility standards.

Operational Off-Site Traffic Noise

Future traffic noise levels throughout the project site vicinity for the proposed project were modeled based on the traffic volumes identified by DKS Associates (refer to Appendix 5.9-1) to determine the noise levels along project site's vicinity roadways. Table 5.9-7, *Proposed Project Predicted Traffic Noise Levels,* shows the calculated off-site roadway noise levels with traffic at existing levels and the projected levels after project site buildout. The

City of Rancho Cordova does not regulate noise from transportation sources and does not have noise standards for such sources. As such, the thresholds recommended by FICON will be used in this analysis.

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g., residential, etc.) are less than 60 dBA L_{dn} and the proposed project creates a readily perceptible 5 dBA L_{dn} or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels range from 60 to 65 dBA L_{dn} and the proposed project creates a barely perceptible 3 dBA L_{dn} or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA L_{dn} and the proposed project creates a community noise level increase of greater than 1.5 dBA L_{dn}.

Table 5.9-7 Proposed Project Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from the Centerline Roadway		Change	FICON's Standard?	Exceeds Standard?
		Existing	Existing + Project			
Folsom Boulevard						
West of Mather Field Road	Commercial	64.1	64.5	+0.4	>3	No
East of Mather Field Road	Commercial	65.7	65.9	+0.2	>1.5	No
Between La Loma Drive and Paseo Drive	Commercial	64.1	64.5	+0.4	>3	No
Routier Road						
South of Folsom Boulevard	Commercial & Residential	59.1	59.4	+0.3	>5	No
La Loma Drive						
North of Folsom Boulevard	Commercial & Residential	51.9	54.7	+2.8	>5	No
Paseo Drive						
North of Folsom Boulevard	Commercial & Residential	50.7	52.6	+1.9	>5	No
Mather Field Road						
South of Folsom Boulevard	Commercial & Residential	65.5	65.8	+0.3	>1.5	No

Source: ECORP 2023 (Appendix 5.9-1).

As shown in Table 5.9-7, none of the proposed project's vicinity roadway segments would experience an increase of traffic noise in excess of the FICON standards.

Operational On-Site Stationary Noise

The proposed project includes the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers. The main stationary operational noise associated with the proposed project would include internal circulation/parking lot activity at the commercial buildings (i.e., people talking, car door opening and closing, and car stereos). Noise associated with residential neighborhoods

is quieter than commercial uses and includes activities such as internal circulation, dogs barking, lawnmowers, and other mechanical equipment). On-site proposed project operations have been calculated using the SoundPLAN 3D noise model. The modeling scenario includes the features of the proposed project, namely the parking lots, community commercial and art center buildings, residential units, and recreational/park plaza. The City has established noise exterior standards for various land uses, shown in Table 5.9-3, *City of Rancho Cordova Noise Standards*. The standard for residential receptors is under 60 dBA. Table 5.9-8, *Operational Noise Levels*, shows the predicted project site's noise levels at nine locations in the project site vicinity, as predicted by SoundPLAN. These locations represent the closest residential and commercial land uses to the project site. Figure 5.9-1, *SoundPlan Noise Contour for Mills Crossing,* provides a visual depiction of the predicted noise levels in the project site vicinity from project site operations.

Table 5.9-8 Operational Noise Levels

Location	Operational Noise (dBA)	City Exterior Noise Standard (dBA)	Exceeds Standard?
#1 Apartments on Bettencourt Lane	40.4	60	No
#2 Apartments on La Loma Drive	39.6	60	No
#3 Apartments on La Loma Drive	36.0	60	No
#4 Auto Repair Shop on La Loma Drive	47.3	60	No
#5 Folsom Lake College	39.4	60	No
#6 Medical Clinic	47.5	60	No
#7 Residence on El Caprice Drive	44.1	60	No
#8 Residence on El Caprice Drive	32.6	60	No
#9 Residence on El Caprice Drive	33.9	60	No

Source: ECORP 2023 (Appendix 5.9-1).

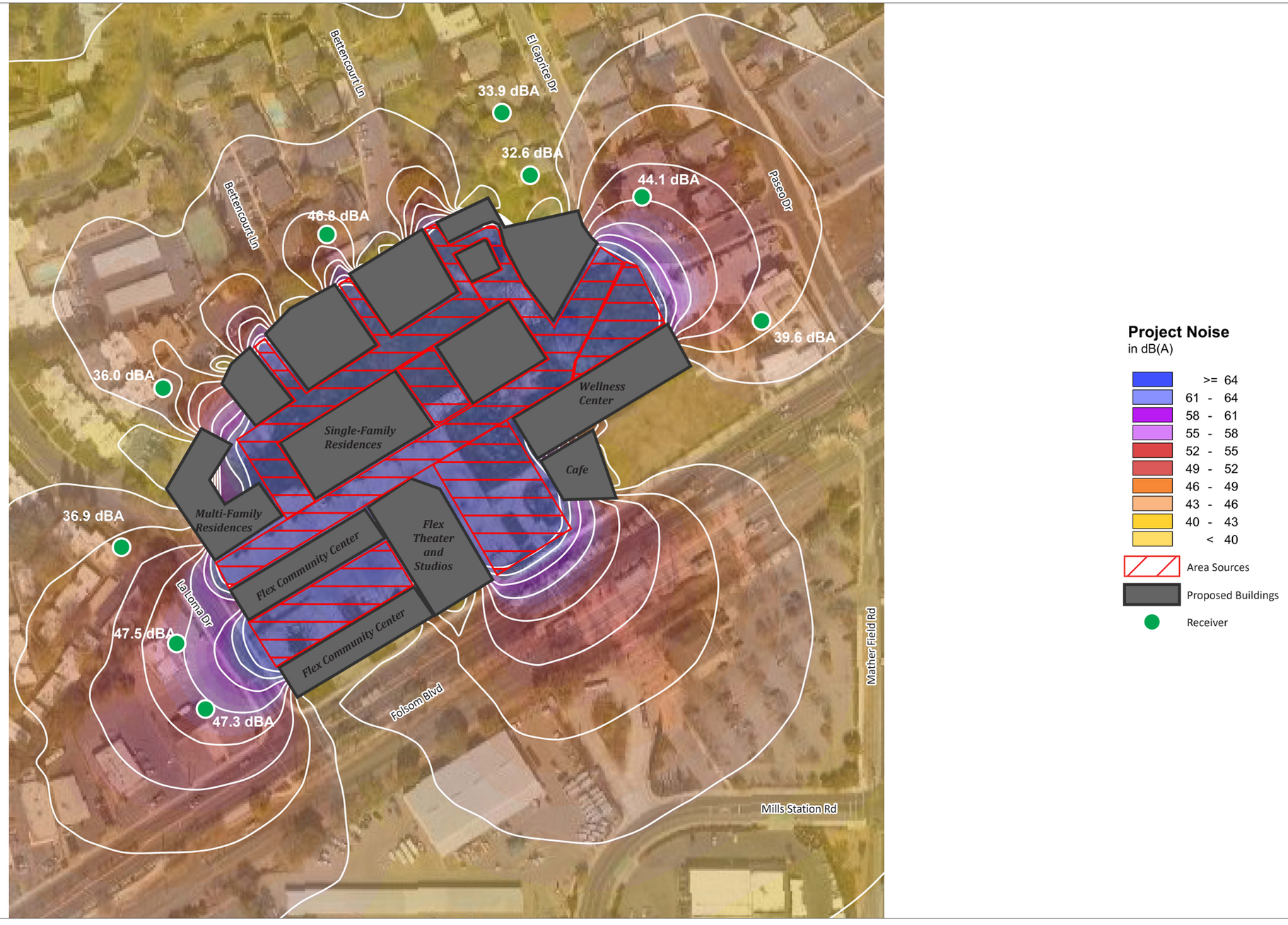
As shown in Table 5.9-8, Operational Noise Levels, the operational noise levels from operational activities on the project site would not exceed the City's noise standards (shown in Table 5.9-3) for the existing residential uses west and south of the project site. Furthermore, it is noted that the modeled noise levels identified are a worst-case scenario. All noise-producing sources on the project site were modeled for noise as if occurring at the same time and at the highest activity level to produce noise levels at the level as those predicted. Not all activities taking place on the project site would generate as much noise as predicted.

Level of Significance Before Mitigation: Impact 5.9-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.9-2 would be less than significant.



Source: ECROP Consulting, Inc. 2023.

0 200
Scale (Feet)

PLACEWORKS

Figure 5.9-1
SoundPlan Noise Contour for Mills Crossing

Impact 5.9-3: The proposed project would not generate excessive groundborne vibration during construction or operation. [Threshold N-2]

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment, such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance, and it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with standard construction equipment at 25 feet are summarized in Table 5.9-9, *Representative Vibration Source Levels for Construction Equipment*.

Table 5.9-9 Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Vibratory Roller	0.210
Impact Pile Driver	0.170
Large Bulldozer	0.089
Caisson Drilling	0.089
Hoe Ram	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: ECORP 2023 (Appendix 5.9-1).

The City does not have a numeric threshold associated with construction vibrations. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans recommended standard of 0.2 inches per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating vibration generated from construction equipment, construction vibration was measured from the center of the project site. The nearest structure of concern to the construction site are residences 341 feet from the center of the project site.

Based on the representative vibration levels presented for various construction equipment types in Table 5.9-10, *On-Site Construction Vibration Levels at 341 Feet*, and the construction vibration assessment methodology published by the FTA (refer to Appendix 5.9-1), it is possible to estimate the potential project site construction vibration levels. The FTA provides the following equation:

$$[PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}]$$

Table 5.9-10 presents the expected project site related vibration levels at a distance of 341 feet.

Table 5.9-10 On-Site Construction Vibration Levels at 341 Feet

Receiver PPV Levels (in/sec)								
Impact Pile Driver	Vibratory Roller	Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jack- hammer	Small Bulldozer	Peak Vibration	Threshold	Exceed Threshold
0.003	0.004	0.002	0.001	0.001	0.000	0.004	0.2	No

Source: ECORP 2023 (Appendix 5.9-1).

Table 5.9-10 showcases that on-site construction peak vibration levels would not exceed the threshold. The proposed project would not include the use of any stationary equipment that would result in excessive vibration levels. Therefore, the proposed project would not result in groundborne vibration impacts during operations.

Level of Significance Before Mitigation: Impact 5.9-3 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.9-3 would be less than significant.

Impact 5.9-4: The proximity of the project site to an airport would not result in exposure of future residents or workers to airport-related noise. [Threshold N-3]

The project site is approximately 2.1 miles northwest of Mather Airport. According to the Sacramento County Department of Airports, the project site is not within the Mather Airport planning noise contours. Therefore, the proposed project would not expose people residing or working on the project site to excessive airport noise levels.

Level of Significance Before Mitigation: Impact 5.9-4 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.9-4 would be less than significant.

5.9.5 Cumulative Impacts

As noted previously, the General Plan EIR determined that impacts associated with buildout of the General Plan would result in significant and unavoidable impacts related to generation of noise. The proposed project would contribute to the noise environment in the project vicinity due to construction of the project and transportation-related noise. However, as discussed, the proposed project's noise generation would not exceed City thresholds. Therefore, while the project would contribute to noise in the project vicinity, the project's contribution to the cumulative noise environment would not be cumulatively considerable.

5.9.6 Level of Significance Before Mitigation

After implementation of regulatory requirements and standard conditions of approval, noise impacts would be less than significant.

5.9.7 Mitigation Measures

No mitigation measures are required.

5.9.8 Level of Significance After Mitigation

All noise impacts would have a less-than-significant impact. Since all noise impacts would be less than significant, there are no mitigation measures that have been incorporated into any of the noise impacts.

5.9.9 References

California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol.*

ECORP Consulting Inc. (ECORP). 2023, June. *Noise Impact Assessment- Mills Crossing, Rancho Cordova, California.* Appendix 5.9-1 to this DEIR.

5.10 POPULATION AND HOUSING

This section of the Draft Environmental Impact Report (DEIR) examines the potential impacts of the proposed Mills Crossing project (proposed project) on the City of Rancho Cordova, specifically changes in population, employment, and demand for housing, particularly housing cost/rent ranges defined as "affordable."[1]

5.10.1 Environmental Setting

5.10.1.1 REGULATORY BACKGROUND

State Regulations

California Housing Element Law

California planning and zoning law requires each city and county to adopt a General Plan for future growth (California Government Code Section 65300). This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, the California Department of Housing and Community Development (HCD) estimates the relative share of California's projected population growth that would occur in each county based on California Department of Finance (DOF) population projections and historical growth trends. These figures are compiled by HCD in a Regional Housing Needs Assessment (RHNA) for each region of California. Where there is a regional council of governments, HCD provides the RHNA to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares allows cities and counties to comment on the proposed allocations. HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing needs.

California housing element laws (California Government Code Sections 65580 to 65589) require that each city and county identify and analyze existing and projected housing needs in its jurisdiction and prepare goals, policies, and programs to further the development, improvement, and preservation of housing for all economic segments of the community, commensurate with local housing needs.

Housing Accountability Act

The Housing Accountability Act (HAA) requires that cities approve applications for residential development that are consistent with a city's general plan and zoning code development standards without reducing the proposed density. Under the HAA, an applicant is entitled to the full density allowed by the zoning and/or general plan, provided the project complies with all objective general plan, zoning, and subdivision standards and provided that the full density proposed does not result in a specific, adverse impact on public health and

[1] Per CEQA Guidelines Section 15131, while "economic or social information may be included in an EIR or may be presented in whatever form the agency desires…"economic or social effects of a project shall not be treated as significant effects on the environment." Where an EIR does include economic or social impacts, the "focus of the analysis shall be on the physical changes." Although this chapter discusses affordable housing laws and RHNA requirements, this is done for informational purposes only. As currently drafted, the impact discussions of affordable housing requirements does not appear to have any bearing on the discussion of physical impacts on the environment under the CEQA Guidelines Appendix G thresholds.

safety that cannot be mitigated in any other way. Objective standards are measurable and have clear criteria that are determined in advance, such as a numerical setback, height limit, universal design requirement, lot coverage requirement, or parking requirement.

Amendment to the Housing Accountability Act

Assembly Bill (AB) 678 amends the HAA by increasing the documentation and standard of proof required for a local agency to legally defend its denial of low- to moderate-income housing development projects. If the local agency considers the housing development project to be inconsistent, not in compliance, or not in conformity with objective, written applicable standards, ordinances, plans, policies, or programs, AB 678 requires that, within a specific time period, the local agency provide the applicant with written documentation of its reasons. If the local agency fails to provide this, AB 678 deems the housing development project consistent, compliant, and in conformity with the applicable plan, program, policy, ordinance, standard, requirement, or other provision.

AB 1515, Reasonable Person Standard

AB 1515 added additional findings related to the HAA. It specifies that a housing development project is deemed consistent, compliant, and in conformity with an applicable plan, program, policy, ordinance, standard, requirement, or similar provision if there is substantial evidence that would allow a reasonable person to conclude that the housing development project or emergency shelter is consistent, compliant, or in conformity.

Senate Bill 330, Housing Crisis Act of 2019

Among other changes that promote housing, the Housing Crisis Act of 2019 strengthened the HAA, which states that a housing development project that complies with the objective standards of the general plan and zoning ordinance must be approved by the City unless the City can make written findings based on the preponderance of evidence in the record that either: (1) the City has already met its RHNA requirement, (2) there is an impact to the public health and safety and this impact cannot be mitigated, (3) the property is agricultural land, (4) approval of the project would violate State federal law and this violation cannot be mitigated, or (5) the project is inconsistent with the zoning and land use designation and not identified in the General Plan Housing Element RHNA inventory.

Regional Regulations

Sacramento Area Council of Governments

The Sacramento Area Councill of Governments (SACOG) is an association of local governments in the six-county Sacramento region. Its members include the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba, and the 22 cities therein. SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG is responsible for developing the methodology for allocating the RHNA housing units to each city and county in the region. SACOG also assists in planning for transit, bicycle networks, clean air, and airport land uses.

SACOG plays a key role in the RHNA process. Every eight years, HCD provides SACOG with a determination of the regional housing needs, which represents the number of housing units the region must plan for. The total allocation is divided into four categories, and the lower two income categories—Low Income and Very Low Income—must be accommodated on sites zoned for higher densities. SACOG is responsible for developing a methodology for allocating these units by income category to each city and county in the region. Once jurisdictions have their RHNA, they must adopt a housing element that demonstrates how there is adequate land zoned for housing to accommodate the RHNA at each income level.

2020 Metropolitan Transportation Plan/Sustainable Communities Strategy

The 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the Sacramento region proactively links land use, air quality, and transportation needs. The MTP/SCS is federally required to be updated every four years. The SACOG board adopted the 2020 MTP/SCS and accompanying documents at a special board meeting on November 18, 2019.

Local Regulations

City of Rancho Cordova General Plan

Development of housing in the City of Rancho Cordova is guided by goals, policies, standards, and actions of the 2021-2029 Housing Element. The City of Rancho Cordova General Plan includes the following policies on population and housing:

- **Policy H.1.1:** Improve the City's jobs-housing balance by ensuring that housing development in Rancho Cordova provides opportunities for all income levels to serve the full range of available and projected jobs in the City.
- **Policy H.1.2:** Maintain adequate sites that support a range of housing types appropriate for the City's housing needs, considering employment projections, household growth, and the City's share of regional housing needs.
- **Policy H.1.4:** Promote higher density housing in close proximity to transit, employment and appropriate services, such as transit-oriented development.
- **Policy H1.1.5:** Developers of new residential projects within the newly developing areas of the City (generally in the large, vacant areas south of Highway 50) shall prepare an Affordable Housing Plan (Plan) for the project for City review and approval that identifies the project's plan for providing affordable housing. These areas are typically high resource and promote inclusion of affordable housing in high opportunity areas.
- **Policy H.1.6:** Allow housing developments with at least 20 percent affordable housing by-right on lower-income housing sites that have been counted in previous housing element cycles, consistent with AB 1397.
- **Policy H.2.1:** Provide neighborhood revitalization in existing areas through housing rehabilitation (owner- and renter-occupied units).

- **Policy H.2.2:** Continue to implement the Folsom Boulevard Specific Plan.
- **Policy H.2.3:** Ensure that existing housing stock within the City is maintained and remains habitable in order to assist in meeting the housing needs of the community.
- **Policy H.3.1:** Ensure that neighborhoods are developed in a balanced, sustainable manner, avoiding over-concentration of affordable housing or oversized rental complexes, and providing a range of housing prices and rents.
- **Policy H.3.3:** Provide housing for the special needs populations, including housing accessible for persons with disabilities (including veterans as a primary target group), persons with developmental disabilities, large households, people experiencing homelessness, farmworkers, and single-parent households.
- **Policy H.3.4:** The City will continue to promote equal housing opportunity for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, disability, familial status, source of income, or sexual orientation.
- **Policy H.5.4:** Require non-residential development to provide for the affordable housing needs generated or contributed to by their development.

5.10.1.2 EXISTING CONDITIONS

Population

According to the DOF, Rancho Cordova's population as of May 2022 is estimated to be 80,359. Table 5.10-1, *Population Trends in the City of Rancho Cordova*, shows the population trends and percentages in the City of Rancho Cordova from 2011 to 2022. The General Plan EIR of Rancho Cordova has anticipated substantial growth in population with an expected population of 183,362 under buildout conditions by 2030.

Table 5.10-1 Population Trends in the City of Rancho Cordova

Year	City of Rancho Cordova	
	Population	Percentage Change
2011	65,542	0%
2012	66,555	.02%
2013	68,376	2.74%
2014	69,635	1.84%
2015	71,059	2.04%
2016	72,674	2.27%
2017	74,394	2.36%
2018	75,815	1.91%
2019	77,259	1.90%
2020	78,139	1.13%
2021	79,536	1.78%
2022	80,359	1.03%

Sources: DOF 2021, 2022.

Housing

Housing Growth Trends

Table 5.10-2, *Housing Growth Trends in the City of Rancho Cordova*, shows the growth trends from 2011 to 2022 in the City.

Table 5.10-2 Housing Growth Trends in the City of Rancho Cordova

	City of Rancho Cordova	
Year	Total Housing Units	Percentage Change
2011	25,635	0%
2012	25,781	0.57%
2013	25,992	0.82%
2014	26,288	1.14%
2015	26,598	1.18%
2016	26,861	0.98%
2017	27,293	1.61%
2018	27,584	1.06%
2019	28,021	1.58%
2020	28,340	1.14%
2021	29,033	2.44%
2022	29,695	2.23%

Sources: US Census 2021; DOF 2021, 2022.

Regional Housing Needs Assessment

As shown in Table 5.10-3, *City of Rancho Cordova 2021-2019 RHNA*, Rancho Cordova's RHNA allocation for the 2021-2029 planning period is 9,067 units.

Table 5.10-3 City of Rancho Cordova 2021-2029 RHNA

		2021-2029 RHNA	
Household Income Category	Definition of Income Category	Number of Housing Units	Percentage of Housing Units
Extremely Low	30% or less MFI	1,057	12%
Very Low[1]	31-50% of MFI	1,058	12%
Low	51-80% of MFI	1,274	14%
Moderate	81-120% of MFI	1,684	18%
Above Moderate	Above 120% of MFI	3,994	44%
	Total	**9,067**	**100%**

Source: Rancho Cordova 2021.
MFI: Median Family Income

Employment

Employment Trends

According to the California Employment Development Department (EDD), the average employment rate in Rancho Cordova has increased from 2011 to 2021. The average annual employment rate and percentage changes are shown in Table 5.10-4, *City of Rancho Cordova Average Employment Trends.*

Table 5.10-4 City of Rancho Cordova Average Employment Trends

	City of Rancho Cordova	
Year	Employment (persons)	Percentage Change
2011	28,100	0%
2012	28,800	2.49%
2013	29,400	2.08%
2014	30,300	3.06%
2015	31,200	2.97%
2016	32,100	2.88%
2017	32,700	1.87%
2018	33,600	2.75%
2019	34,000	1.19%
2020	32,200	-5.29%
2021	33,300	3.416%

Source: EDD 2021.

Growth Projections

Sacramento Area Council of Governments

SACOG undertakes comprehensive regional planning with an emphasis on transportation. The 2020 MTP/SCS provides projections of total households, total jobs for the City of Rancho Cordova, and a projected jobs-housing ratio. The jobs-housing ratio is a general measure of number of jobs versus housing in a defined geographic area, without regard to economic constraints or individual preferences. The jobs-housing ratio, as well as the type of jobs versus the price of housing, has implications for mobility, air quality, and distribution of tax revenues. A project's effect on the jobs-housing ratio is one indicator of how it will affect growth and quality of life in the project area. SACOG's regional planning efforts and goals are to create balanced communities. SACOG projected the job-housing ratio of Rancho Cordova (SACOG 2019). These projections are summarized in Table 5.10-5, *SACOG Growth Projections for the City of Rancho Cordova.*

Table 5.10-5 SACOG Growth Projections for the City of Rancho Cordova

	2016	2040
Housing Units	26,860	42,740
Total Jobs	59,410	78,890
Jobs-Housing Ratio	2.2	1.8

Source: SACOG 2019

5.10.2 Thresholds of Significance

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant effect on the environment if it would:

P-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses), or indirectly (for example, through extension of roads or other infrastructure).

P-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

5.10.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR of Rancho Cordova was prepared to evaluate and provide the public with information about the potential environmental effects of proposed future development under the general plan, in accordance with CEQA. The population/housing/employment section was prepared using SACOG existing and projected demographics. The EIR evaluated the General Plan planning for areas within existing city limits at buildout of 75,923 residential units, an expected population of 183,459, and employment of approximately 102,878 people; an increase of 238 percent, 233 percent, and 116 percent, respectively. The General Plan EIR concluded that implementation of the General Plan land use map would increase population, housing, and employment, which would result in a significant and unavoidable impact. Additionally, impacts related to displacement of housing and/or persons were found to be less than significant, due to potential displacement being minor as developments would mostly avoid developed areas. Furthermore, the General Plan EIR concluded that buildout of the Planning Area would induce substantial population, housing units, and employment increases that would cumulatively be considerable and result in a significant and unavoidable impact. General Plan policies and actions in the housing element and land use element were provided to mitigate the effect on the environment. As indicated in the 2006 EIR, the project site is in the Folsom Boulevard Planning Area, and a Specific Plan would be prepared for this Planning Area after the adoption of the 2006 General Plan.

Folsom Boulevard Specific Plan

The Folsom Boulevard Specific Plan (FBSP) would guide and establish the long-term redevelopment of the Folsom Boulevard Planning Area. The FBSP area is approximately four miles long from Sunrise Boulevard to Bradshaw Road, encompassing areas to the north and south of Folsom Boulevard. The FBSP would follow the General Plan goals and policies of increasing mixed-use density and transit-oriented development (Policies LU-10, LU-11, LU-12, LU-14, and LU-17). The Specific Plan identifies four opportunity sites for concentrated commercial activity, new residential mixed-use development, and employment uses. Opportunity sites include the Kassis opportunity site, Mather Mills opportunity site, Olson Island opportunity site, and the Sunrise opportunity site. The Mills Crossing project falls within the Mather Mills opportunity site. The Mather Mills opportunity site is envisioned to support transit-oriented uses, such as a mix of educational, residential, retail,

and service activities, both vertically and horizontally. Each opportunity site has its own vision and set of standards.

5.10.4 Environmental Impacts

This section analyzes impacts of the proposed project on population and housing in Rancho Cordova. Impact 5.10-1: The Mills Crossing project would not induce unplanned population growth either directly or indirectly in the project area. [Threshold P-1]

Housing

The Mills Crossing project is in the FBSP area, which is zoned for Residential Mixed Use (RMU) and allows between 6.1 and 40 dwelling units per acre, which would allow between 61 and 394 units. The proposed project would require a rezone from RMU to be a Commercial Mixed-Use (CMU), Medium Density Residential (MDR), and High-Density Residential (HDR) zone. CMU allows a density between 10 and 18 dwelling units per acre, MDR allows a density range between 6.1 and 18.0 dwelling units per acre, and HDR allows a density between 20.1 and 40.0 dwelling units per acre. Figure 3-4, *Zoning Option 1*, shown in Chapter 3, *Project Description*, would be the more conservative option for the proposed project and would allow between 88 and 183 units on the project site.

The General Plan EIR analyzed the buildout of 75,923 residential units in the General Plan Planning Area (areas within existing city limits). The proposed project would provide up to 120 dwelling units, 0.15 percent of the permitted housing units under the 2006 General Plan EIR. Based on the average household size of 2.68 persons per household from the General Plan EIR, the proposed project would generate approximately 322 residents. The General Plan EIR buildout is estimated to generate approximately 183,459 residents, specifically a residential population of 22,936 people for the Folsom Boulevard planning area (Rancho Cordova 2006, pg. 4.1-22). The project would generate 1.4 percent of the proposed residential population in the Folsom Boulevard planning area. Since the level of residential development would be within the projected buildout of the 2006 General Plan EIR, the direct impact of population growth would be less than significant.

Employment

The Mills Crossing project would also introduce employment opportunities. The project site is currently zoned for RMU; however, the proposed project would rezone the site to CMU, MDR, and HDR zones. Since the RMU zone is primarily intended for medium- and high-density housing but can also include office and/or commercial uses, the rezone would not change the intended use of the site but make it more conducive for the proposed uses. The FBSP and General Plan EIR are silent on expected job growth in the Folsom Boulevard planning area, while the General Plan EIR projected buildout expects approximately 11,529 commercial jobs within the city and 5,764,627 square feet of commercial development at buildout (General Plan EIR, Table 3.0-1). This results in approximately 2 employees per 1,000 square feet. Thus, the community commercial buildings on-site are projected to generate approximately 280 jobs. It is expected a portion of employees generated by the Mills Crossing project would live in the City of Rancho Cordova. The approximately 280 total employees would be a minimal portion of the projected 102,878 jobs anticipated in the city at buildout with the implementation of the 2006 General Plan EIR. These new jobs, therefore, would not be anticipated to generate

unplanned new population growth in comparison to the levels considered in the 2006 General Plan EIR, and impacts would be less than significant.

Level of Significance Before Mitigation: Impact 5.10-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.10-1 would be less than significant.

Impact 5.10-2: Project implementation would not result in substantial displacement of existing people and/or the construction of replacement housing elsewhere. [Threshold P-2]

Currently, the project is occupied by paved areas with patches of vegetation. No housing units or structures exist on-site; therefore, the construction of replacement housing would not be required. The Mills Crossing project would provide approximately 120 dwelling units at buildout, as permitted by the General Plan EIR.

Therefore, the proposed project would not result in any significant impacts related to the potential displacement of housing and/or people in comparison to the General Plan EIR

Level of Significance Before Mitigation: Impact 5.10-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.10-2 would be less than significant.

5.10.5 Cumulative Impacts

Impact 4.3.3 in the 2006 General Plan EIR states that the General Plan Land Use Policy Map shows a slightly larger development in terms of residential units and jobs, but a smaller population than the Sacramento County General Plan, Cordova Community Plan, and SACOG's Sacramento Region Blueprint. The General Plan's entire Planning Area is projected to have 126,241 housing units at buildout (2050), with a slightly smaller population under buildout conditions than the projected Blueprint population. However, the General Plan's entire Planning Area has a greater employment rate, with 195,021 jobs. Buildout projections under the entire Planning Area include the city as well as other planning areas considered.

The geographic area considered for cumulative impacts is the City of Rancho Cordova. Population growth anticipated for implementation of the Mills Crossing project would be within the analyzed scope of the 2006 General Plan EIR. The General Plan EIR analyzed the construction of 75,923 residential units in the General Plan planning area (areas within existing city limits). The proposed project would provide 120 dwelling units, 0.15 percent of the permitted housing units under the 2006 General Plan EIR. The project, based on an average household size of 2.68, is estimated to generate 322 residents and a residential population of 22,936 in the Folsom Boulevard planning area, accounting for 1.4 percent of the expected population under the 2006 General

Plan EIR. In addition, the Mills Crossing project is expected to generate 280 employees, which is 0.27 percent of the projected 102,878 jobs in city limits. Potential indirect population growth would be negligible since it is anticipated that the majority of those employees would already live within the city's boundaries. The Mills Crossing project, therefore, would not result in impacts that could combine with other projects to be cumulatively considerable. Cumulative population and housing impacts, therefore, would be less than significant.

5.10.6 Level of Significance Before Mitigation

After implementation of regulatory requirements and standard conditions of approval, impacts related to population and housing would be less than significant.

5.10.7 Mitigation Measures

No mitigation measures are required.

5.10.8 Level of Significance After Mitigation

Project impacts associated with population and housing would be less than significant; therefore, no mitigation measures are required.

5.10.9 References

Department of Finance (DOF). 2021, May. Table E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2020, with 2010 Benchmark. https://dof.ca.gov/forecasting/Demographics/estimates/estimates-e5-2010-2020/

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Employment Development Department (EDD). 2021. Cities and Census Designated Places by Individual County. https://labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html#CCD.

Rancho Cordova, City of. 2006. *City of Rancho Cordova General Plan.* https://www.cityofranchocordova.org/home/showpublisheddocument/14279/636820350426270000.

Rancho Cordova, City of. 2021. *City of Rancho Cordova 2021-2029 Housing Element.* https://www.cityofranchocordova.org/home/showpublisheddocument/17793/637686169221070000

Sacramento Area Council of Governments (SACOG). 2019. *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).* https://www.sacog.org/home/showpublisheddocument/76/638212804736270000

United States Census Bureau (US Census). 2021. Table B01003 – Total Population. https://data.census.gov/table?q=Population+Total&g=1600000US0659444&tid=ACSDT5Y2020.B01003

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5.11 PUBLIC SERVICES

This section addresses the proposed project's impacts to public services providing fire protection and emergency services, police protection, school services, and library services. Park services are addressed in Section 5.11, *Recreation*. Public and private utilities and service systems, including water, wastewater, and solid waste services and systems, are addressed in Section 5.14, *Utilities and Service Systems*.

5.11.1 Fire Protection and Emergency Services

5.11.1.1 ENVIRONMENTAL SETTING

Regulatory Background

International Fire Code

The International Fire Code (IFC) is a model code for regulating minimum fire-safety requirements for new and existing buildings, facilities, storage, and processes. The IFC includes general and specialized technical fire- and life-safety regulations, which topic addressing fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire, and explosion hazards safety, use and storage of hazardous materials, protection of emergency responders, industrial processes, and various other topics. The IFC is issued by the International Code Council, which is an international organization of building officials.

State

California Fire Code

The California Fire Code (CFC) (California Code of Regulations, Title 24, Part 9) is based on the 2015 IFC and includes amendments from the State of California fully integrated into the code. The CFC contains fire safety-related building standards that are referenced in other parts of Title 24 of the California Code of Regulations. The CFC is updated once every three years; the 2022 CFC became effective on January 1, 2023 (ICC 2022).

California Health and Safety Code

Sections 13000 et seq. of the California Health and Safety Code include fire regulations for building standards (also in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Local

City of Rancho Cordova Municipal Code

Chapter 17.04: Fire Code

This chapter prescribes regulations governing conditions hazardous to life and property from fire or explosion and incorporates the CFC.

Chapter 17.12: Weed Control

This chapter of the Municipal Code finds and declares that the uncontrolled growth and or accumulation of weeds near neighboring property of residents is considered a nuisance and can lead to fire hazards therefore the chapter sets enforcement, firebreak, and removal requirements to decrease potential impacts.

City of Rancho Cordova General Plan

The following General Plan policies relate to the fire protection and emergency medical services:

- **Policy ISF 2.1:** Ensure the development of public infrastructure that meet the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.
- **Policy ISF.2.2:** Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.
- **Policy ISF.2.3:** Ensure that adequate funding is available for all infrastructure and public facilities and make certain that the cost of improvements is equitably distributed.
- **Policy ISF.2.4:** Ensure that water supply and delivery systems are available in time to meet the demand created by new development or are guaranteed to be built by bonds or sureties.
- **Policy ISF.2.5:** Ensure that water flow and pressure are provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.
- **Policy S.9.1:** Cooperate with the Sacramento Metropolitan Fire Department (SMFD) to reduce fire hazards, assist in fire suppression, and ensure efficient emergency medical response.
- **Policy S.9.2:** Provide infill development with adequate off-site improvements to meet onsite fire flow requirements.
- **Policy S.9.3:** Consider establishing mitigation fees to fund adequate fire protection and emergency medical response facilities if such fees are critical and necessary to meet the facility funding needs of SMFD and existing methods of financing are inadequate.

Existing Conditions

Sacramento Metropolitan Fire District

The Sacramento Metropolitan Fire District, or "Metro Fire," serves a population of over 738,000 in a 358-square-mile service area. Metro Fire is the seventh largest fire agency in California. Metro Fire is a combination of 16 smaller fire departments that, over the years, merged to create this California Special District. On any given day, there are 155 on-duty personnel to serve the District's communities. Routine and emergency operations are managed with five battalion chiefs with oversight by an assistant chief assigned a 24-hour shift.

Metro Fire provides fire protection services, fire suppression, inspection, plan checking, emergency transportation and medical services, public education, advanced life support, and rescue services to the City of Rancho Cordova (Rancho Cordova 2006). Metro Fire's response goal is a four-minute travel time to at least 90 percent of all major emergencies (in addition to a 1-minute dispatch and 1-minute turnout time) (SMFD 2022b). It currently has eight fire stations in Rancho Cordova. Table 5.11-1, *Fire Stations Serving Rancho Cordova*, lists the Metro Fire stations and their location serving the City of Rancho Cordova. Metro Fire's Capital Improvement Program Plan (CIP) states planned expenditures for the fiscal years 2023 through 2026/2027, one of which is to secure a three-acre property for a station in Rancho Cordova (SMFD 2022a). The nearest fire station to the proposed project site is fire station 61, approximately 1.13 miles from the project site.

Table 5.11-1 Fire Stations Serving Rancho Cordova

Name of Facility	Address	Location
Station 54	8990 Frederick Avenue	Planning Area[1]
Station 61	10595 Folsom Blvd	City
Station 62	3646 Bradshaw Road	City
Station 63	12395 Folsom Blvd	City
Station 64	9116 Vancouver Drive	Planning Area[1]
Station 65	11201 Coloma Road	City
Station 66	3180 Kilgore Road	City
Station 68[2]	12065 Cobble Brook Drive	City

Source: Rancho Cordova 2006.
[1] The Planning Area for the City of Rancho Cordova General Plan consists of the existing incorporated City and a larger study area, approximately 58,190 acres (Refer to City's General Plan for more information on the Planning Area).
[2] Metro Fire Station 68 inaugurated on May 27, 2022 (SMFD 2022a).

The project site is not within a Very High Fire Hazard Severity Zone (FHSZ) according to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (CAL FIRE 2023).

5.11.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

5.11.1.3 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

- **Impact 4.12.1.1** focuses on the implementation of the General Plan which would result in the need for additional fire protection and emergency medical equipment and facilities that could result in physical environmental impacts. The EIR includes General Plan policies and action items to reduce impacts from fire protection and emergency medical services. Impact 4.12.1.1 was determined to be less than significant.
- **Impact 4.12.1.2** focuses on the implementation of the General Plan could result in safety hazards associated with wildland fires in residential areas adjacent to open space and natural areas. The General Plan policies and action items SA.1.37 and SA.1.37.1 through SA.1.37.7 require Metro Fire to review new developments and install essential fire safety infrastructure for protection in potential wildfire areas. These policies aim to minimize impacts on residential areas and consider safety hazards as less than significant.
- **Impact 4.12.1.2** focuses on the implementation of the General Plan in combination with other reasonably foreseeable development (based on Sacramento County, and the cities of Folsom, Elk Grove, Citrus Heights, Galt, Lodi, and Sacramento General Plans land use projections), would increase the population within the Metro Fire service area, requiring additional fire and emergency medical services and related facilities. The EIR includes General Plan policies and action items to reduce impacts from fire protection and emergency medical services. Impact 4.12.1.2 was determined to be less than significant

5.11.1.4 ENVIRONMENTAL IMPACTS

Impact 5.11-1: The proposed project would introduce new structures, residents, and workers into the Sacramento Metropolitan Fire District service boundaries; however, this increase would not require the need for additional fire protection facilities. [Threshold FP-1]

Currently, there are no built structures on the project site. The proposed project would introduce up to 120 housing units to the project site. The introduction of these units would generate approximately 322 residents to the area, according to the average 2.68 persons per household from the City's General Plan EIR. In addition, the proposed project would introduce up to 140,000 square feet of commercial uses, thus attracting employees and people to the area. Overall, the proposed project would introduce new structures and people to the area which would increase the demand for fire protection and emergency services which could potentially result in the construction of new fire facilities such as a new fire station. As noted above, the project site is not within a CAL FIRE Very High FHSZ.

Metro Fire Station #61 is the primary fire station providing service to the project site and is approximately 1.13 miles east of the project site. While the proposed project would likely increase the number of service calls and demand for fire protection services, the proposed project would be required to comply with the California Fire and Building Codes and City ordinances. The Metro Fire response goal is a four-minute travel time to at least 90 percent of all major emergencies (in addition to a 1-minuite dispatch and 1-minute turnout time) (SMFD 2022b). As the fire station is approximately 1.13 miles from the project site, the response time is anticipated to be within the standard. Compliance with the California Building Code as well as the location of the project site

to the existing fire station would allow Metro Fire to meet future service demands; therefore it is unlikely the proposed project would need to construct new fire facilities.

The City of Rancho Cordova General Plan includes Policy ISF 2.5, which would require that sufficient and adequate water flows and pressure are maintained to meet all domestic, commercial, and industrial firefighting and protection requirements. Policy ISF 2.1 requires the City to ensure sufficient capacity in fire protection and emergency medical services and that the facilities are available on time to maintain the desired service levels, avoid capacity shortages, and protect the citizens' quality of life and safety. In addition, Policy ISF 2.5 requires that new development fund its fair share portion of its impacts to all fire related services and facilities. All future development would be required to comply with Chapter 17.04 of the Rancho Cordova Municipal Code, which adopts the California Fire Code standards. Operation of future development would also need to comply with Chapter 17.12, Weed Control, of the City's Municipal Code which would reduce fire impacts and thus the need for new or altered fire protection facilities. Compliance with local regulations such as the policies in the General Plan and requirements from the City's Municipal Code would ensure that the proposed project would not overwhelm Metro Fire; therefore it is unlikely the proposed project would result in the construction of fire facilities to meet future demand.

The proposed project is not expected to result in activities that create unusual fire protection needs. Refer to Section 5.14, *Wildfire*, for specific analysis related to fire hazards. As such, any impacts are considered less than significant.

Level of Significance Before Mitigation: Impact 5.11-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.11-1 would be less than significant.

5.11.1.5 CUMULATIVE IMPACTS

Growth within the City would increase demands for fire protection and emergency services which could potentially result in the construction of new fire facilities. Other projects that are found by the City to require increases in public safety equipment, facilities, and staffing would also be required to pay fair-share payments for increased resources. Projects within the city would also be required to comply the City of Rancho Cordova's General Plan policies, such as Policy ISF 2.5, which mandates adequate water flows and pressure for firefighting and protection; Policy ISF 2.1, which ensures sufficient capacity in fire protection and emergency medical services, ensuring timely availability to maintain service levels and protect citizens' quality of life; and Policy ISF 2.5, which also mandates that new development fund its fair share of fire-related services and facilities. In addition, future development in Rancho Cordova must adhere to Chapter 17.04 of the Municipal Code, adopting California Fire Code standards, and Chapter 17.12, Weed Control, to reduce fire impacts and the need for fire protection services, including new or altered facilities. Therefore, cumulative impacts would be less than significant and impacts of the proposed project would not be cumulatively considerable.

5.11.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

5.11.1.7 MITIGATION MEASURES

No mitigation measures are required.

5.11.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.11.2 Police Protection

5.11.2.1 ENVIRONMENTAL SETTING

Regulatory Background

State

Emergency Response/Evacuation Plans

Government Code Section 8607(a) directs the California Governor's Office of Emergency Services to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. The program is intended to provide effective management of multiagency and multi-jurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: (1) Field Response, (2) Local Government, (3) Operational Area, (4) Regional, and (5) State. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The City of Rancho Cordova is generally responsible for emergencies that occur within city boundaries and has adopted an Emergency Operations Plan that is consistent with the SEMS.

California Highway Patrol

The California Highway Patrol (CHP) provides traffic regulation enforcement, emergency management, and assistance on State roadways and other major roadways in unincorporated portions of the southern Sacramento Valley area. The CHP is responsible for providing patrols on all interstates and state highways within California. The Sacramento Communications Center (SCC) is located at 3165 Gold Valley Drive in Rancho Cordova (Rancho Cordova 2006). The SCC is co-located with the California Department of Transportation (Caltrans), forming the Sacramento Regional Traffic Management Center. This cooperative effort allows for real time information to be relayed to CHP patrol personnel and appropriate resources and action to be taken without delay to mitigate traffic-related and emergency incidents (CHP 2023).

Regional

Sacramento County General Plan

On November 9, 2011, the Sacramento County Board of Supervisors adopted an updated General Plan. The updated General Plan's planning horizon looks out to 2030. The City of Rancho Cordova is covered under the County's General Plan. The Public Facilities Element contains law enforcement related policies applicable including:

- **Policy PCF-51:** Plan and develop law enforcement facilities in keeping with overall needs and the distribution of growth.

Local

Cordova Community Plan

Adopted by the Sacramento County Board of Supervisors on May 21, 2003, this document is an extension of the Sacramento County General Plan but is much more specific in terms of the objectives and implementation strategies and is intended to address issues that are most important to this community. The Plan area covers the project site. The Plan includes objectives which further help police services such as:

- **Objective PS-12:** Encourage the concept of neighborhood policing, and the formation of "Neighborhood Watch" programs.
- **Objective PS-13:** Promote a method or system for community communication for the Sheriff.
- **Objective PS-14:** Promote coordination between the Sheriff and local school districts

City of Rancho Cordova Municipal Code

Chapter 4.10: Special Business Licenses and Employee Permits

The purposes of this chapter are to establish special regulations applicable to the types of enterprises regulated hereunder, and to regulate such enterprises through a special business licensing procedure in order to protect and safeguard the health, safety, and welfare of the citizens in the city of Rancho Cordova.

Chapter 9.96: Emergency Alarms

This chapter sets an alarm permit requirement on all alarm system users in order to improve the ability of the chief of police to effectively respond to law enforcement needs and to encourage alarm system users, lessors, sellers, and manufacturers to better construct and maintain alarm systems in the city of Rancho Cordova.

City of Rancho Cordova General Plan

The following General Plan policies are identified in the General Plan relating to law enforcement services and the safety of the citizens of Rancho Cordova:

- **Policy ISF 2.1:** Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.
- **Policy ISF.2.3:** Ensure that adequate funding is available for all infrastructure and public facilities and make certain that the cost of improvements is equitably distributed.
- **Policy S.7.1:** Encourage the use of Crime Prevention Through Environmental Design (CPTED) principles in the design of projects and buildings.
- **Policy S.8.1:** Monitor and review the level of police staffing provided in the City, and ensure that sufficient staffing and resources are available to serve local needs
- **Policy S.8.2:** Develop law enforcement programs through community partnerships, which reduce, as well as prevent, crime.
- **Policy S.8.3:** Plan and develop law enforcement facilities according to overall need and the distribution of growth within the City.

Existing Conditions

The City of Rancho Cordova established a law enforcement services contract with the Sacramento County Sheriff's Office and formed the Rancho Cordova Police Department (RCPD). RCPD consists of 55 sworn officers and 7 non-sworn staff who are dedicated to serving the City of Rancho Cordova. Calls for service occurring outside of the city's boundaries but within the unincorporated area of Sacramento County are handled by the Sacramento County Sheriff's Office. Traffic complaints, concerns or collisions occurring outside the city's boundaries but within the unincorporated area of Sacramento County are handled by the California Highway Patrol. The Rancho Cordova Police Station is at 2897 Kilgore Road in the City of Rancho Cordova (RCPD 2023a). The police station is approximately 2.45 miles northeast of the project site.

The RCPD includes a Crime Analysis and Prevention Unit, Crime Suppression Unit, Homeless Outreach Team, Investigations Unit, Mobile Crisis Support Team, Patrol Operations Bureau, Problem Oriented Policing Units, Service Center, Traffic Unit, and Youth Services Unit (RCPD 2023b).

5.11.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

PP-1 Result in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

5.11.2.3 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

Among the EIR's police related impacts, Impact 4.12.2.1 focuses on the implementation of the General Plan which would increase the Planning Area population and would result in additional commercial, industrial and recreational uses in the Planning Area uses, which may result in additional law enforcement protection facilities that could result in physical environmental impacts. Impact 4.12.2.2 focuses on the neighborhood design, home design, street design, and other features associated with implementation of the General Plan could reduce the ability of the City of Rancho Cordova Police Department to enforce the law and respond to crime and other emergencies in the project area. Impact 4.12.2.3 focuses on the implementation of the General Plan and other reasonably foreseeable development in southeastern Sacramento County (based on Sacramento County land use projections) which would increase the population within the Planning Area and surrounding area and would require additional law enforcement services and related facilities under cumulative conditions.

5.11.2.4 ENVIRONMENTAL IMPACTS

Impact 5.11-2: The proposed project would introduce new structures, residents, and workers into the Rancho Cordova Police Department service boundaries; however, this increase would not require the need for additional police protection facilities or personnel. [Threshold PP-1]

The proposed project would develop up to 120 housing units which is expected to result in approximately 322 new residents coming to the project site, which would increase the demand for police services. The proposed project would also develop up to 140,000 square feet of commercial uses resulting in 280 employees,[1] which would further increase the demand for service of RCPD, which could result in the need for more police protection facilities.

The General Plan EIR states that based on the SCSD standard of one officer per 1,000 residents, an estimated total of 404 officers and 283 new officers would be required to maintain adequate service levels (Rancho Cordova 2006b, p. 4.0-13). The proposed project is not expected to result in impacts to performance objectives indicating the need for new or altered police facilities. Nonetheless, the General Plan includes policies to reduce significant impacts on police services, such as Policy ISF.2.3, "Ensure that adequate funding is available for all infrastructure and public facilities and make certain that the cost of improvements is equitably distributed." In addition, future residents and businesses would need to comply with the City's Municipal Code, Chapter 4.10, Special Business License and Employee Permits, and Chapter 9.96, Emergency Alarms, which would help reduce demand on police services. Compliance with local regulations such as the policies in the City's General Plan and requirements from the City's Municipal Code would ensure that the proposed project would not overwhelm the RCPD; therefore it is unlikely the proposed project would result in the construction of police protection facilities to meet future demand. As such, impacts would be less than significant.

[1] The FBSP and General Plan EIR is silent on expected job growth within the Folsom Boulevard planning area, while the General Plan EIR projected buildout expects approximately 11,529 commercial jobs within the city and 5,764,627 square feet of commercial development at buildout (General Plan EIR Table 3.-1). This results in approximately 2 employees per 1,000 square feet. Thus, the community commercial buildings on-site are projected to generate approximately 280 jobs.

Level of Significance Before Mitigation: Impact 5.11-2 would be less than significant

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.11-2 would be less than significant.

5.11.2.5 CUMULATIVE IMPACTS

Growth in population within the City would increase demand for police protection services, which could, in turn, increase the need for new or altered police facilities. However as mentioned in Impact 5.11-2, compliance with existing regulations such as the polices and the General Plan and regulations in the Municipal Code would ensure the proposed project would not result in impacts to performance objectives indicating the need for new or altered police facilities. Cumulative impacts would be less than significant and impacts of the proposed projects would not be cumulatively considerable.

5.11.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

5.11.2.7 MITIGATION MEASURES

No mitigation measures are required.

5.11.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.11.3 School Services

5.11.3.1 ENVIRONMENTAL SETTING

Regulatory Background

State

California State Assembly Bill 2926: School Facilities Act of 1986

To assist in providing school facilities to serve students generated by new development, Assembly Bill (AB) 2926 was enacted in 1986 and authorizes a levy of impact fees on new residential and commercial/industrial development. The bill was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. to the Government Code. Under this statute, payment of impact fees by developers serves as CEQA mitigation to satisfy the impact of development of school facilities.

California Senate Bill 50

Senate Bill (SB) 50, passed in 1998, provides a comprehensive school facilities financing and reform program and enables a statewide bond issue to be placed on the ballot. Under the provisions of SB 50, school districts are authorized to collect fees to offset the costs associated with increasing school capacity as a result of development and related population increases. The funding goes to acquiring school sites, constructing new school facilities, and modernizing existing school facilities. SB 50 establishes a process for determining the amount of fees developers would be charged to mitigate the impact of development on school districts from increased enrollment. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

Under the legislation, there are three levels of developer fees that may be imposed upon new development by the governing school district. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the state provides the remaining half. To qualify for Level II fees, the governing board of the school district must adopt a School Facilities Needs Analysis and meet other prerequisites in accordance with Section 65995.6 of the California Government Code. Level III fees apply if the state runs out of bond funds, allowing the governing school district to impose 100 percent of the cost of school facility or mitigation minus any local dedicated school monies on the developer.

Local

City of Rancho Cordova General Plan

The City of Rancho Cordova General Plan contains policies that support the City's schools:

- **Policy ISF.2.2:** Coordinate with independent public providers, including schools, parks, and recreation, utility, transit, and other service districts, in developing service and financial planning strategies)
- **Policy ISF.2.3:** Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed

Development Impact Fees

Pursuant to Government Code Section 65995, on April 28, 2022, the FCUSD increased development fee rates as follows: $6.64 per square foot for residential construction and $0.78 per square foot for commercial/industrial construction (FCUSD 2023a).

Existing Conditions

The City of Rancho Cordova is served by the Folsom Cordova Unified School District (FCUSD), Elk Grove Unified School District, San Juan Unified, and the Sacramento City Unified. However, according to the City's General Plan DEIR, the project site is within the service boundary of FCUSD (Rancho Cordova 2006).

5. Environmental Analysis
PUBLIC SERVICES

As shown in Table 5.11-2, *FCUSD Schools,* FCUSD is made up of 37 public schools, with one preschool, 22 elementary schools, four middle schools, four high schools, plus continuation high schools, adult education and other alternative centers. The current capacity of the FCUSD is 22,762 K-12 students (FCUSD 2022).

Table 5.11-2 FCUSD Schools

School Name/Location	2021-2022 Enrollment
Preschool/Elementary Schools	
Blanche Sprentz *249 Flower Dr.*	362
Carl H. Sundahl *9932 Inwood Rd.*	324
Cordova Gardens *2400 Dawes St.*	262
Cordova Meadows *2550 La Loma Dr.*	350
Cordova Villa *10359 South White Rock Rd.*	443
Empire Oaks *1830 Bonhill Dr.*	394
Folsom Cordova K-8 Community Charter *4420 Monhegan Way*	256
Folsom Hills *106 Manseau Dr.*	489
Golden Ridge 735 Halidon Way	508
Mangini Ranch *4640 Sparrow Dr.*	316
Mather Heights *4370 Mather School Rd.*	328
Natoma Station *500 Turnpike Dr.*	471
Navigator *10679 Bear Hollow Dr.*	379
Oak Chan Elementary *101 Prewett Dr.*	454
Peter J. Shields *10434 Georgetown Dr.*	315
Rancho Cordova Elementary 2562 Chassella Way	434
Riverview STEM *10700 Ambassador Dr.*	337
Russell Ranch *375 Dry Creek Rd.*	625
Sandra J. Gallardo *775 Russi Rd.*	363
Theodore Judah *101 Dean Way*	593

Table 5.11-2 FCUSD Schools

School Name/Location	2021-2022 Enrollment
White Rock *10487 White Rock Rd.*	415
Williamson *2275 Benita Dr.*	473
Middle Schools	
Folsom *500 Blue Ravine Rd.*	1,308
Mills *10439 Coloma Rd.*	745
Sutter *715 Riley St.*	1,482
W.E. Mitchell *2100 Zinfandel Dr.*	803
High Schools	
Cordova *2239 Chase Dr.*	1,973
Folsom *1655 Iron Point Rd.*	2,675
Folsom Lake *1655 Iron Point Rd.*	66
Vista del Lago High *1970 Broadstone Pkwy.*	1,785
Adult/Alternative/Continuation	
Folsom-Cordova Adult *10850 Gadsten Way*	975[1]
Innovations Academy *10886 Gadsten Way*	294
Kinney (Continuation) *2710 Kilgore Rd.*	74
Prospect Community Day *2710 Kilgore Rd*	13
Reymouth Special Education Center *1965 Birkmont Dr.*	N/A
Walnutwood High (Independent Study) *10848 Gadsten Way*	185
Total	19,417

Source: CDE 2022, 2023.
[1]FCUSD 2023b.

5.11.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

SS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for school services.

5.11.3.3 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

Among the EIR's School facilities' related impacts, impact 4.12.6.1 focuses on the implementation of the project which would increase student enrollment in the Planning Area and require the construction of new schools and related facilities to serve the anticipated demand. Impact 4.12.6.2 focuses on the implementation of the General Plan in combination with other reasonably foreseeable development (based on General Plan land use projections for Sacramento County, Folsom, and Elk Grove) proposed in eastern Sacramento County would result in a cumulative increase in student enrollment and require additional schools and related facilities to accommodate the growth.

5.11.3.4 ENVIRONMENTAL IMPACTS

Methodology

Evaluation of potential school facility impacts was based on information from FCUSD's April 2022 School Facility Needs Analysis. The impact analysis focuses on whether those impacts would have a significant effect on the physical environment.

Impact 5.11-3: The proposed project would generate 57 new students into the FCUSD which would impact the school enrollment capacities of area schools.

The proposed project would develop up to 60 multifamily affordable apartments and 60 townhouse-style homes, which would result in approximately 322 new residents into the project site and increase the demand for school facilities. Table 5.11-3, *FCUSD Student Generation Rates and Student Generation,* shows the generation rates and the expected number of students to be generated as a result of the implementation of the proposed project.

Table 5.11-3 FCUSD Student Generation Rates and Student Generation

Grade Level	Generation Factor	Additional Units	Students Generated
Single-Family Attached			
K-5	0.35	60	21
6-8	0.15		9
9-12	0.14		8.4
Multifamily			
K-5	0.19	60	11.4
6-8	0.05		3
9-12	0.07		4.2
		Total	**57**

Source: FCUSD 2022.

As shown in Table 5.11-3, the proposed project would result in 57 new students in the FCUSD. Currently, the City establishes development impact fees for a building permit, and the applicant works with the school district to determine the precise amount of school impact fees. Once the fee has been paid in full, FCUSD prepares and provides a certificate to the City demonstrating payment of the fee (FCUSD 2023a). Payment of fees in compliance with Government Code Section 65996 fully mitigates all impacts to school facilities. Payment of impact fees in compliance with SB 50 would reduce potential impacts to an acceptable level.

The proposed project would not increase the number of residences beyond what was analyzed in the 2006 General Plan EIR. As stated previously, a maximum of 120 residential units would be developed. As a result, it is not anticipated that the number of students would change under the proposed project. The proposed project would not increase the number of residential units above what has already been accounted for in the 2006 General Plan EIR, so it would not increase the number of students potentially enrolling at FCUSD past what has already been analyzed. Therefore it is unlikely the proposed project would require the need for the construction of a new school or altered school to meet future demand. In addition, as a standard condition of approval, developers will be required to pay impact fees to help offset any costs associated with an increase in student enrollment. Therefore, impacts on school services would be less than significant.

Level of Significance Before Mitigation: Impact 5.11-3 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.11-3 would be less than significant.

5.11.3.5 CUMULATIVE IMPACTS

Growth in population in the city would increase demand for school services, which could result in the need for new or altered school facilities. The project is not proposing to increase the number of residential units above what was already accounted for in the 2006 General Plan. As a result, the number of students enrolling at FCUSD, which includes all of the elementary schools, junior high schools, and high schools in the city, would

not increase beyond what has been anticipated in the general plan. As with the proposed project, other projects would have to pay impact fees in compliance with Government Code Section 65996, which would be available for FCUSD's operations and construction of new and/or expanded school facilities. Other projects that are found by the City to require increases in school facilities and staffing would also be required to make fair-share payments for increased resources. Cumulative impacts would be less than significant after the payment of impact fees by other projects and impacts of the proposed project would not be cumulatively considerable.

5.11.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

5.11.3.7 MITIGATION MEASURES

No mitigation measures are required.

5.11.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.11.4 Library Services

5.11.4.1 ENVIRONMENTAL SETTING

Regulatory Background

Local

City of Rancho Cordova General Plan

- **Policy ISF.3.2:** Support enhanced library services for existing and future residents and employees that exceed regional and national standards.

City of Rancho Cordova Municipal Code

Chapter 16.83: Development Impact Fees to Finance Cost of Public Facilities

Section 16.83.065, Sunrise Douglas Community Plan Library Fund: Elimination and Transfer to CFF Library Fund, states the Sunrise Douglas Community Plan Library Fund is eliminated and required collected library development fees to be transferred to the Capital Facilities Fund and under the authority of the Sacramento Public Library. Section 16.83.100, Payment of development fees, states that development fees imposed pursuant to this chapter shall be paid by the property owner to the Rancho Cordova public works department in an amount calculated under this chapter and the fees shall be calculated upon the approval of subdivision maps and shall be paid upon issuance of building permits.

Existing Conditions

The Rancho Cordova Branch Library is part of the Sacramento Public Library community library network. The Rancho Cordova Branch Library is at 9845 Folsom Blvd, approximately a mile west of the project site. The Library provides amenities such as a book drop in the main entrance, assistive communication devices, 18 internet and Microsoft Office workstations, one early learning workstation, an internet printing station, document station including fax machine, photocopier/scanner, and a meeting room with a capacity of 94 people (SPL 2023a).

5.11.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

LS-1 Result in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.

5.11.4.3 PLANS, PROGRAMS, AND POLICIES

No Impacts related to Library facilities were mentioned in the City of Rancho Cordova General Plan EIR 2006.

5.11.4.4 ENVIRONMENTAL IMPACTS

Impact 5.11-4: The proposed project would introduce new residents into the Sacramento Public Library System/Rancho Cordova Library service boundaries, thereby increasing the requirement for library facilities and personnel. [Threshold LS-1]

The Rancho Cordova Branch Library is approximately a mile west of the project site. The proposed project would result in the addition of 322 new residents to the project site, thus increasing the demand for library services which could increase the demand for library facilities and personnel.

It should be noted that the Sacramento Public Library System also provides a wide range of electronic and digitized resources that do not require physical library space, including eBooks and audiobooks (SPL 2023b). The proposed project would not warrant the construction of a new library or the expansion of the Rancho Cordova Branch Library as the proposed demand for library services could be accommodated through the use of electronic and digitized resources. Funding would be required to provide the additional books to meet the service standard. Generally, impact fees are assessed on new development to help pay for public infrastructure required to accommodate the new development. As mentioned in Chapter 16.83.100, Payment of development fees, of the City's Municipal Code, property owners must pay development fees, and fees are due upon subdivision map approval and building permit issuance. Funding for library services comes primarily from property tax revenue, as well as library fines and fees collected from patrons, and state, federal, or government aid. As development occurs, property tax revenue would grow proportionally with the new property tax collections. Although the proposed project could increase the demand for library services and thus potentially

require the need for expanded library facilities, the City's Municipal Code includes a provision and process that would allow additional library facilities to be constructed with impact fees from the project applicant of the proposed project. Therefore, the proposed project would not have a substantial impact associated with the provision of new or physically altered governmental facilities; the impacts of the proposed project would be less than significant.

Level of Significance Before Mitigation: Impact 5.11-4 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.11-4 would be less than significant.

5.11.4.5 CUMULATIVE IMPACTS

Growth in population within the city would increase demand for library services which may result in altered or new library facilities in order to meet the increased demand. As with the proposed project, other projects would have to pay fees and property taxes which would be available for the operations and development of new and/or expanded library facilities. Other projects that are found by the City to require increases in library facilities and staffing would also be required to make fair-share payments to the City for increased resources. Cumulative impacts would be less than significant after the payment of impact fees and property taxes by other projects and impacts of the proposed project would not be cumulatively considerable.

5.11.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

5.11.4.7 MITIGATION MEASURES

No mitigation measures are required.

5.11.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.11.5 References

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5.12 RECREATION

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Mills Crossing project to result in impacts to recreation facilities and parks in the City of Rancho Cordova and its sphere of influence (SOI).

5.12.1 Environmental Setting

5.12.1.1 REGULATORY BACKGROUND

State

California Public Park Preservation Act

The primary instrument for protecting and preserving parkland is California's Public Park Preservation Act of 1971. Under the Public Resources Code, cities and counties may not acquire any real property that is in use as a public park for any nonpark use unless compensation, land, or both are provided to replace the parkland acquired. This provides for no net loss of parkland and facilities.

Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid, and land conveyed directly to the local public agencies that provide parks and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup 2002).

Originally, the Quimby Act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3–5 acres per 1,000 residents). In some California communities, the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments.

In 1982, the act was substantially amended via Assembly Bill (AB) 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. In other words, AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed (Westrup 2002).

Cities or counties with a high ratio of parkland to inhabitants can set a standard of 5 acres per 1,000 residents for new development. Cities or counties with a lower ratio can only require the provision of up to 3 acres of parkland per 1,000 residents. The calculation of a city's or county's parkland-to-population ratio is based on a

comparison of the population count of the last federal census to the amount of city- or county-owned parkland.

Local

City of Rancho Cordova General Plan

The Parks and Trails Elements of the City's General Plan provides the following policies and actions intended to achieve the City's vision for open spaces that are accessible to the community.

- **Goal OSPT.1:** Create a premier system of public parks and recreation programs that meet the needs of all residents.
    - **Policy OSPT.1.1:** Review all proposals for new residential development to ensure each project complies with the City's minimum standards for parkland dedication and is consistent with Cordova Recreation and Park District goals.
        - **Action OSPT.1.1.1:** Require developers of all new residential development to dedicate parkland at a rate of five acres of land per 1,000 population. When necessary, provide an in-lieu payment option, which allows the developer to fund the acquisition of acceptable land equal to the dedication requirement. Calculate required parkland dedication exclusive of required open space.
    - **Policy OSPT.1.2:** Coordinate with the Cordova Recreation and Park District to ensure that parks are provided, developed, and operated in a way that ensures that the City's parks goals are achieved throughout the community.
- **Goal OSPT.2:** Establish A System Of Open Space Areas That Connect All Parts Of The Community And Provide Opportunities For Passive And Neighborhood-Based Recreation.
    - **Policy OSPT.2.1:** Review all proposals for new residential development to ensure compliance with the City's minimum open space standards.
        - **Action OSPT.2.1.2:** Require developers of all new residential development to dedicate parkland at a rate of 1.75 acres of land per 1,000 population, generally comprised of:
            - Open Turf, Tree Canopy and Dog Parks;
            - Neighborhood Greens; and
            - Communitywide Open Space

City of Rancho Cordova Municipal Code

Chapter 22.40: Park and Recreation Dedication and Fees

This chapter sets requirements for paying a fee in lieu of dedication, or a combination of dedication and in-lieu fees for park and recreation dedications. Municipal Code Section 22.40.035, "Calculating area of land dedication," states that if land dedication is required for a neighborhood and community park, the owner shall

dedicate land by multiplying the number of dwelling units to the factors determined from an analysis of population trends and studies of Rancho Cordova which, when multiplied by the number of dwelling units permitted in the subject area, will produce five acres per 1,000 population to be devoted to neighborhood or community park facilities.

Cordova Recreation and Park District Master Plan

Cordova Recreation and Parks Department (CRPD) prepares the Cordova Recreation and Park District Facilities Master Plan (Master Plan), which outlines the district's projected needs for a period of ten years and strategies for fulfilling those needs. The current 2014 Master Plan focuses on development in incorporated areas.

5.12.1.2 EXISTING CONDITIONS

The CRPD has the primary responsibility for providing and maintaining recreation facilities and services. Table 5.12-1, *CRPD's Parks and Recreation Facilities* shows the locations, acreages, and amenities of these facilities. As shown in Table 5.12-1, there are a total of 32 park and recreational facilities with a total of 295.5 acres (CRPD 2012, 2023b). CRPD also anticipates future park development of Exploration Park, Goldrush Park, Gantline 208/Arista Del Sol Community Park, Hummingbird Park, W. H. Williamson Park, Federspiel Park Walkway Improvement, and Rosemont Community Park Sports Courts (CRPD 2023c). CRPD is currently working on a districtwide Optimized Parks, Facilities and Recreation Plan that provides guidance over the next 10 years and began public review in fall of 2022 (CRPD 2023a). CRPD's standard for dedication of parkland is 5 acres per 1,000 residents within the city to be devoted to neighborhood and community parks. Table 5.12-1 shows there are currently 295.5 acres of available recreation facilities. According to the Department of Finance's estimates, the current population in Rancho Cordova is 80,359 (DOF 2023). Based on existing population and parkland, the City needs approximately 401.8 acres[1] of parkland to accommodate its current population.

Currently, the project is occupied by paved areas with patches of vegetation. No parks or recreation facilities exist on site.

[1] 5 acres/1,000 persons = 0.005 acre/person
0.005 acre/person x 80,359 (population DOF 2023) = 401.8 acres needed

5. Environmental Analysis
RECREATION

Table 5.12-1 CRPD's Parks and Recreation Facilities

	Facility Name	Acres	Location	Amenities
1	Ahlstrom Park	7	2425 Zinfandel Drive Rancho Cordova, CA	baseball field, BBQ, drinking fountain, 4 picnic areas, playground
2	Argonaut Park (N)	6	11825 Herodian Drive Rancho Cordova, CA	baseball field, basketball court, 2 BBQ, climbing wall, drinking fountain, pavilion, 2 picnic areas, playground
3	Cobblestone Park (N)	1.6	10900 Barden Drive Rancho Cordova, CA 95670	Drinking fountain, fitness station, multiuse field, open grass area, 3 picnic areas, playground
4	Countryside Park (N)	2	3240 Glenmoor Drive Sacramento, CA	3 BBQ, drinking fountain, multiuse field, 3 picnic areas, playground
5	Cypress Grove Park (N)	1.1	4047 Cypress Grove Drive	multiuse field, open grass, 2 picnic areas
6	Dave Roberts Community Park	13	10805 Mapola Way Rancho Cordova, CA	baseball field, 3 BBQ, drinking fountain, lighting, multiuse field, parking lot, playground
7	Eagle's Nest Park (N)	4	11810 Chrysanthy Boulevard Rancho Cordova, CA	basketball court, drinking fountain, lighting, multiuse field, pavilion, playground, 2 tennis courts
8	Federspiel Park (N)	5	2549 Chassella Way Rancho Cordova, CA	2 BBQ, drinking fountain, open grass area, 3 picnic areas, playground, rental available, soccer field
9	Hagan Community Dog Park	2.5	2197 Chase Dr. Rancho Cordova, CA 95670	dog park, drinking fountain, open grass area, parking lot
10	Hagan Community Park	80	2197 Chase Dr. Rancho Cordova, CA 95670	athletic field, 3 baseball fields, 15 BBQ, dog park, drinking fountain, 2 horseshoe courts, multiuse field, open grass area, parking lot, pavilions, 24 picnic areas, 3 playgrounds, rental available, restrooms, 2 soccer field, 4 tennis courts, The HYDE Out Teen Center, Hagan Community Center, Hagan Community Barn, Cordova Community Pool
11	Heron Landing Community Park	20	Justinian Drive and Sunrise Boulevard Rancho Cordova, CA	athletic field, 2 baseball fields, basketball court, BBQ, drinking fountain, lighting, multiuse field, open grass area, parking lot, 2 pavilions, 5 picnic areas, 2 playgrounds, rental available, restrooms, showers, soccer field, 2 soft ball fields, spray park, tennis court
12	Hillside Park (N)	8	3566 Rockdale Drive Rancho Cordova, CA 95670	basketball court, drinking fountain, multiuse field, open grass area, 2 pavilions, 2 playgrounds, trail access
13	Kavala Ranch Park	4.8	5100 Azalea Park Drive Rancho Cordova, CA	basketball court, 2 BBQ, drinking fountain, multiuse field, open grass area, pavilion, playground, restrooms
14	Labyrinth Community Park	7	12770 Glass Beach Drive Rancho Cordova, CA 95742	2 BBQ, drinking fountain, fitness station, multiuse field, open grass area, pavilion, playground, rental available, restrooms
15	Larchmont-Rossmoor Park (N)	3	10708 Ambassador Drive Rancho Cordova, CA	BBQ, drinking fountain, multiuse field, open grass area,2 picnic area, playground, rental available

Table 5.12-1 CRPD's Parks and Recreation Facilities

	Facility Name	Acres	Location	Amenities
16	Lincoln Village Community Park	17	3480 Routier Road Sacramento, CA	baseball field, basketball court, climbing wall, fitness station, 2 horseshoe courts, lighting, multiuse field, open grass area, parking lot, picnic area, playground, rental available, Lincoln Village Community Pool
17	Mather Sports Complex	32.1	3755 Schriever Ave. Mather, CA 95655	administrative offices, athletic field, baseball field, 4 basketball courts, drinking fountain, fitness station, 3 multiuse fields, parking lot, recreation center, rental available, restrooms, showers, skate park, 2 soccer fields, sports center
18	Prospect Hill Park	7	11840 Prospect Hill Drive Rancho Cordova, CA	basketball court, 3 BBQs, multiuse field, 4 picnic areas, playground, rental available, soccer field
19	Pyramid Peak Park	2	4053 Red Blush Way Rancho Cordova, CA 95742	BBQ and picnic area
20	Renaissance Park	1.7	3125 Mowbray Way Rancho Cordova, CA	basketball court, drinking fountain, pavilion, playground
21	Sandpiper Park	5	11830 Appolon Drive Rancho Cordova, CA	2 BBQs, drinking fountain, multiuse field, open grass area, pavilion, 2 playgrounds, rental available, trail access
22	Sonoma Park	4	10750 Agria Court Rancho Cordova, CA	multiuse field, open grass area, pavilion, 5 picnic areas, 2 playgrounds
23	Sparrow Park	2.5	11938 Montron Way Rancho Cordova, CA 95742	multiuse field, pavilion, playground
24	Stone Creek Community Park	21	3625 Spot Drive Rancho Cordova, CA	baseball field, basketball court, 2 BBQs, drinking fountain, 4 multiuse fields, open grass area, outdoor amphitheater, parking lot, 2 pavilions, 14 picnic areas, 2 playgrounds, rental available, restrooms, showers, skate park, 3 soccer fields
25	Sunridge Park	7	4041 Borderlands Drive Rancho Cordova, CA	basketball court, BBQ, multiuse field, open grass area, pavilion, 2 picnic areas, playground, showers, spray park, trail access
26	Sunriver Park	5	11120 Moose River Court Rancho Cordova, CA	2 basketball courts, 3 multiuse fields, open grass area, 2 picnic areas, playground, rental available, trail access
27	Taylor Park	3	2238 West La Loma Drive Rancho Cordova, CA	3 BBQs, drinking fountain, multiuse field, open grass area, 3 picnic areas, playground
28	Village Green	3.6	3141 Bridgeway Drive Rancho Cordova, CA	drinking fountain, multiuse field, open grass area, outdoor amphitheater, 10 picnic areas, rental available, restrooms, showers, spray park
29	Tuscany Park	5	3460 Corvina Drive Rancho Cordova, CA	2 BBQs, multiuse field, open grass area, pavilion, 8 picnic areas, playground, rental available, soccer field
30	Waterbrook Park	0.1	10849 Waterbrook Drive Rancho Cordova, CA	drinking fountain and playground

5. Environmental Analysis
RECREATION

Table 5.12-1 CRPD's Parks and Recreation Facilities

	Facility Name	Acres	Location	Amenities
31	White Rock Community Park	14	10488 White Rock Rd. Rancho Cordova, CA 95670	2 basketball courts, 2 BBQs, multiuse fields, open grass area, pavilion, 4 picnic areas, playground, rental available, restrooms, soccer field, tennis court
32	White Rock Splash Park	0.53	10488 White Rock Rd. Rancho Cordova, CA 95670	drinking fountain, open grass area, parking lot, 2 picnic areas, restrooms, showers, spray park, 2 water slides
	Total	**295.5**		

Sources: CRPD 2012, 2023b.

5.12.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

R-1 Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

R-2 Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

5.12.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR found that implementation of the 2006 General Plan would increase demand for existing facilities and require additional parks and recreational facilities to accommodate growth; however, this impact was considered to be less significant impact.

5.12.4 Environmental Impacts

5.12.4.1 IMPACT ANALYSIS

Impact 5.12-1: The proposed project would increase the use of existing neighborhood and regional parks and other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated [Threshold R-1]

The proposed project would add up to 120 housing units, which would add approximately 322 residents to the area, according to the average 2.68 persons per household from the General Plan EIR. The proposed project would require 1.6 acres[2] of parkland. Although the proposed project would introduce up to 2.5 acres of public open space with 1.3 to 1.5 acres of Neighborhood and Community Greens and 0.75 to 1.0 acres of Plaza and Green Space, as mentioned in the General Plan EIR, additional community amenities such as landscaped corridors, parkways, paseos, multiuse trails, and accessible open space are considered critical for defining a community and should not be used to fulfill the parkland standard (Rancho Cordova 2006, p. 4.12-87). Therefore, the proposed project would remain deficient in meeting the required parkland standard.

However, the proposed project would need to comply with the City's General Plan Policy OSPT.1.1 and Policy OSPT.2.1, which require review of all new residential development to ensure compliance with the City's parkland and open space standards. Municipal Code Chapter 22.40, Park and Recreation Dedication Fees, would require the subdivider to provide either the dedication of land or fees to ensure adequate parkland.

[2] 0.005 acre/person x 322 persons (proposed project) = 1.6 acres (project need).

These policies would aid in attaining the necessary funding for the acquisition, development and maintenance of new parkland and existing park and recreational facilities. Implementation of the General Plan policies and the City's Municipal Code discussed above would ensure that the proposed project's generation of new residents such that substantial physical deterioration of the facility would not occur or be accelerated.

Level of Significance Before Mitigation: Impact 5.12-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.12-1 would be less than significant.

Impact 5.12-2: Project implementation would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. [Threshold R-2]

The proposed project would introduce up to 2.5 acres of public open space with 1.3 to 1.5 acres of Neighborhood and Community Greens and 0.75 to 1.0 acre of Plaza and Green Space. However, as noted in Impact 5.12-1, the proposed project would need to comply with the City's General Plan Policy OSPT.1.1 and Policy OSPT.2.1, which require review of all new residential development to ensure compliance with the City's parkland and open space standards. The project would comply with the City's Municipal Code, Chapter 22.40, Park and Recreation Dedication Fees, which would require the developer to pay the park development fees or dedicate parkland. Although the proposed project would require the construction or expansion of recreation facilities, the proposed project would comply with the City's Municipal Code and goals in the General Plan; therefore no adverse physical effect would occur.

Level of Significance Before Mitigation: Impact 5.12-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.12-2 would be less than significant.

5.12.5 Cumulative Impacts

The geographic context for the analysis of cumulative recreation impacts is the City of Rancho Cordova. The proposed project, in combination with other proposed, approved, and reasonably foreseeable development in the City, would contribute to a cumulative increase in the demand for parks and recreational facilities. The proposed project would provide parkland and associated facilities to its residents. The proposed project would be required to pay fees pursuant to Chapter 22.40 of the City's Municipal Code. In addition, projects would need to comply with the goals and policies established in the City's General Plan, such as Policy OSPT.1.1, which mandates a review of all residential development proposals to ensure they meet the City's parkland dedication standards and align with Cordova Recreation and Park District objectives; Action OSPT.1.1.1 requires developers of new residential developments to dedicate five acres of land per 1,000 population, with

an in-lieu payment option provided when needed; and Policy OSPT.2.1 mandates the review of all residential development proposals to ensure adherence to the City's minimum open space standards. Therefore, compliance with the stated regulations in the Municipal Code and General Plan would provide sufficient resources for the design, construction, and maintenance of new parks and associated facilities needed to accommodate future growth in the city. Therefore, the proposed project's contribution to this impact would be less than cumulatively considerable.

5.12.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant.

5.12.7 Mitigation Measures

No mitigation measures are required.

5.12.8 Level of Significance After Mitigation

Impacts would be less than significant.

5.12.9 References

Cordova Recreation and Parks Department (CRPD). 2012. District Inventory & Assessment Plan: Final Draft. https://crpd.com/wp-content/uploads/FINAL-Cordova-RPD-Inventory-Assessment-Plan.pdf

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5.13 TRIBAL CULTURAL RESOURCES

This section describes the potential impacts on tribal cultural resources associated with the adoption and implementation of the proposed project. This section describes the regulatory framework and existing conditions in the project site related to tribal cultural resources and the potential impacts of the project on tribal resources.

The analysis in this section is based in part on the following information:

- *Archaeological Resources Inventory Report for the Mills Crossing Project*, ECORP Consulting Inc., March 2023

A complete copy of this report is included as Appendix 5.3-1 to this Draft Environmental Impact Report (DEIR).

5.13.1 Environmental Setting

5.13.1.1 REGULATORY BACKGROUND

This section summarizes key federal, state, and local regulations, plans, and programs that provide protection and management of tribal cultural resources to the City of Rancho Cordova and the project site.

Federal

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites that are on federal and Native American lands.

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106, Protection of Historic Properties, of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties. Section 106 ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (United States Code, Title 25, Sections 3001 et seq.) is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Native American tribes.

State Regulations

California Public Resources Code

Archaeological, paleontological, and historical sites are protected under a wide variety of State policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and the California Environmental Quality Act (CEQA).

PRC Sections 5020 to 5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the California Register of Historical Resources and is responsible for designating State Historical Landmarks and Historical Points of Interest.

PRC Sections 5079 to 5079.65 define the functions and duties of the Office of Historic Preservation, which administers federal- and State-mandated historic preservation programs in California as well as the California Heritage Fund.

PRC Sections 5097.9 to 5097.991 provide protection to Native American historical and cultural resources and sacred sites; identify the powers and duties of the Native American Heritage Commission (NAHC); require that descendants be notified when Native American human remains are discovered; and provide for treatment and disposition of human remains and associated grave goods.

California Health and Safety Code

The discovery of human remains is regulated per California Health and Safety Code Section 7050.5, which states that:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation…until the coroner…has determined…that the remains are not subject to…provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible…. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and…has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC).

California Register of Historical Resources

The California Register of Historical Resources (California Register) is the State version of the National Register of Historic Resources program (see also Chapter 5.3, *Cultural Resources*). It was enacted in 1992 and became official January 1, 1993. The California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Resources that may be eligible for listing include

buildings, sites, structures, objects, and historic districts. According to PRC Section 5024.1(c), a resource may be listed as a historical resource in the California Register if it meets any of the four National Register criteria:

- **Criterion 1:** Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- **Criterion 2:** Associated with the lives of persons important to local, California, or national history.
- **Criterion 3:** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
- **Criterion 4:** Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

California Senate Bill 18

Senate Bill (SB) 18 on Traditional Tribal Cultural Places was signed into law in September 2004 and went into effect on March 1, 2005. SB 18 places requirements on local governments for developments in or near traditional tribal cultural places (TTCP) (Burton, Chapter 905, Statutes of 2004). SB 18 requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving TTCPs. SB 18 goes into effect with a proposed amendment or adoption of a general plan or a specific plan, or the designation of open space. The local government sends proposal information to the NAHC and requests contact information for tribes with traditional lands or places located in a geographic area affected by proposed changes. The Final Tribal Guidelines recommend that the NAHC provide written information as soon as possible but no later than 30 days after receiving notice of the project to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to a local government if they want to consult with the local government to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by the NAHC who have requested consultation, or it may not. If consultation occurs and the NAHC, the tribe, and interested parties agree on the mitigation measures necessary for the proposed project, it would be included in the project's EIR. If both the City and the tribe agree that adequate mitigation or preservation measures cannot be taken, then neither party is obligated to take action.

Per SB 18, the law requires a City or County to consult with the NAHC and any appropriate Native American tribe for the purpose of preserving relevant TTCP prior to the adoption, revision, amendment, or update of a city's or county's general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advise that SB 18 requirements extend to specific plans as well, since State planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code Section 65453). In addition, SB 18 provides a new definition of TTCP, requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies or the site must be shown to

actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities. In addition, SB 18 also amended Civil Code Section 815.3 and added California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources into the CEQA process (Gatto 2014). AB 52 required an update to Appendix G (Initial Study Checklist) of the CEQA Guidelines to include questions related to impacts to tribal cultural resources. It requires tribal cultural resources to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a Notice of Preparation of an EIR or Notice of Intent to adopt a Negative Declaration or Mitigated Negative Declaration on or after July 1, 2015, are subject to AB 52. A significant impact on a tribal cultural resource is considered a significant environmental impact, requiring feasible mitigation measures.

Tribal cultural resources must have certain characteristics:

1) Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (PRC Section 21074(a)(1))

2) The lead agency, supported by substantial evidence, chooses to treat the resource as a tribal cultural resource. (PRC Section 21074(a)(2))

The first category requires that the tribal cultural resource qualify as a historical resource according to PRC Section 5024.1, which states that the California Register is an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change. The second category gives the lead agency discretion to qualify that resource—under the conditions that it supports its determination with substantial evidence and considers the resource's significance to a California tribe. The following is a brief outline of the process (PRC Sections 21080.3.1 to 3.3).

1) A California Native American tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.

2) Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.

3) A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.

4) The lead agency must initiate consultation within 30 days of receiving the request from the tribe.

5) Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a tribal cultural resource, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.

6) Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on tribal cultural resources and discuss feasible alternatives or mitigation that avoid or lessen the impact.

Local Regulations

The Cultural and Historical Resources Element of the City of Rancho Cordova 2006 General Plan seeks to identify and protect locally important sites, buildings, and cultural/tribal resources. The following policies are relevant to tribal cultural resources:

- **Policy CHR 1.1.** Establish, support, and fund programs that enhance Rancho Cordova's sense of community and identity, such as the collection of oral histories; genealogical research; and the acquisition of collections of historic artifacts, photographs, memorabilia, or other information relevant to the history of the City.

- **Policy CHR 1.2.** Establish and promote programs that identify, maintain, and protect buildings, sites, or other features of the landscape possessing historic or cultural significance.

- **Policy CHR 1.3.** Establish review procedures for development projects that recognize the history of the area in conjunction with State and federal laws.

5.13.1.2 EXISTING CONDITIONS

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious sites, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites. Refer to Chapter 5.3, *Cultural Resources*, of this EIR for further discussion of the tribal cultural resources environmental setting.

Natural Setting

The project site is in northern Sacramento County in the Great Valley geographic province of Northern California. The Great Valley is bound by the Coast Ranges to the west and the Sierra Nevada to the east. The American River, approximately 4,000 feet west of the project site, flows northeast to southwest connecting to the Sacramento River. The Cordova Creek is approximately 0.5 miles north of the project site.

The project site is relatively flat with elevation ranges from approximately 77 to 75 feet above mean sea level. The geology of the project site and vicinity consists of sedimentary deposits of the Pleistocene-Holocene marine and nonmarine sedimentary rocks and includes alluvium, lake, playa, and terrace deposits.

Cultural Setting

The Sacramento region includes the current project site that was inhabited by the Nisenan or Southern Maidu. Nisenan inhabited the drainages of the Yuba, Bear, and American Rivers, and the lower reaches of the Feather River, extending from the east banks of the Sacramento River on the west to the mid to high elevations of the western flank of the Sierra Nevada to the east. The territory extended from the area surrounding the current City of Oroville on the north to a few miles south of the American River in the south, the Sacramento River on the west, and in the east it extended to a general area within a few miles of Lake Tahoe.

Records Search Methods

ECORP requested a records search for the Project Area at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) at California State University, Sacramento, on January 17, 2023. The search aimed to determine the extent of previous surveys within an 800-meter radius of the proposed project location and whether pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist in the area. The study reviewed official records, maps, and historic references for archaeological sites and surveys in Sacramento County. Additional references and literature are included in Appendix 5.3-1 of the DEIR.

Sacred Lands File

ECORP contacted the California NAHC on January 17, 2023, to request a search of the Sacred Lands File for the project site. This search determines whether the California Native American tribes within the project site have recorded Sacred Lands because the Sacred Lands File is populated by members of the Native American community with knowledge about the locations of tribal resources. The NAHC completed a record search and the results were positive.

Archaeological Resources

The records search consisted of a review of previous research and literature, records on file with the NCIC for previously recorded resources, and historical aerial photographs and maps of the vicinity. The records search revealed that six previously recorded pre-contact and historic-era cultural resources are within 0.5 mile of the project site, as shown in Table 5.13-1, *Previously Recorded Archaeological Resources within a 0.5-mile Radius of the Project Site*. Of the sites listed, two are believed to be associated with Native American occupation of the vicinity and four are historic-era sites associated with mining activities. The records search results indicate that the project site is within the boundaries of the previously recorded American River Placer Mining District (P-34-335). However, the field surveys did not identify any features or artifacts associated with the district.

Table 5.13-1 Previously Recorded Archaeological Resources within a 0.5-Mile Radius of the Project Site

Site Number	Primary Number	Recorder and Year	Site Description	Age/Period	Within Project Area?
CA-SAC-157	P-34-184	A.R. Pilling, 1949; S. Flink, J. Johnson, Dames and Moore, 1995	Habitation and Burials	Pre-contact	No
CA-SAC-233	P-34-260	Boloyan and Payen, 1958	Other	Pre-contact	No
CA-SAC-308H	P-34-335	K.G.S, 1969; Coleman, Talcott, and Wolpert, Solano Archaeological Services, 2020	Folsom Mining District	Historic	Yes
CA-SAC-428H	P-34-455	J. Arbuckle, 1979; M. Maniery, Par, 2009	Southern Pacific Railroad	Historic	No
-	P-34-2435	S. D. Mikesell, JRP Historical Consulting Services, 1993	Mills Station	Historic	No
CA-SAC-1275H	P-34-53698	L. Furnis, Cogstone Resources Management, Inc	Mather Sur	Historic	No

Source: ECORP 2023 (Appendix 5.3-1).

The American River Placer Mining District (P-34-335) is considered a Super District that includes smaller districts, such as the Alder Creek Corridor Mining District, Prairie Diggings Mining District, and others, which were grouped arbitrarily on paper decades ago to ensure proper consideration during a surge in development in the region. The American River Placer Mining District includes thousands of acres of land that were subjected to placer mining by manual and mechanical methods, using water from the South Fork of the American River following the discovery of gold in California in 1848.

5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.13.3 Plans, Programs, and Policies

The 2006 General Plan Environmental Impact Report

The 2006 Rancho Cordova General Plan EIR does not discuss tribal cultural resources; however, the Impact 4.11.1 in the DEIR did determine implementation of the General Plan could result in the potential disturbance of cultural resources (i.e., prehistoric sites, historic sites, and isolated prehistoric/historic artifacts and features) and human remains. The implementation of General Plan policies and action items aims to reduce significant impacts on known and unknown cultural resources. However, it is uncertain whether all significant impacts can be avoided or mitigated. Therefore, the 2006 EIR concluded the impact would be significant and unavoidable due to uncertainty.

5.13.4 Environmental Impacts

5.13.4.1 METHODOLOGY

SB 18 and AB 52 Consultation

The 2006 General Plan was proposed prior to March 1, 2005, and is therefore not subject to SB 18. Regardless, the City of Rancho Cordova requested a sacred lands search of Native American contacts and SB 18 contacts from the NAHC for the project site. The sacred lands search did not identify any Native American cultural resources in or near the project site. All Native American groups or individuals identified by the NAHC were contacted, and tribes were asked to consult regarding the General Plan.

In accordance with AB 52 and SB 18, ECORP requested a Sacred Lands File and Native American Contact List Request search from NAHC on January 17, 2023. NAHC responded on February 27, 2023. The search of the Sacred Lands File from the NAHC resulted in a positive result for the presence of Native American Sacred Lands near the proposed project.

In accordance with SB 52, the City sent letters to the Ione Band of Miwok Indians, Shingle Springs Band of Miwok Indians, United Auburn Indian Community of the Auburn Rancheria, and Wilton Rancheria on January 10, 2023, notifying them of the proposed project and requesting comments or concerns for the project area. The date that the 30-day window closed for the City's response was February 16, 2023. Two tribes sent responses: Wilton Rancheria and the Shingle Springs Band of Miwok Indians.

In a letter dated March 13, 2023, the Shingle Springs Band of Miwok Indians requested consultation regarding the proposed project via email. The City's response was sent via email offering to set up a consultation on March 20, 2023. The Shingle Springs Band of Miwok Indians have yet to respond to set up a meeting for consultation.

The Wilton Rancheria tribe reached out to the City via email on January 17, 2023. The City responded by email offering to set up a consultation on January 20, 2023. The tribe confirmed their availability on February 7, 2023, and confirmed the date and time on February 8, 2023. The City then sent a Zoom meeting invitation on February 8, 2023, for the consultation on February 15, 2023. During the consultation, the tribe shared the

history of tribal activity in the area and requested an on-site visit, review of the EIR cultural study, and on-site monitoring during trenching and site work.

The City sent letters to the tribes that were listed in their current internal list of tribes recently contacted for CEQA, planning, and project-related matters. The City of Rancho Cordova sent tribal letters before receiving the official tribal list from NAHC. The NAHC tribal list identified three new tribes not identified in the City's internal tribal list, including Buena Vista Rancheria of Me-Wuk Indians, Tsi Akim Maidu, and Colfax-Todds Valley Consolidated Tribe. The City sent letters notifying the three additional tribes of their opportunity for consultation, which were mailed on April 22, 2024. The City sent two letters to the Tsi Akim Maidu tribe at the address listed by the NAHC. Both letters were returned to the City undeliverable. No responses or requests for consultation were received from these additional tribes within 30 days of the letters' send date of April 22, 2024. All tribes that needed to be contacted to request information and consultation received a letter.

The City has accepted all requests and is collaborating with Wilton Rancheria to have an on-site monitor present during soil remediation excavation work.

No other comments were received for the proposed project.

5.13.4.2 IMPACT ANALYSIS

Impact 5.13-1:	**The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is: (i) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). (ii) determined by the lead agency to be significant pursuant to criteria in Public Resources Code Section 5024.1(c). In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. [Thresholds TCR-1.i and TCR-1.ii]**

The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources, as defined in Public Resources Code Section 5020.1. The 2006 General Plan EIR stated the Pacific Municipal Consultants conducted archaeological and historical investigations for the General Plan, including a records search at the NCIC, archival research at other repositories, and field investigation of the project site. The investigations identified 31 cultural resources or prehistoric/historic sites in the area, demonstrating the archaeological and historical sensitivity of the area. Impact 4.11.1 of the 2006 Rancho Cordova General Plan DEIR states that part of the project site has been subject to archaeological and historical investigations (as shown in Figure 4.11-1, *Archaeological and Cultural Sensitivity Areas Within the General Plan Planning Area*, of the 2006 Rancho Cordova General Plan EIR), but the entire area has not been subjected to investigation. Impact 4.11.1 notes the General Plan Roadway System Sizing Map is expected to significantly impact a historic resource site, potentially eligible under the National Register of Historic Places. The development under the Rancho Cordova General Plan could also negatively affect known cultural resources, undiscovered resources, and human remains. In addition, as shown in Figure 4.11-1 of the 2006 Rancho Cordova General Plan DEIR, the project site is not in an archaeologically sensitive area.

In addition, the lead agency must assess the significance of a tribal cultural resource to a California Native American tribe, following the criteria outlined in Public Resources Code Section 5024.1(c). The Public Resources Code Section 5024.1(c) states that a historical resource in the California Register can be listed if it meets the National Register of Historic Places criteria, such as being associated with significant events in California's history and cultural heritage, representing important historical figures, embodying distinctive characteristics of a type, period, region, or method of construction, or containing high artistic values, and potentially yielding important information in prehistory or history. The City of Rancho Cordova adopts this definition as a guideline for identifying tribal cultural resources.

As shown in Table 5.13-1, of the six pre-contract and historic-era cultural resources, two are associated with Native American occupation – CA-SAC-157 and CA-SAC-233. CA-SAC-157 was recorded in 1949 as a habitation and burials, and CA-SAC-233 was recorded in 1958 as "other." Both of these sites are not within the project site. Construction and operation would be contained to the project site; therefore, the proposed project would not result in significant impacts to these identified tribal resources.

ECORP notes that the project site sits on a terrace with approximately 50 percent of the ground surface covered with an asphalt paved lot and the remaining 50 percent of the ground surface was tall grass (Appendix 5.3-1). Additionally as mentioned in Chapter 3, *Project Description*, the project site has been graded, paved, and developed in the past and currently includes paved areas with patches of vegetated areas. Therefore, due to the previous ground-disturbing activities on-site, the likelihood of uncovering tribal cultural resources is low. No significant impacts on tribal cultural resources are expected to occur as a result of the proposed project.

Nonetheless, the City contacted Native American tribes pursuant to AB 52; the City consulted with the Wilton Rancheria who provided recommended mitigation measures for the project. As described in Section 5.13.1.2, *Existing Conditions*, Wilton Rancheria identified the possibility of tribal cultural resources in the project area. On February 15, 2023, the City consulted with Wilton Rancheria and they requested an on-site visit, review of the ECORP cultural study, and implementation of site monitoring in accordance with project mitigation. At the time of drafting this DEIR, the City and Wilton Rancheria site visit has not yet occurred.

Although the project site presents a low likelihood of uncovering tribal cultural resources due to previous ground-disturbing activities, this does not make it impossible. In addition, with the request of Wilton Rancheria to implement mitigation, the following mitigation measures would need to be followed by future developers/project applicants. This impact is determined to be potentially significant.

Level of Significance Before Mitigation: Impact 5.13-1 would be considered potentially significant.

Mitigation Measures

TCR-1 Prior to issuance of grading permits, a qualified tribal monitor/consultant shall be identified to be on call during ground-disturbing activities. The project applicant shall be required to retain and compensate for the services of a tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Wilton Rancheria Tribal Government and is listed under the Native American Heritage Commission (NAHC) Tribal Contact list for the project area. A Native American monitor shall be retained by the lead agency or owner of the

project to be on-site to monitor all project-related, ground-disturbing construction activities (e.g., boring, grading, excavation, potholing, trenching). A monitor associated with one of the NAHC recognized tribal governments that have commented on the project shall provide the Native American monitor. The monitor/consultant shall only be present on-site during the construction phases that involve ground-disturbing activities. The tribal monitor/consultant shall complete daily monitoring logs that provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the tribal representatives and monitor/consultant have indicated that the site has a low potential for impacting tribal cultural resources.

TCR-2 If any tribal cultural resources are discovered during excavation or construction activities, construction shall stop within 100 feet of the find, and the qualified tribal monitor/consultant shall be consulted to determine whether the resource requires further study. The tribal monitor/consultant shall make recommendations to the City to protect the discovered resources. All tribal cultural resources unearthed by project construction activities shall be evaluated by the qualified tribal monitor/consultant. If the resources are Native American in origin, the Wilton Rancheria Tribal Government shall coordinate with the landowner regarding treatment and curation of these resources. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 1506.5[f]).

Level of Significance After Mitigation: Impact 5.13-1 would be considered less than significant with mitigation applied.

5.13.5 Cumulative Impacts

The Rancho Cordova General Plan EIR did not specifically analyze the potential impacts of tribal cultural resources; however, tribal cultural resource analysis may be relevant to the discussion of impacts on tribal cultural resources (i.e., prehistoric sites, historic sites, and isolated prehistoric/historic artifacts and features) and human remains. The Rancho Cordova General Plan EIR analyzed the cumulative impacts on cultural resources and human remains under Impact 4.11.3. Land uses associated with the buildout of Rancho Cordova would require considerable ground-disturbing activities. The General Plan EIR concluded implementation of the General Plan that impacts related to cultural resources and human remains would be cumulatively significant and unavoidable.

The project site is not determined to be in an archaeologically sensitive area (seen in Figure 4.11-1 of the 2006 Rancho Cordova General Plan EIR). Additionally, other projects in the city may have the potential to impact tribal cultural resources directly or indirectly through ground-disturbing activities during development. Other projects would be required to adhere to laws and regulations, such as AB 52 and SB 18. As the project site has been previously graded and developed, there is a low likelihood that the proposed project would significantly impact tribal resources in the project site. In addition, the construction and operation of the proposed project would be within the boundaries of the project site; therefore, the project site would not significantly impact

surrounding tribal cultural resources. However, if tribal cultural resources are discovered within the project site, then the proposed Mitigation Measures TCR-1 and TCR-2 would reduce impacts to less than significant.

5.13.6 Level of Significance Before Mitigation

After implementation of regulatory requirements and standard conditions of approval, Impact 5.13-1 would be less than significant. Without mitigation, Impact 5.13-1 would be potentially significant. the following impact would be **potentially significant:**

5.13.7 Mitigation Measures

Impact 5.13-1

TCR-1 Prior to issuance of grading permits, a qualified tribal monitor/consultant shall be identified to be on call during ground-disturbing activities. The project applicant shall be required to retain and compensate for the services of a tribal monitor/consultant who is both ancestrally affiliated with the project area and approved by the Wilton Rancheria Tribal Government and is listed under the Native American Heritage Commission (NAHC) Tribal Contact list for the project area. A Native American monitor shall be retained by the lead agency or owner of the project to be on-site to monitor all project-related, ground-disturbing construction activities (e.g., boring, grading, excavation, potholing, trenching). A monitor associated with one of the NAHC recognized tribal governments that have commented on the project shall provide the Native American monitor. The monitor/consultant shall only be present on-site during the construction phases that involve ground-disturbing activities. The tribal monitor/consultant shall complete daily monitoring logs that provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the tribal representatives and monitor/consultant have indicated that the site has a low potential for impacting tribal cultural resources.

TCR-2 If any tribal cultural resources are discovered during excavation or construction activities, construction shall stop within 100 feet of the find, and the qualified tribal monitor/consultant shall be consulted to determine whether the resource requires further study. The tribal monitor/consultant shall make recommendations to the City to protect the discovered resources. All tribal cultural resources unearthed by project construction activities shall be evaluated by the qualified tribal monitor/consultant. If the resources are Native American in origin, the Wilton Rancheria Tribal Government shall coordinate with the landowner regarding the treatment and curation of these resources. Work may continue on other parts of the project while evaluation and, if necessary, additional protective mitigation takes place (CEQA Guidelines Section 1506.5[f]).

5.13.8 Level of Significance After Mitigation

With incorporation of Mitigation Measures TCR-1 and TCR-2, Impact 5.13-1 would be less than significant.

5.13.9 References

ECORP Consulting Inc (ECORP). 2023, March. *Archaeological Resources Inventory Report for the Mills Crossing Project.* Appendix 5.3-1 to this DEIR.

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5.14 UTILITIES AND SERVICE SYSTEMS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed Mills Crossing project (proposed project) to impact utilities and service systems. Utilities and service systems include wastewater (sewage) treatment and collection systems, water supply and distribution systems, storm drainage, solid waste collection and disposal, and other public utilities. Potential impacts to hydrology (e.g., flooding) and water quality are provided in Chapter 8, *Impacts Found Not to be Significant*, in the discussion of hydrology and water quality impacts. Storm drainage, though discussed in this section, is also addressed in Chapter 8. Impacts associated with electrical and natural gas infrastructure are discussed in Section 5.4, *Energy*.

5.14.1 Wastewater Treatment and Collection

5.14.1.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal, state, and local laws, regulations, plans, or guidelines related to wastewater treatment and collection that are applicable to the Specific Plan are summarized below.

Federal Regulations

Clean Water Act and National Pollution Elimination Discharge System

The Clean Water Act (CWA) establishes regulations to control the discharge of pollutants into waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, Sections 1251 et seq.). Under the CWA, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and run the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into waters of the United States. The federal CWA requires wastewater treatment of all effluent before it is discharged into surface waters. NPDES permits for such discharges in the project region are issued by the Central Valley Regional Water Quality Control Board (RWQCB).

The quality of the effluent that can be discharged to waterways in the Sacramento area, including the entire city of Rancho Cordova by the Sacramento Regional Wastewater Treatment Plant (SRWTP) which is owned and operated by the Sacramento Regional County Sanitation District (SRCSD). The SRWTP is established by the Central Valley RWQCB through waste discharge requirements (WDRs) that implement the NPDES permit. WDRs are updated at least every five years. A new permit must be issued in the event of a major change or expansion of the facility. In April 2021, the Central Valley RWQCB issued Order No. R5-2021-0019, NPDES No. CA 0077682, to the SRCSD (Regional San) for its SRWTP, which treats wastewater from its service area before discharging the treated effluent to the Sacramento River (Regional San 2017). The water quality objectives established in the Central Valley RWQCB Basin Plan are protected, in part, by Order No. R5-2021-0019, NPDES No. CA 0077682.

State Regulations

State Water Resources Control Board: Statewide General Waste Discharge Requirements

The General Waste Discharge Requirements specify that all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California need to develop a sewer master plan. The master plan evaluates existing sewer collection systems and provides a framework for undertaking the construction of new and replacement facilities to maintain proper levels of service. It includes inflow and infiltration studies to analyze flow monitoring and water use data, a capacity assurance plan to analyze the existing system with existing land use and unit flow factors, a condition assessment and sewer system rehabilitation plan, and a financial plan with recommended capital improvements and financial models.

General Pretreatment Regulations for Existing and New Sources of Pollution

The General Pretreatment Regulations establish the responsibilities of federal, state, and local governments; industry; and the public to implement National Pretreatment Standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works or that may contaminate sewage sludge. Pretreatment standards are pollutant discharge limits that apply to industrial users (Title 40 Code of Federal Regulations [CFR] Part 403).

Local Regulations

Sacramento Regional Wastewater Treatment Plant 2020 Master Plan

SRWTP's 2020 Master Plan provides a phased program of recommended wastewater treatment facilities and management programs to accommodate planned growth and to meet existing and anticipated regulatory requirements through the year 2020. The master plan addresses both public health and environmental protection issues while providing reliable service at affordable rates for Regional San customers. The key goals of the master plan are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, comply with applicable water quality standards, and provide for the most cost-effective facilities and programs from a watershed perspective, as described in Chapter 2, Master Planning Goals, Objectives, Planning Assumptions, and Regulatory Requirements, of the 2020 Master Plan (Regional San 2008).

The 2020 Master Plan relies on the Sacramento Area Council of Government's (SACOG's) population projections to determine SRWTP capacity requirements in the Regional San service area, which includes the proposed project, through 2020. The population projections used in the master plan do not represent a buildout population total for Regional San; rather, they represent the amount of growth expected in the Regional San service area. Regional San's planning and facility construction is not tied to the long-range growth projection, but instead is designed to respond to the actual growth rate and associated wastewater flows (Regional San 2008).

Sacramento Area Sewer Capacity Plan 2020 Update

The primary objective of the Sacramento Area Sewer District (SASD)'s 2020 System Capacity Plan (SCP) update was to develop a comprehensive plan that addresses existing and buildout sewer capacity needs. Existing capacity needs are based on SASD's current sewer system conditions. Buildout capacity needs are based on providing sewer service to the entire SASD service area in the future, as described in Section 1.1, Objectives and Scope, of the 2020 SCP.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goal and policies that are relevant to wastewater:

Infrastructure, Services, and Finance Element

- **Goal ISF.2**: Ensure the development of quality infrastructure to meet community needs at the time they are needed.
    - **Policy ISF.2.1**: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.
    - **Policy ISF.2.2**: Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.
    - **Policy ISF.2.3**: Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed.
    - **Policy ISF.2.4:** Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.
    - **Policy ISF.2.6:** Ensure that sewage conveyance and treatment capacity are available in time to meet the demand created by new development, or are guaranteed to be built by bonds or other sureties.

City of Rancho Cordova Municipal Code

Chapter 6.32, Sanitary Sewage Systems. This chapter requires that the drainage system in every building where persons reside, congregate or are employed, is available to a public sanitary sewer.

Chapter 15.04, Sewer Use. This chapter establishes provisions to assure efficient operation and protection of maintenance district sewage facilities. Per Section 15.04.070, a connection permit is required for any connection to the City's sewer system.

Chapter 15.05, Sewer Rates. This chapter establishes the fees for sewer use for new development. The rates applicable to the proposed project are shown in Section 15.05.030 of the Municipal Code.

5.14.1.2 EXISTING CONDITIONS

Wastewater Service

Sanitary sewer service for the proposed project would be provided by SASD and Regional San. SASD operates and maintains the laterals and main line pipes for wastewater conveyance and collection from the source to the Regional San interceptors (sanitary sewers that are designed to carry flows in excess of 10 million gallons per day [mgd]). Regional San is responsible for collection by interceptors and for wastewater treatment in Sacramento County (Regional San 2022). This district owns, operates, and is responsible for the collection, trunk, and interceptor sewer systems throughout Sacramento County as well as the SRWTP near Elk Grove (Regional San 2022).

The main SASD collection system includes over 3,100 miles of sewer pipelines ranging in size from 1.25 to 75 inches in diameter (SASD 2020). The collection system pipelines are categorized based on size, function, and hydraulic capacity. Sewer collectors generally receive flow directly from individual homes and businesses and are designed to carry less than one mgd of peak wet-weather flow (PWWF) (SASD 2020). In general, collector sewers are 10 inches and smaller in diameter and comprise the majority (over 85 percent) of the pipes in the collection system. Trunk sewers carry one mgd of PWWF or more to the Regional San interceptor system. Trunk sewers are generally 12 inches in diameter (SASD 2020).

Wastewater flows collected from the Regional San interceptors are ultimately transported into the SRWTP. Wastewater conveyed to the SRWTP is treated to a secondary level, which is designed to substantially degrade the biological content of the waste, which allows for safe release into the local environment and is ultimately discharged into the Sacramento River. The SRWTP receives and has a permitted plant treatment capacity of 181 mgd for average dry weather flow (ADWF) and 392 mgd under wet-weather conditions (Regional San 2008). The SRWTP had an average effluent flow of 115 mgd in 2021 (Ramirez 2022).

Future wastewater capacity needs are based on the wastewater flow and load projections. Beyond the 20-year planning period, flows (and loads) can be expected to continue to increase above the projected 181 mgd average dry-weather flow for the year 2020 (Regional San 2022b). Construction of the EchoWater Project is underway to rehabilitate the older facilities at the SRWTP to increase capacity, and when the project is complete, the SRWTP will produce about 120 mgd of tertiary-treated water, which removes inorganic compounds, bacteria, viruses, and parasites, which is then safe to reuse, recycle, or release into the environment (Regional San 2023a).

A portion of the SRWTP's secondary-treated flow is sent to a Water Reclamation Facility at SRWTP. Regional San, in cooperation with Sacramento County Water Agency (SCWA), operates an existing recycled water program that distributes up to 3.5 mgd of tertiary-treated water from the Water Reclamation Facility.

5.14.1.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant effect on the environment if the project would:

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

U-3 Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

5.14.1.4 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR determined that impacts to wastewater facilities would be significant and unavoidable since buildout under the General Plan would contribute to the need for expanded wastewater conveyance and treatment facilities. Under the calculations made in the 2006 EIR, projected wastewater generation rates by year 2030 were estimated to be 36.5 mgd and under buildout conditions 42.2 mgd. No mitigation measures were considered feasible.

5.14.1.5 ENVIRONMENTAL IMPACTS

Impact 5.14-1: The proposed project would not require the relocation or construction of new or expanded wastewater treatment facilities, the construction of which would cause significant environmental effects. [Threshold U-1 (part)]

The proposed project is in the service area of SASD, which manages the sewer system and serves much of Sacramento County, including the City of Rancho Cordova. Wastewater treatment services are provided by the SRWTP. As discussed previously, an upgrade of the SRWTP is underway, known as the EchoWater Project, to meet new water quality requirements that were issued by the Central Valley RWQCB as part of Regional San's 2010 NPDES permit (Regional San 2023b). The requirements are designed primarily to help protect the Delta ecosystem downstream by removing most of the ammonia and nitrates and improving the removal of pathogens from wastewater discharge. The upgrade will include deployment of new treatment technologies and facilities and will increase the quality of effluent discharged into the Sacramento River and ensure that the SRWTP discharge constituents are below permitted discharge limits specified in the NPDES permit. Flows to the SRWTP have decreased as a result of water conservation efforts over the last 10 years (Ramirez 2022).

Furthermore, adequate capacity for wastewater is anticipated well into the future. The average effluent flow in 2021 was approximately 115 mgd, compared to the current permitted capacity of 181 mgd. Wastewater would be conveyed off the project site using a network of collectors (up to 1 mgd flow capacity) and trunk sewers (1 to 10 mgd flow capacity), which currently exist adjacent to the project site, as seen in the 2020 SCP in Figure 1-2, SASD and Regional San Existing Sewer Systems (SASD 2020). The proposed project would involve reconfiguring the existing connections on the project site to accommodate the uses under the proposed project, the environmental impacts of which are addressed through this DEIR. The construction of these improvements would adhere to SASD's adopted Standards and Specifications (SASD 2022).

These sanitary sewer lines would then connect to the district's sewer system by connecting to an existing interceptor line along Folsom Boulevard, which has a flow capacity of greater than 10 mgd (SASD 2020). The project would construct up to 120 housing units and up to 154,000 square feet[1] (3.53 acres) of commercial and event center space. The SASD's Standards and Specifications determined the average dry-weather flow rates for land use type. The flow rates relevant to the proposed project include 310 gallons per day per single-family dwelling unit, 233 gallons per day per multifamily dwelling unit, and 1,900 gallons per day per acre of commercial development, as seen in Table 201-1, ADWF Summary, in Section 201, Capacity Design, of SASD's the Standards and Specifications document (SASD 2023). When multiplied by the residential dwelling units and commercial acreage under the proposed project, the total average dry-weather flow would be 38,000 gallons per day, or 0.038 mgd.

These calculations and assumptions are shown in Table 5.14-1, *Proposed Project Wastewater Generation*.

Table 5.14-1 Proposed Project Wastewater Generation

Land Use	Units/Acres	ADWF[1] Rate (g/d)	ADWF (mgd)
Single-Family	60 units	310	0.018
Multifamily	60 units	233	0.014
Commercial	3.53 acres	1,900	0.006
Total			**0.038**

Source: SASD 2023.
[1] Average Dry-Weather Flow

The wastewater generated by the project would be less than 0.01 percent of a 10 mgd flow capacity. This flow represents an even smaller fraction of the 181 mgd capacity of the SRWTP. Therefore, existing utility infrastructure, including the interceptor sewer line on Folsom Boulevard and the SRWTP would have sufficient capacity to accommodate the wastewater flows that the project is estimated to generate.

Level of Significance Before Mitigation: Impact 5.14-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.14-1 would be less than significant.

Impact 5.14-2: The proposed project would result in the determination of a wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. [Threshold U-3]

As described previously, the project site is in the service area of SASD, which maintains the wastewater treatment conveyance system that would collect wastewater at the project site. SASD's system connects to Regional San interceptors that convey the wastewater to the SRWTP in Sacramento County for treatment. The SRWTP receives and has a permitted plant treatment capacity of 181 mgd for ADWF and 392 mgd under wet-

[1] Based on coverage of the project site, the total acreage per building site was calculated by adding 10 percent to building footprint of the nonresidential buildings (140,000*1.1= 154,000).

weather conditions (Regional San 2008). The SRWTP had an average effluent flow of 115 mgd in 2021 (Ramirez 2022).

As described under Impact 5.14-1, the proposed project is anticipated to result in an ADWF of 0.038 mgd, which would represent approximately 0.002 percent of the SRWTP's current ADWF capacity. Additionally, the proposed project's increase in wastewater treated at the SRWTP would not cause the SRWTP's existing average effluent flow of 115 mgd to exceed the ADWF capacity of the plant. Therefore, the proposed project would not exceed Regional San's wastewater treatment capacity. Impacts would be less than significant.

5.14.1.6 CUMULATIVE IMPACTS

The 2006 General Plan EIR analyzed cumulative impacts to wastewater treatment capacity and conveyance infrastructure under Impact 4.12.4.2. Development under the General Plan and other development planned in Sacramento County and SRCSD's service area would substantially increase cumulative demands for wastewater services and related facilities. While planned improvements to the wastewater infrastructure network have been analyzed in the 2006 EIR, future growth may require modification and expansion of currently planned wastewater facility improvements. Overall, the 2006 EIR concluded that impacts related to cumulative wastewater service demands are less than cumulatively considerable, but impacts related to infrastructure/facility expansion are cumulatively considerable, significant, and unavoidable.

As discussed under Impact 5.14-1, the existing infrastructure is sufficient to serve the proposed project. The SRWTP currently has a permitted capacity of 181 mgd for ADWF and 392 mgd of Average Wet Weather Flows (AWWF). Per the City's General Plan EIR, projected wastewater generation rates by 2030 are estimated to be 36.5 mgd and under buildout conditions 42.2 mgd. As such, wastewater generated from the proposed project (0.038 mgd) would constitute 0.1 percent of the wastewater treatment demand at buildout of the City's planning area. The proposed project does not include any change in land use designation; the growth under the proposed project was included as part of the City's planned regional growth estimate. Therefore, impacts to wastewater treatment facilities have been anticipated in the 2006 General Plan EIR. While the 2006 EIR concluded that impacts related to infrastructure/facility expansion would be cumulatively considerable, significant, and unavoidable, the proposed project would be subject to payment of development fees to fund the planned Capital Improvement Program, and the project's incremental contribution to the impact would be less than cumulatively considerable.

5.14.1.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

After implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.14-1 and 5.14-2.

5.14.1.8 MITIGATION MEASURES

No mitigation measures are required.

5.14.1.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact would be less than significant.

5.14.2 Water Supply and Distribution Systems

5.14.2.1 ENVIRONMENTAL SETTING

Regulatory Background

State Regulations

California Urban Water Management Planning Act

The Urban Water Management Planning Act requires urban water suppliers to prepare an urban water management plan (UWMP) if they provide water for municipal purposes to more than 3,000 customers or provide more than 3,000 acre-feet per year (afy) of water. The intent of the UWMP is to assist water supply agencies in water resource planning given their existing and anticipated future demands. The UWMP must include a water supply and demand assessment that compares total water supply available to the water supplier with the total projected water use over a 20-year period. It is also mandatory that UWMPs be updated every five years.

Water Conservation Act of 2009 (Senate Bill X7-7)

The Water Conservation Act of 2009, Senate Bill (SB) X7-7, requires all water suppliers to increase water-use efficiency. The legislation sets an overall goal of reducing per-capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per-capita water use by 2015. As of 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards; it also requires that agricultural water suppliers prepare plans and implement efficient water management practices.

20x2020 Water Conservation Plan

The 20x2020 Water Conservation Plan of 2010 was a byproduct of the Water Conservation Act of 2009. The plan had a threefold effect, establishing: (1) a benchmark of current usage per capita of 2005 baseline data, (2) an intermediate goal for all water providers to meet by 2015, (3) a 20 percent reduction by 2020 of water usage.

Assembly Bill 1668 and Senate Bill 606

On May 31, 2018, Governor Brown signed two bills (Assembly Bill [AB] 1668 and SB 606) that established long-term standards for water suppliers. The bills called for the creation of new urban efficiency standards for indoor use, outdoor use, and water lost to leaks as well as any appropriate variances for unique local conditions. The State Water Resources Control Board (SWRCB) is in the process of adopting standards for indoor residential water use, outdoor residential water use, commercial and industrial water use, and water loss. The indoor water use standard will be 55 gallons per person per day until January 2025; the standard will become stricter over time, decreasing to 50 gallons per person per day in January 2030. The outdoor water use standard will be based on land cover, climate, and other factors determined by the Department of Water Resources (DWR) and the SWRCB.

Mandatory Water Conservation

Following the declaration on July 15, 2014, of a state of emergency due to drought conditions, the SWRCB adopted Resolution No. 2014-0038 for emergency regulation of statewide water conservation efforts. These regulations, which went into effect on August 1, 2014, were intended to reduce outdoor urban water use and persuade all California households to voluntarily reduce their water consumption by 20 percent. Water companies with 3,000 or more service connections were required to report monthly water consumption to the SWRCB. The SWRCB readopted the regulations several times until Governor Brown issued Executive Order B-40-17 in April 2017, ending the drought emergency and directing the SWRCB to rescind portions of its existing drought emergency water conservation regulations but maintain the portions that prohibit wasteful water use practices until permanent requirements are in place. The prohibitions that are still in effect address: (1) the application of potable water to outdoor landscapes in a manner that causes excess runoff, (2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle, (3) the application of potable water to driveways and sidewalks, (4) the use of potable water in nonrecirculating ornamental fountains, and (5) the application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall. Also, urban water suppliers are still required to submit monthly water monitoring reports to the SWRCB.

Governor's 2021 Drought Declaration

Governor Gavin Newsom declared a drought state of emergency on April 21, 2021, and asked State agencies to partner with local water districts and utilities to make Californians aware of drought and encourage actions to reduce water usage by promoting DWR's Save Our Water Campaign and other water conservation programs. The proclamation also included measures to be implemented by the DWR, SWRCB, the California Department of Fish and Wildlife (CDFW), and the Department of Food and Agriculture that included coordinated State and local actions to address issues stemming from continued dry conditions.

Governor Newsom issued subsequent drought emergency proclamations on May 10, June 8, and October 19, 2021, and March 28, 2022. The May 10 proclamation included further measures to be implemented by DWR, SWRCB, CDFW, and the Department of Food and Agriculture. The July 8 proclamation called on Californians to voluntarily reduce water use by 15 percent from their 2020 levels. The October 19 proclamation required local water suppliers to implement water shortage contingency plans that are responsive to local conditions and prepare for the possibility of a third dry year. The March 28 proclamation requires that by May 25, 2022, the SWRCB must consider adopting emergency regulations defining non-functional turf[2] and banning irrigation of non-functional turf in the commercial, industrial, and institutional sectors. The proclamation also requires that by May 25, 2022, SWRCB must consider adopting emergency regulations to implement the shortage response actions specified in UWMPs for a water shortage level of up to 20 percent.

The SWRCB tracks and reports monthly on the state's progress toward achieving a 15 percent reduction in statewide urban water use compared to 2020.

[2] Nonfunctional turf is turf that is ornamental and not otherwise used for human recreation purposes, such as school fields, sports fields, and parks.

Executive Order N-5-23

Executive Order N-5-23 ends the voluntary 15 percent water conservation target, while continuing to encourage that Californians make conservation a way of life, as well as ends the requirement that local water agencies implement level two of their drought contingency plans. It also maintains the ban on wasteful water uses, such as watering ornamental grass on commercial properties, while preserving all current emergency orders focused on groundwater supply, where the effects of the multi-year drought continue to be devastating. It also maintains orders focused on specific watersheds that have not benefited as much from recent rains, including the Klamath River and Colorado River basins, which both remain in drought and retains a state of emergency for all 58 counties to allow for drought response and recovery efforts to continue (California Governor 2023).

State Water Resources Control Board Resolution No. 2022-002

On January 4, 2022, the SWRCB adopted an emergency regulation by resolution. On January 18, 2022, the emergency regulation became effective and remains in effect for one year from the effective date unless the SWRCB acts to end, modify, or readopt it. The following emergency regulation restrictions remain in effect until December 2023 (SWRCB 2024):

- Outdoor watering that lets water run onto sidewalks and other areas (except incidental runoff)
- Washing vehicles without an automatic shutoff nozzle
- Washing hard surfaces like driveways or sidewalks that don't absorb water
- Street cleaning or construction site preparation
- Filling decorative fountains, lakes, or ponds without a recirculation pump
- Outdoor watering within 48 hours after at least a quarter-inch of rainfall
- Watering decorative grass on public medians

Water Conservation in Landscaping Act of 2006 (AB 1881)

The Water Conservation in Landscaping Act of 2006 (AB 1881) required DWR to update the State Model Water Efficient Landscape Ordinance by 2009. The State's model ordinance was issued on October 8, 2009. Under AB 1881, cities and counties are required to adopt a State updated model landscape water conservation ordinance by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the updated model ordinance. It also requires reporting on the implementation and enforcement of local ordinances, with required reports due by December 31, 2015.

2015 Update of the State Model Water Efficient Landscape Ordinance (Executive Order B-29-15)

To improve water savings in the landscaping sector, DWR updated the State Model Water Efficient Landscape Ordinance in accordance with Executive Order B-29-15. The Model Ordinance promotes efficient landscapes in new developments and retrofitted landscapes. The Executive Order called for revising the Model Ordinance to increase water-efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf.

New development projects that include landscaped areas of 500 square feet or more—including residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review—are subject to the Model Ordinance. The previous landscape-size threshold for new development projects ranged from 2,500 to 5,000 square feet.

California Green Building Standards Code

The residential provisions of the 2019 California Green Building Standards Code (CALGreen) outline planning, design, and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore, and enhance the environmental quality of the site and respect the integrity of adjacent properties. The code also establishes the means of conserving water used indoors, outdoors, and in wastewater conveyance, outlines means of achieving material conservation and resource efficiency, and outlines means of reducing the quantity of air contaminants.

Regional and Local Regulations

2020 Urban Water Management Plan for California American Water's Northern Division - Sacramento Main District

The project site is in the service area of California American Water (CAW) Northern Division's Sacramento Main District. Within the Sacramento Main District, the project site is in the Suburban-Rosemont Service Area, which covers the eastern portion of the City of Rancho Cordova in addition to the La Riviera and Rosemont neighborhoods in unincorporated Sacramento County. The 2020 UWMP addresses current and future water use in the Sacramento Main District and its constituent service areas in addition to identifying all available potable and non-potable water supplies and providing a water supply reliability analysis, a drought risk assessment, and a water shortage contingency plan.

City of Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to water service.

Infrastructure, Services, and Finance Element

- **Goal ISF.2:** Ensure the development of quality infrastructure to meet community needs at the time they are needed.
  - **Policy ISF.2.1**: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.
  - **Policy ISF.2.2**: Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.
  - **Policy ISF.2.3**: Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed.
  - **Policy ISF.2.4**: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

Natural Resources Element

- **Goal NR.5**: Protect the quantity and quality of the City's water resources.
  - **Policy NR.5.1**: Promote water conservation within existing and future urban uses.
  - **Policy NR.5.2**: Encourage the use of treated wastewater to irrigate parks, golf courses, and landscaping.

City of Rancho Cordova Municipal Code

The City's Municipal Code, Chapter 22.180, Water Use and Conservation, establishes the standards and procedures for the design, installation, and management of landscapes for the purpose of water conservation. The standards in this chapter would be applicable to landscaping the proposed project.

South American Subbasin Groundwater Sustainability Plan

As explained below, the primary water supply for the project site is groundwater from the South American Subbasin under the Sacramento Valley Groundwater Basin. The *South American Subbasin Groundwater Sustainability Plan* was adopted in 2021 by the six groundwater sustainability agencies that manage and use the groundwater in the South American Subbasin. The plan reviewed the past, current, and future water needs of the subbasin's users and assesses the impacts of predicted future groundwater levels. The key finding of the plan is that the basin will be sustainable over the next 20 years as long as planned recycled water, recharge, and other projects are implemented, as explained in the Executive Summary of the plan (South American Subbasin 2021). These projects will raise groundwater levels above current levels, maintain storage volumes, and protect ecosystems, interconnected surface water, and shallow well users.

5.14.2.2 EXISTING CONDITIONS

Water Service Area

As described previously, the project site is in the service area of California American Water (CAW). CAW is a privately owned utility that provides service to approximately 675,000 customers throughout California. The Sacramento Main District (District) is part of CAW's Northern Division and contains 11 public water systems. The Suburban-Rosemont Public Water System contains the project site. The Suburban-Rosemont service area covers approximately 13,600 acres in Sacramento County and a portion of eastern Rancho Cordova along the American River. It is bordered to the north by the American River and to the west by the Mather Airport. The service area extends to Fruitridge Road in the south and approximately 1 mile west of Watt Avenue in the west. The Suburban-Rosemont service area contained 16,585 municipal connections and supplied 8,813 acre-feet (AF) of water in 2020, as shown in Table 2-1, Water System Information, of the CAW-Sacramento Main District 2020 UWMP (CAW 2021).

Water Demand

The Suburban-Rosemont water system serves primarily residential and commercial customers. The historical and projected water use for the service area is shown in Table 5.14-2, *Suburban-Rosemont Historical and Projected*

Water Use. This data can also be found in Table 4-9, Suburban-Rosemont Historical and Projected Water Use, of the CAW-Sacramento Main District 2020 UWMP.

Table 5.14-2 Suburban-Rosemont Historical and Projected Water Use

Year	Total Water Use (Million Gallons)
2011	3,176
2012	2,938
2013	2,716
2014	2,526
2015	2,216
2016	2,389
2017	2,676
2018	2,691
2019	2,629
2020	2,872
2021	2,836
2022	2,839
2023	2,842
2024	2,845
2025	2,848
2030	2,915
2035	3,036
2045	3,162

Source: CAW 2021.

The 2020 UWMP estimated the population and growth rates of the service area using the data from the SACOG Transportation Analysis Zones projections. The total population for the District in 2020 was estimated to be 234,686 with the population in 2040 projected to be 287,145, as discussed in Section 3.5.1, Population, of the CAW-Sacramento Main District 2020 UWMP. The UWMP notes that the Suburban-Rosemont service area includes a portion of land designated as the West Jackson development, which has the potential to add about 4,000 new customers in the future; however, CAW anticipates that most growth in the District will consist of infill development.

Water Supply

CAW has wholesale water supply agreements with several water providers. The CAW service areas, Arden, Fruitridge, Parkway, and Suburban-Rosemont, lie within the Place of Use for the City of Sacramento's American River Water Rights. CAW has an agreement with the City of Sacramento to receive a maximum of 3.46 mgd of non-firm supply during off-peak periods (October 15th through May 14th), plus an additional 2.3 mgd of firm capacity, for a total of 5.76 mgd. The agreement stipulates that the City would supply surface water unless the Lower American River is below the Hodge Flow Criteria, in which case, the City would produce groundwater instead of surface water when demands exceed 1.13 mgd. This mixed supply is available to CAW up to 2.3 mgd. Other service agreements serve other service areas in the Sacramento Main District, including agreements with Placer County Water District, Sacramento County Water Agency, and the Sacramento Suburban Water District.

The 2020 UWMP notes that groundwater is the primary source of supply for most of the water systems in the Sacramento Main District. All water systems in the Sacramento Main District are within the boundaries of the Sacramento Valley Groundwater Basin of the Sacramento River Hydrologic Region. The Suburban-Rosemont service area is in the South American Subbasin of the Sacramento Valley Groundwater Basin. A total of 15,357 million gallons (mg) of water were pumped from the South American Subbasin in 2020. This subbasin is managed by the Sacramento Groundwater Authority. The current and projected water supplies available to the Suburban-Rosemont service area are shown in Table 5.14-3, *Current and Projected Water Supplies for the Suburban-Rosemont Service Area.*

Table 5.14-3 Current and Projected Water Supplies for the Suburban-Rosemont Service Area

		Source (MG)	
		Groundwater (South American Subbasin)	Purchased Water (City of Sacramento)
2020	Drinking Water Available	9,217	1,417
	Safe Yield	8,924	403
2025	Reasonably Available	9,217	1,471
	Safe Yield	8,924	403
2030	Reasonably Available	9,217	1,471
	Safe Yield	8,924	403
2035	Reasonably Available	9,217	1,471
	Safe Yield	8,924	403
2040	Reasonably Available	9,217	1,471
	Safe Yield	8,924	403

Source: CAW 2021.
Note: All quantities are expressed in millions of gallons (MG)
The safe yield for groundwater is calculated as the total capacity of all the wells in each system with the largest well out of service. Safe yield for purchased supply refers to the amount of water guaranteed to CAW.

As shown in Table 5.14-3, CAW expects that all current water agreements will continue to serve the Suburban-Rosemont area through 2040. A total of 9,327 mg of water is guaranteed to the service area each year. This is composed of 8,924 mg of safe yield water from the South American Sub-basin and 403 mg purchased from the City of Sacramento. The safe yield is calculated as the total capacity of all the wells in each system with the largest well out of service. The 2020 UWMP's drought risk assessment notes that its groundwater supply is expected to remain dependable under drought conditions. Overall, CAW expects all 9,327 mg of safe yield water supply available to Suburban-Rosemont service area under single-year and multiple-year drought conditions. At the expected demand of 3,162 mg in 2040, 6,165 mg of water supply would still be available to the service area, as shown in Table 5.14-4, *Normal, Single Dry, and Multiple Dry Year Supply and Demand (MG).*

Table 5.14-4 Normal, Single Dry, and Multiple Dry Year Supply and Demand (MG)

	2025	2030	2035	2040
Normal Year				
Supply Totals	10,395	10,395	10,395	10,395
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**7,546**	**7,480**	**7,359**	**7,233**
Single Dry Year				
Supply Totals	9,327	9,327	9,327	9,327
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**6,478**	**6,412**	**6,291**	**6,165**
Multiple Dry Year				
Year 1				
Supply Totals	9,327	9,327	9,327	9,327
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**6,478**	**6,412**	**6,291**	**6,165**
Year 2				
Supply Totals	9,327	9,327	9,327	9,327
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**6,478**	**6,412**	**6,291**	**6,165**
Year 3				
Supply Totals	9,327	9,327	9,327	9,327
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**6,478**	**6,412**	**6,291**	**6,165**
Year 4				
Supply Totals	9,327	9,327	9,327	9,327
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**6,478**	**6,412**	**6,291**	**6,165**
Year 5				
Supply Totals	9,327	9,327	9,327	9,327
Demand Totals	2,849	2,915	3,036	3,162
Surplus	**6,478**	**6,412**	**6,291**	**6,165**

Source: CAW 2021.

5.14.2.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

U-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

5.14.2.4 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR determined that impacts on water supplies and treatment would be significant and unavoidable since buildout under the General Plan would contribute to the need for expanded water supplies and facilities. No mitigation measures were considered feasible.

5.14.2.5 ENVIRONMENTAL IMPACTS

Impact 5.14-3: The proposed project would not require the relocation or construction of new or expanded water facilities, which could cause significant environmental effects. [Threshold U-1 (part)]

Existing water distribution pipelines and valves are present on-site from previous commercial uses; however, utility connections would need to be reconfigured for the proposed site plan. The environmental impacts of constructing these improvements are discussed throughout Chapter 5, *Environmental Analysis*, of this DEIR. Therefore, the proposed project is not expected to result in the construction of new or expanded water facilities that would cause significant environmental impacts.

Level of Significance Before Mitigation: Impact 5.14-3 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.14-3 would be less than significant.

Impact 5.14-4: CAW would have sufficient water supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. [Threshold U-2]

As described above, CAW's 2020 UWMP assumed infill development and population growth based on SACOG population projections. The proposed project is an infill development that would not involve any land use changes. Therefore, the development of the site under the proposed project was anticipated within the SACOG population projections and the CAW 2020 UWMP. Furthermore, the proposed project represents approximately less than 1 percent of the population growth assumed in the UWMP for the Sacramento Main District between 2020 and 2045.

The UWMP identifies a 2020 water use target of 173 gallons per capita per day (gpcd) for the Sacramento Main District. The District is currently in compliance with this target (CAW 2021). The California State Water Resources Control Board's Water Conservation and Production Reports state that the Suburban-Rosemont service area (Public Water System ID: CA3410010) had a gpcd of 61.86 for December 2022 (DWRCB 2022). However, to estimate the proposed project's indoor water use for both its residential and commercial components, the water use factors in Appendix G, Default Data Tables, of the California Emissions Estimator Model (CalEEMod) are used.

Table 5.14-5 Indoor Water Usage

Project Component	CalEEMod Land Use Type	CalEEMod Water Use Factor (gallons/year)	Water Use (gallons/year)	Water Use (million gallons/year)
Residential				
120 Dwelling Units	Indoor Residential Water Consumption per dwelling unit in Sacramento County	35,259	4,231,080	4.23
Commercial				
Community Health Clinic (30,000 square feet)	Indoor Water Consumption for Medical Office Buildings per 1,000 square feet	125,481	3,764,430	3.76
Arts Center (35,000 square feet)	Indoor Water Consumption for Arenas per 1,000 square feet	430,770	15,076,950	15.08
Events Meeting Space (15,000 square feet)	Indoor Water Consumption for Arenas per 1,000 square feet	430,770	6,461,550	6.46
Community Office Building (52,500 square feet)	Indoor Water Consumption for Office Parks per 1,000 square feet	177,734	9,331,035	9.33
Commercial Retail (7,500 square feet)	Indoor Water Consumption for Convenience Market (24 Hour) per acre	74,073	555,548	0.55
		TOTAL	**39,420,593**	**39.41**

Source: CAPCOA 2022.

Consistent with the water consumption modeled for the proposed project in CalEEMod shown in Appendix 5.1-1, the project's estimated outdoor water usage would be approximately 3.10 mg per year.

As shown in Table 5.14-5, *Indoor Water Usage,* total indoor yearly water use from the proposed project is estimated to be 39.41 mg per year and when added to the proposed project's estimated outdoor water usage, the proposed project's total water usage would be 42.51 mg per year. The water demand from the proposed project would be approximately 1.4 percent of the water demand anticipated during normal years during the year 2040 in the UWMP. The 2020 UWMP estimated that, in the event of multiple-year drought conditions, the supplier would have reliable water supplies for the District through 2040 for a projected population of 234,686. Due to conjunctive management and a Water Shortage Contingency Plan, the 2020 UWMP projects adequate supply to meet demand in all water years through 2040. The proposed project is consistent with the type of infill development assumed in CAW's 2020 UWMP. Normal water year demand is expected to increase by 323 mg (from 2,839 mg to 3,162 mg) between 2020 and 2040. The projected increase in water demand under the proposed project is accounted for in the UWMP, which concludes that there is sufficient supply to serve the reasonably foreseeable development in its service area through 2040. Therefore, impacts are less than significant.

Level of Significance Before Mitigation: Impact 5.14-4 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.14-4 would be less than significant.

5.14.2.6 CUMULATIVE IMPACTS

The Rancho Cordova General Plan EIR analyzed cumulative impacts to water supply and water conveyance infrastructure under Impact 4.12.3.2. As noted therein, the land uses associated with buildout of the Rancho Cordova General Plan would require considerable modifications and improvements to the existing water supply delivery system to meet the projected water demands. Additional water treatment, storage capacity, and the extension of the existing water system, including pipelines and other transmission and conveyance infrastructure, would be required to meet the demand for the General Plan growth and other anticipated regional growth. The General Plan concluded that impacts related to water supply utilities would be cumulatively considerable, significant, and unavoidable.

However, per CAW's Sacramento Main District 2020 UWMP, the Suburban-Rosemont service area would have a surplus of 6,165 mg of water by 2040. The proposed project is anticipated to consume approximately 42.51 mg per year based on the assumptions explained above regarding its indoor and outdoor water use. This would represent approximately 1.45 percent of the Suburban-Rosemont service area's annual demand (at single- and multi-year drought levels) for the year 2040. Though the proposed project is an infill project and was therefore considered to be part of the demand projected for the Suburban-Rosemont service area, the proposed project's water use, when added to the water demand for the service area in 2040, does not exceed CAW's supply of 9,327 mg. The surplus with the proposed project would be 6,122.5 mg in 2040. The CAW's 2020 UWMP for the Sacramento Main District considers the cumulative buildout of the service area primarily accounting for infill development in addition to larger development projects that are anticipated in the next 18 years. Therefore, the proposed project would not result in a cumulative impact on water supply or water supply systems.

5.14.2.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

After implementation of regulatory requirements and standard conditions of approval, Impact 5.14-4 would be less than significant.

5.14.2.8 MITIGATION MEASURES

No mitigation measures are required.

5.14.2.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.14.3 Storm Drainage Systems

5.14.3.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal Regulations

National Pollution Elimination Discharge System

The CWA mandates permits for stormwater discharges and requirements for stormwater discharges are regulated under the NPDES program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. The project site lies in the jurisdiction of the Central Valley RWQCB (Region 5).

State Regulations

State Water Resources Control Board General Construction Permit

The SWRCB has adopted a statewide Construction General Permit (Order No. 2012-0006-DWQ) for stormwater discharges associated with construction activity. These regulations prohibit the discharge of stormwater from construction projects that include one acre or more of soil disturbance. Construction activities subject to this permit include clearing, grading, and other disturbance to the ground, such as stockpiling or excavation, that results in soil disturbance of at least one acre of total land area. Individual developers are required to submit a Notice of Intent to the SWRCB for coverage under the NPDES permit and would be obligated to comply with its requirements.

The NPDES Construction General Permit requires all dischargers to (1) develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies best management practices (BMPs) to be used during construction of the project, (2) eliminate or reduce non-storm-water discharge to stormwater conveyance systems, and (3) develop and implement a monitoring program of all BMPs specified. The two major objectives of the SWPPP are to (1) help identify the sources of sediment and other pollutants that affect the water quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges.

Regional Regulations

Sacramento County (MS4) Permit

The City of Rancho Cordova, along with the cities of Citrus Heights, Folsom, and Galt, and the County of Sacramento, operate under a NPDES municipal separate storm sewer system (MS4) permit to discharge stormwater runoff from storm drains within their jurisdictions (NPDES No. CAS082597). The NPDES MS4 Permit establishes waste discharge requirements needed to attain water quality standards and protection of beneficial uses consistent with the Basin Plan. To comply with the NPDES MS4 Permit, the City imposes water quality and watershed protection measures for all new development projects.

A Stormwater Quality Improvement Plan (SQIP) was adopted by the Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Sacramento, and the County of Sacramento in 2010 for compliance with the NPDES permit. The SQIP is composed of six program elements developed to reduce contaminants discharged into receiving-water bodies. The six Minimum Control Measure elements of the SQIP are public education and outreach, public involvement/participation, detection and elimination of illicit discharges, construction-site runoff control, post-construction runoff control in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations (CRWQCB 2007).

Stormwater Quality Design Manual for the Sacramento Region

The Stormwater Quality Design Manual (SQDM) for the Sacramento Region outlines planning tools and requirements to reduce urban runoff pollution to the maximum extent practicable from new development and redevelopment projects for jurisdictions in the Sacramento Stormwater Quality Partnership (SSQP), which includes Rancho Cordova. The Design Manual primarily addresses stormwater quality features that can be optimally integrated into the site and project design of projects, including a selection of multiple categories of stormwater quality control measures: source control, treatment control, low-impact development, hydromodification management, and trash control (SSQP 2018).

Local Regulations

City of Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goal and policies that are relevant to water service:

Infrastructure, Services, and Finance Element

- **Goal ISF.2:** Ensure the development of quality infrastructure to meet community needs at the time they are needed.
    - **Policy ISF.2.1**: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.
    - **Policy ISF.2.2**: Coordinate with independent public service providers, including schools, parks and recreation, utility, transit, and other service districts, in developing service and financial planning strategies.
    - **Policy ISF.2.3**: Ensure that adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed.
    - **Policy ISF.2.4**: Ensure the development of public infrastructure that meets the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

City of Rancho Cordova Municipal Code

Chapter 15.95, Storm Drainage Impact Fee Program. The provisions of this chapter impose development fees on all new development projects to fund the cost of certain storm drainage facilities. Fees are required upon the issuance of building permits. The adopted fee schedule for the year of 2023 is calculated by acre and

includes a fee for construction impacts and administrative costs. The fees were established based on the assumed impervious area of the land uses as identified in the storm drainage impact fee program nexus study.

Chapter 15.12, Stormwater Management and Discharge Control. This chapter implements the requirements of the City's MS4 permit. The provisions of this chapter are applicable to all users and potential users located within the incorporated area of the city and all users that discharge either directly or indirectly into the county stormwater conveyance system. This also applies to all activities that would make non-stormwater discharges directly into the Sacramento River, American River, Cosumnes River, Mokelumne River, or navigable waters of the delta. The chapter also states that activities subject to this chapter shall reduce the discharge of pollutants from those activities through the implementation of BMPs.

Chapter 16.44 Land Grading and Erosion Control. This chapter requires projects disturbing 350 cubic yards or more of soil or one or more acres of land to prepare an erosion and sediment control plan specifying BMPs for erosion and sediment control. It also provides legal authority for inspections and enforcement needed on local construction sites to ensure compliance with the ordinance.

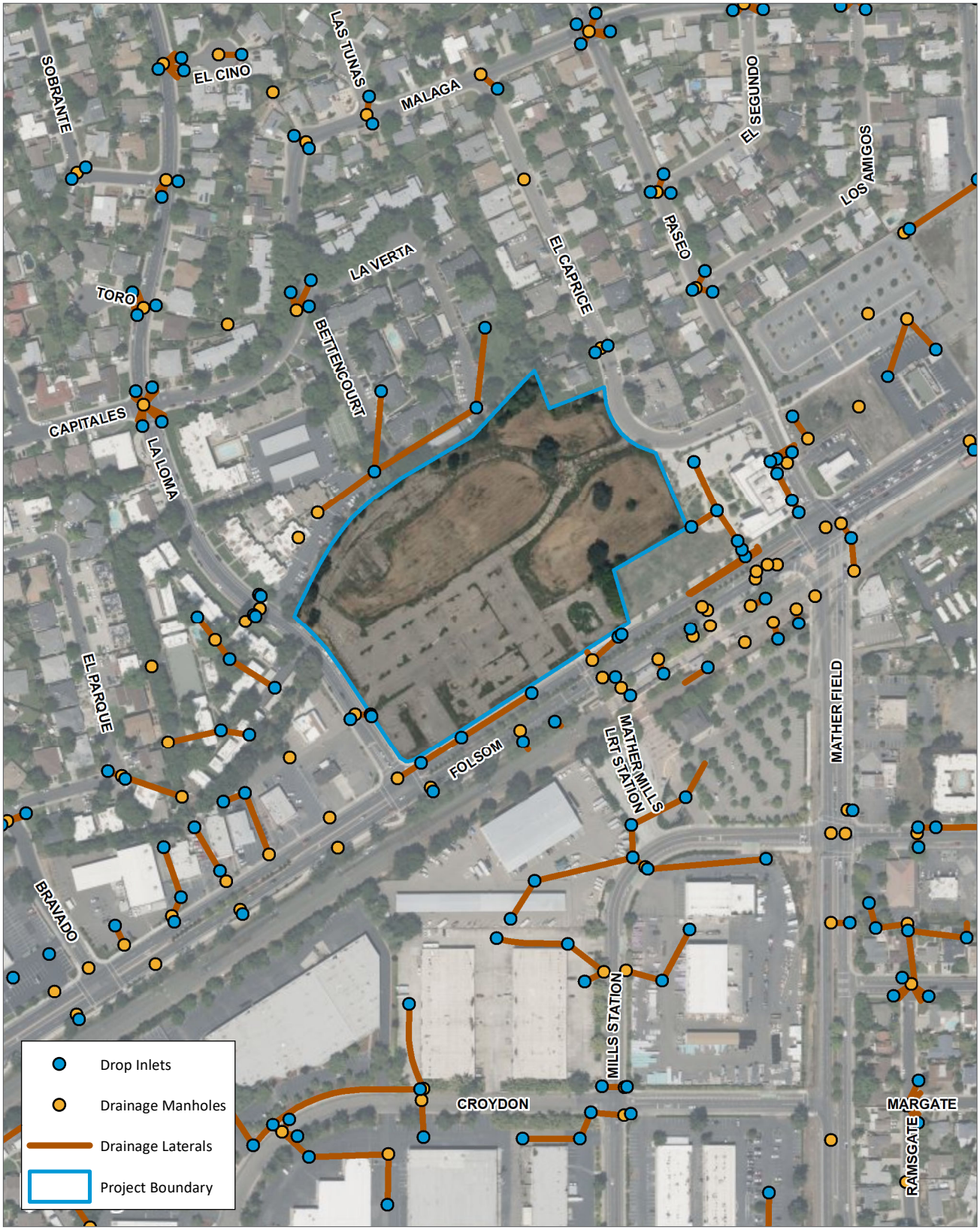
5.14.3.2 EXISTING CONDITIONS

The City of Rancho Cordova is home to six miles of the American River, as well as 41 miles of creeks and channels, some of which flow directly into the river. The City's Stormwater Division protects these waterways by preventing pollutants from entering the drainage system (Rancho Cordova 2023).

This includes operating and maintaining:

- Six pump stations
- Six regional detention basins
- 254 miles of drainage pipes
- 7,740 drainage inlets
- 4,370 manholes

According to the U.S. Geological Survey Watershed Boundary Dataset, the project site is in the American River Watershed and the Lower American River Sub-watershed. The nearest surface water is the American River, located approximately 0.72 miles northwest of the project site. Runoff at the project site generally flows from northeast to southwest. Runoff drains into drop inlets on the streets bordering the project site, as shown in Figure 5.14-1, *Storm Drainage Infrastructure*. From these inlets, stormwater is conveyed through a drainage lateral on La Loma Drive and another on Folsom Boulevard to drainage mains along Folsom Boulevard and La Loma Drive. Historically, the project site has featured commercial uses; a large portion of the site is currently covered in impervious concrete hardscape from the remains of the previous development (Kleinfelder 2008).



Source: Generated using ArcMap, Inc. 2022.; City of Rancho Cordova 2023.

0 350
Scale (Feet)

Figure 5.14-1
Storm Drainage Infrastructure

5.14.3.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

5.14.3.4 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR analyzed impacts to the City's drainage system in Section 4.9, Hydrology, and concluded that because the General Plan contains adequate policies and actions that address drainage and flooding issues, impacts are considered less than significant. No mitigation measures related to stormwater drainage are required under the 2006 EIR.

5.14.3.5 ENVIRONMENTAL IMPACTS

Impact 5.14-5: The proposed project would not require the relocation or construction of new or expanded storm drainage facilities, the construction of which would cause significant environmental effects. [Threshold U-1 (part)]

Runoff from the project site would be collected through existing stormwater drainage infrastructure on La Loma Drive and Folsom Boulevard. Much of the site is currently composed of impervious surfaces, including concrete foundations and asphalt parking lots that have remained on-site from previous commercial uses. The proposed project would also feature 2.5 acres of open space and additional landscaping throughout the site.

Any proposed stormwater infrastructure would fulfill the requirements of the SQDM for the Sacramento Region, ensuring that the proposed project implements all applicable hydromodification control measures and low-impact development measures to reduce and accommodate stormwater runoff. The proposed project would also be required to comply with Chapter 15.12 of the Municipal Code which regulates discharges into the stormwater conveyance system. The proposed project would also be subject to fees under Chapter 15.95 which requires payment from all new development to fund improvements to the City's stormwater infrastructure. Furthermore, the proposed project would also be required to comply with the provisions of the NPDES Construction General Permit issued by the Central Valley RWQCB. The proposed project would also require preparation of a SWPPP with BMPs to control erosion. These requirements are consistent with the land grading and erosion-control requirements outlined in Chapter 16.44 of the Municipal Code. Compliance with the applicable regulations and design measures would ensure that impacts to the City's stormwater infrastructure would be less than significant.

Level of Significance Before Mitigation: Impact 5.14-5 is less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.14-5 is less than significant.

5.14.3.6 CUMULATIVE IMPACTS

The Rancho Cordova General Plan EIR concluded cumulative impacts to flood hazards would be less than cumulatively considerable under implementation of the General Plan. The 2006 EIR notes that development under the General Plan would increase impervious surfaces in the Planning Area that would contribute (in combination with cumulative development in the watershed) to increases in flood conditions for area waterways, as discussed in Sections 4.9, Hydrology and Water Quality, and 4.12, Public Services and Utilities, of the 2006 EIR. The 2006 EIR also notes that the City's NPDES permit requires the provision of water quality control measures that would treat stormwater drainage, reducing cumulative impacts with respect to stormwater quality (see Sections 4.9.3 and 4.12.4.3 of the 2006 EIR).

Cumulative projects in the American River watershed could increase impervious areas and thus increase local runoff volumes at those project sites which could require the relocation or construction of new or expanded storm water drainage facilities. However, as noted above and within the 2006 EIR, cumulative projects in the region would be required to capture and infiltrate runoff as applicable in accordance with the NPDES MS4 permit. Compliance with the MS4 permit would ensure projects retain a specified volume of stormwater runoff, and the SSQP's Stormwater Quality Design Manual provides guidance on how projects can meet these on-site retention requirements using stormwater quality control measures. Projects in the region would also be required to limit post-development runoff discharges per the requirements of the Stormwater Quality Improvement Plan listed throughout Sections 9.3 through 9.8 of the SQIP, and projects in the City would be required to comply with the Rancho Cordova Stormwater Management and Discharge Control ordinance. These measures minimize the potential for exceedance of the capacity of existing or planned stormwater drainage systems. No significant cumulative drainage impact would occur, and the proposed project's drainage impacts would not be cumulatively considerable; impacts would be less than significant.

5.14.3.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

After implementation of regulatory requirements and standard conditions of approval, Impact 5.14-5 would be less than significant.

5.14.3.8 MITIGATION MEASURES

Impacts would be less than significant and no mitigation would be required.

5.14.3.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

5.14.4 Solid Waste

5.14.4.1 ENVIRONMENTAL SETTING

Regulatory Background

Federal Regulations

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (Title 40 of the CFR), Part 258, contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design (liners, leachate collection, run-off control, etc.), groundwater monitoring, and closure of landfills.

State Regulations

Assembly Bill 939

AB 939 (California Integrated Solid Waste Management Act of 1989; Public Resources Code Section 40050 et seq.) established an integrated waste-management system that focused on source reduction, recycling, composting, and land disposal of waste. AB 939 required every California city and county to divert 50 percent of its waste from landfills by the year 2000. Compliance with AB 939 is measured in part by comparing solid waste disposal rates for a jurisdiction with target disposal rates; actual rates at or below target rates are consistent with AB 939. AB 939 also requires California counties to show 15 years of disposal capacity for all jurisdictions in the county or show a plan to transform or divert its waste.

Assembly Bill 1327

The California Solid Waste Reuse and the Recycling Access Act of 1991 (AB 1327) is codified in Public Resources Code Sections 42900 through 42911. As amended, AB 1327 requires each local jurisdiction to adopt an ordinance requiring commercial, industrial, institutional, and residential buildings with five or more living units to provide an adequate storage area for the collection and removal of recyclable materials. The size of these storage areas is determined by the appropriate jurisdictions' ordinance.

Organic Waste Methane Emissions Reduction Act (Senate Bill 1383)

In September 2016, SB 1383 was signed into law establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. SB 1383 establishes goals to reduce the landfill disposal of organics by achieving a 50 percent reduction in the 2014 level of statewide disposal of organic waste by 2020 and a 75 percent reduction by 2025. SB 1383 grants CalRecycle the regulatory authority to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food must be recovered for human consumption by 2025.

As of January 2022, SB 1383 affects all generators of organic waste, including businesses, institutions, and nonprofit organizations, multifamily property owners or managers of buildings with five or more units, residents in single-family homes, apartments, and condominiums, public and private schools, and government agencies, such as State agencies and park districts. All generators must be provided with curbside organics service.

California Green Building Standards Code

Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of CALGreen requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. Additionally, newly constructed non-residential buildings, certain non-residential additions and multi-family housing with more than 5 units are required to provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at minimum) paper, corrugated cardboard, glass, plastics, organic waste and metals. CALGreen is updated on a three-year cycle; the 2022 CALGreen took effect on January 1, 2023.

Rancho Cordova General Plan

The Rancho Cordova General Plan contains the following goals and policies that are relevant to solid waste disposal and recycling.

Natural Resources Element

- **Goal NR.8**: Promote waste reduction, reuse, recycling, and composting efforts.
  - **Policy NR.8.1**: Support recycling efforts by developing a set of programs to educate residents on recycling and provide recycling services.
  - **Policy NR.8.2**: Encourage all companies that do business in Rancho Cordova to recycle and reuse construction scraps, demolition materials, concrete, industrial waste, and green waste.
  - **Policy NR.8.3**: Promote the use of rubberized asphalt on all public roadways in an effort to recycle old tires and reduce noise impacts. Implementation of this policy will help to preserve aggregate resources.
  - **Policy NR.8.4**: Encourage the use of recycled materials and source reduction (also known as waste prevention) by governmental agencies and local businesses.
  - **Policy NR.8.5**: Meet state mandates for solid waste reduction and recycling. Increase recycling efforts beyond those required by state law through supporting businesses that buy and sell re-used materials, such as materials exchange centers.
  - **Policy NR.8.6**: Encourage the use of recycled-content products and construction materials.

- **Policy NR.8.7**: Maintain contact with Sacramento County and Allied Waste (or its successor) regarding the capacity projections of Kiefer Landfill and Lockwood Landfill to ensure an adequate capacity in their disposal facilities for the long-term disposal needs of Rancho Cordova.

Infrastructure, Services, and Financing Element

- **Policy ISF.2.1**: Ensure the development of public infrastructure that meet the long-term needs of residents and ensure infrastructure is available at the time such facilities are needed.

City of Rancho Cordova Municipal Code

Chapter 6.20, Solid Waste Management. This chapter regulates the management of garbage, recyclables, and other wastes. Section 6.20.230 outlines the rules and regulations for collection, transportation, and disposal of commercial solid waste and recyclables in the city.

Chapter 6.21, Business and Multifamily Recycling and Organics Recycling. This chapter promotes recycled and organics recycling for businesses and multifamily uses by:

- Requiring covered generators in the city of Rancho Cordova to keep recyclable materials separate from all other solid waste for recycling;
- Requiring covered generators in the city of Rancho Cordova to keep organic recyclable materials separate from all other solid waste for organics recycling;
- Requiring covered generators to provide signs and labeled containers for the storage and collection of recyclable materials and organic recyclable materials; and
- Requiring covered generators to either self-haul or enter into a written service agreement for the collection and subsequent delivery of recyclable materials and organic recyclable materials to a recycling facility.

Chapter 16.92, Construction and Demolition Debris. This chapter outlines the City's Construction and Demolition Debris ordinance. "Covered project" means a project that meets one or more of the following criteria: (1) is new construction; (2) is a demolition project; or (3) is a tenant improvement with a permit valuation greater than or equal to $250,000. "Covered project" shall not include: (1) activities performed in response to an emergency, such as a natural disaster; or (2) activities that contain significant amounts of materials that cannot be disposed of in Class II sanitary landfills described in Title 27, Section 20250 of the California Code of Regulations, and as may be amended from time to time. The general requirements of the Construction and Demolition Debris ordinance are outlined in Section 16.92.030.

5.14.4.2 EXISTING CONDITIONS

Republic Services Inc. currently provides solid waste and recycling collection services to the City. Solid waste is transported to the Republic Services Forward Inc. & Austin Rd. Landfill (Forward Landfill), located at 9999 South Austin Road in the City of Manteca. Forward Landfill is owned and operated by Republic Services.

Forward Landfill is a total of 567 acres in size, with a permitted disposal area of 371.80 acres. Forward is classified as a Class I, II, and III municipal solid waste landfill facility and is permitted to accept tires, sludge (biosolids), mixed municipal, industrial, green materials, contaminated soil, construction/demolition materials, ash, asbestos, and agricultural debris (CalRecycle 2024a). The landfill is permitted to accept a maximum of 8,668 tons per day of solid waste (CalRecycle 2024a). The site currently has a permitted capacity of approximately 59 million cubic yards and a remaining capacity of 24 million cubic yards (CalRecycle 2024a). The landfill is currently operating; however, the closure date was reported in 2020, which occurs when a landfill or disposal site is no longer receiving waste due to being prepared for post-closure maintenance to an approved plan or construction schedule. Closure and post-closure maintenance plans ensure that landfill closure and post-closure maintenance and the eventual reuse of disposal sites will conform to state performance standards and minimum substantive requirements (Cal Recycle 2024b). The landfill has a cease operation date of January 1, 2036 (CalRecycle 2024a).

California Department of Resources Recycling and Recovery (CalRecycle) provides an average per-capita solid waste disposal rate for residents and businesses. In Rancho Cordova, CalRecycle identified solid waste disposal rates of 4.7 tons per resident per year and 7.0 tons per employee per year in 2021 (CalRecycle 2023). The Countywide Integrated Waste Management Plan requires recycling programs that are expected to result in a 50 percent diversion away from landfills, thereby extending the life of landfills. According to the 2006 Regional Waste Management Authority Annual Report, Rancho Cordova showed 48 percent of the solid waste generated in the city was diverted from landfills through recycling, composting, and other waste diversion methods. To comply with the CIWMA, the City adopted the Business and Multifamily Recycling and Organics Ordinance (Title 6, Chapter 6.21) in October 2008. The ordinance requires businesses and multifamily residential properties with five or more units that generate four or more cubic yards per week of solid waste to implement an on-site recycling program. Businesses and multifamily properties that generate an excess of two cubic yards of organic waste per week are also subject to the provisions of the ordinance.

5.14.4.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

U-4 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

U-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

5.14.4.4 PLANS, PROGRAMS, AND POLICIES

The 2006 General Plan Environmental Impact Report

The 2006 General Plan EIR determined that implementation of the proposed policies Infrastructure, Services, and Financing and Natural Resource Elements and associated actions and mitigation measures would ensure that the 2006 General Plan's solid waste service impacts would be less than significant.

5.14.4.5 ENVIRONMENTAL IMPACTS

Impact 5.14-6: The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of waste reduction goals. [Threshold U-4]

With the implementation of the proposed project, the population is anticipated to increase by 322 residents[3] and approximately 280 jobs[4] are projected to be generated. As shown in Table 5.14-6, *Increase in Solid Waste Generation Rates,* this projected growth would result in an increase in solid waste of approximately 2.4 tons/day or 864.9 tons/year. Table 5.14-6 also shows the disposal rate for residential and employees in Rancho Cordova. The per-capita disposal rate is a jurisdiction-specific index used to determine compliance with AB 939, allowing CalRecycle and jurisdictions to focus on the successful implementation of diversion programs, as one of several factors (CalRecycle 2023).

Table 5.14-6 Increase in Solid Waste Generation Rates

Category	Increase in Residents	Solid Waste Generation Rate (ppd)	Increase in Solid Waste (tons/day)	Increase in Solid Waste (tons/year)
Residents	322	7.5	1.2	440.7
Jobs	280	8.3	1.2	424.1
Total			**2.4**	**864.9**

Source: CalRecycle 2023.

Municipal waste services in the city are currently provided by Republic Services, Inc. The proposed project would increase the waste delivered to The Forward Landfill (SWIS No. 39-AA-0015) by 2.4 tons per day. The remaining capacity at the Forward Landfill was reported to be 24,720,669 tons with a Ceased Operation Date of January 1, 2036 (CalRecycle 2024a). The Ceased Operation Date is when the landfill will no longer receiving waste and is being prepared for post-closure maintenance according to an approved plan and construction schedule (CalRecycle 2024b). The proposed project would result in a nominal increase in waste generation that would not exceed the capacity of the Forward Landfill.

During construction, the proposed project would need to comply with CALGreen requirements, specifically recycling and/or salvaging for reuse a minimum of 65 percent of nonhazardous construction and demolition waste generated during most "new construction" projects. Section 74-04.006, Amendments to CALGreen Building Standards Code, amends Section 5.408.1, Construction Waste Management, to include 2019 CALGreen requirements. Furthermore, the proposed project would also comply with the requirements of AB 341 which mandates recycling for commercial land uses and SB 1383, which requires every jurisdiction to provide organic waste collection services to all residents and businesses. Additionally, any organic waste generated in amounts over a certain threshold would be recycled in accordance with AB 1826. Therefore, the

[3] Based on the average household size of 2.68 persons per household from the General Plan multiplied by the 120 dwelling units from the proposed project.
[4] Based on the 140,000 square feet proposed by the project and multiplied by the 2 employees per 1,000 square feet factor (see Chapter 5.10, *Population and Housing*).

proposed project would not generate waste in excess of state and local standards or in excess of local infrastructure, causing the impairment of solid waste reduction goals. Impacts would be less than significant.

Level of Significance Before Mitigation: Impact 5.14-6 is less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.14-6 is less than significant.

Impact 5.14-7: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. [Threshold U-5]

As noted above, the proposed project would comply with applicable federal, state, and local statues and regulations related to solid waste. For example, during construction, the proposed project would be required to salvage or recycle a minimum of 65 percent of nonhazardous construction and demolition waste generated during construction activities in order to comply with CALGreen Section 5.408 requirements. Additionally, the proposed project would need to provide readily accessible areas for the depositing, storage, and collection of non-hazardous materials for recycling including for organics, under CALGreen Section 5.408. Furthermore, the proposed project would also comply with the requirements of AB 341 which mandates recycling for commercial land uses and SB 1383, which requires every jurisdiction to provide organic waste collection services to all residents and businesses. The City Municipal Code implements these state requirements in Sections 6.20 and 6.21. The proposed project would also comply with these sections of the Municipal Code by collecting recyclables in separated and labeled containers. Therefore, the proposed project would comply with the federal, state, and local standards related to solid waste. Impacts would be less than significant.

5.14.4.6 CUMULATIVE IMPACTS

The Rancho Cordova General Plan EIR determined that cumulative impacts to solid waste would be less than cumulatively considerable under implementation of the General Plan. The 2006 EIR notes that the Kiefer Landfill, Forward Landfill, and Lockwood Regional Landfill can accommodate solid waste disposal demands from the Planning Area.

The cumulative setting for the discussion of solid waste in the 2006 EIR includes all existing, planned, proposed, approved, and reasonably foreseeable development in all of Rancho Cordova. Implementation of the proposed project is estimated to result in an increase of 322 residents and 280 jobs. As evaluated in Impact 5.14-6, this would result in an increase in solid waste generation of approximately 2.4 tons/day. All waste in the City is deposited at the Forward Landfill. Like the proposed project, all projects in the City would be required to adhere to state and local waste diversion requirements including the 2022 CALGreen standards and various mandates at the state level that require jurisdictions to implement recycling programs. As such, the proposed project in conjunction with other foreseeable projects in the City would not generate waste in excess of state or local standards or in exceedance of the Forward Landfill's remaining capacity. Furthermore, other projects

proposed within the city would be subject to environmental review to evaluate their contributive increase in solid waste.

Continued compliance with the applicable regulations that require waste diversion would ensure that the proposed project's incremental impacts regarding solid waste are not cumulatively considerable.

5.14.4.7 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

After implementation of regulatory requirements and standard conditions of approval, Impact 5.14-7 would be less than significant.

5.14.4.8 MITIGATION MEASURES

Impacts would be less than significant.

5.14.4.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant.

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6. Significant Impacts, Irreversible Changes, and Growth-Inducing Impacts

Section 15126(b) of the California Environmental Quality Act (CEQA) Guidelines requires an Environmental Impact Report (EIR) to describe any significant impacts of the proposed project, including those which can be mitigated but not reduced to a level of insignificance. Significant impacts of a proposed project that cannot be reduced to a less than significant level are referred to as significant and unavoidable impacts. This chapter provides an overview of the significant and unavoidable impacts of the proposed project, as well as impacts found not to be significant, growth inducing, significant and unavoidable impacts, and significant irreversible changes.

A more detailed analysis of the effects the proposed project would have on the environment, and proposed mitigation measures to minimize significant environmental impacts, are provided in Sections 5.1 through 5.13 of this EIR.

6.1 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

Sections 5.1 through 5.14 of Chapter 5, *Environmental Analysis*, of this EIR evaluate the significant effects of the proposed project and provide mitigation for impacts that can be reduced to a less than significant level. Each chapter discusses the significant impact and provides a corresponding mitigation measure. The mitigation measures are summarized in Chapter 1, *Executive Summary*, of this EIR.

Pursuant to Section 15126.2(b) of the CEQA Guidelines, this EIR considers the significant environmental effects that cannot be avoided if the proposed project is implemented.

The environmental impacts listed below would be potentially affected by the proposed project; however, mitigation measures would reduce their level of significance to less than significant, as determined in the chapters analyzing each of these impacts.

Air Quality

- **Impact 5.1-2:** Construction activities associated with the proposed project could generate short-term emissions in exceedance of Sacramento Metropolitan Air Quality Management District's threshold criteria.

Biological Resources

- **Impact 5.2-1:** Development of the proposed project could significantly impact the following sensitive species: special status birds and bats.

- **Impact 5.2-3:** The proposed project could affect wildlife movement of special status species.

Cultural Resources

- **Impact 5.3-2:** Development of the project could impact archaeological resources.
- **Impact 5.3-3:** Grading activities could potentially disturb human remains.

Greenhouse Gas Emissions

- **Impact 5.5-1:** The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Hazards and Hazardous Materials

- **Impact 5.6-1:** The project could potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- **Impact 5.6-2:** The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

- **Impact 5.6-3:** The proposed project could potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

- **Impact 5.6-4:** The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5, which could create a significant hazard to the public or the environment.

- **Impact 5.6-6:** The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Tribal Cultural Resources

- **Impact 5.13-1:**The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is: i) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or ii) determined by the lead agency to be significant pursuant to criteria in Public Resources Code section 5024.1(c). In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

6.2 SIGNIFICANT IRREVERSIBLE CHANGES DUE TO THE PROPOSED PROJECT

Section 15126.2(c) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, the CEQA Guidelines state:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The following are the significant irreversible changes that would be caused by the proposed project, should it be implemented:

- Implementation of the proposed project would include construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. Operation of the proposed project would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of the proposed project would limit the availability of such resources for future generations or for other uses during the life of the project.

- An increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required. The energy and social services commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed.

- An increase in vehicle trips would accompany project-related population growth. Over the long term, emissions associated with such vehicle trips would continue to contribute to the South Coast Air Basin's nonattainment designation for ozone (O^3) and particulate matter ($PM_{2.5}$ and PM_{10}) under the California and National Ambient Air Quality Standards (AAQS), and nonattainment for nitrogen dioxide (NO_2) under the California AAQS.

Given the low likelihood that the land at the project site would revert to its original form, the proposed project would generally commit future generations to these environmental changes.

6.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

The construction of the proposed project would not require the extension of major infrastructure facilities to the site. The project site does not have any built structures onsite and would require connections; however the site is within an existing residential area and is in an urban area served by existing infrastructure, including water and sewer mains, and electricity and natural gas services.

As mentioned in Section 5.7, *Land Use and Planning*, of the DEIR, the proposed project is located within the Folsom Boulevard Planning area and is zoned RMU (FBSP) with additional development standards. The project consists of community-commercial buildings, parking structures, and affordable multi-family development, adhering to the Mather Mills opportunity site's development standards. In addition, the project aligns with City general plan policies for high-density residential and mixed-use development within 0.25 miles of a transit stop and a strong job-housing ratio.

Would this project result in the need to expand one or more public services to maintain desired levels of service?

The proposed project would increase employment and residences in the City. The proposed project is expected to increase the demand for public services, which would contribute to the needs to expand facilities. However, as substantiated in Section 5.11, Public Services, of this DEIR, existing programs and policies would ensure that the increase in uses, and impacts to public services, would be less than significant.

Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?

Future development under the proposed project would increase population, housing, and jobs in the City. The project is expected to increase demand for fire protection services, police services, school services, and library services, which would contribute to the need to expand facilities. However, as substantiated in 5.11, *Public Services*, and 5.14, *Utilities and Service Systems*, of the DEIR, existing programs and policies would ensure that the service capability will grow proportionate to the increase in uses and impacts to public services and utilities would be less than significant.

Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

During construction of future development on the site, several design, engineering, and construction jobs would be created. Construction employees would be from the regional labor force, and the construction of the project would not be expected attract new workers to the region. The proposed project could result in a maximum of 322 residents and 280 employees (see 5.10, *Population and Housing*). Although the proposed project would require a zoning amendment this action would not approve growth beyond that considered in the 2006 GP EIR.

Future residents of the proposed project would seek shopping, entertainment, employment, and other economic opportunities in the City of Rancho Cordova. This would create an increased demand for such economic goods and services and would, therefore, encourage the creation of new businesses. Proximity to the commercial uses onsite and in the surroundings, would result in beneficial impacts to the City's jobs-housing balance (see Section 5.10, *Population and Housing*), and the close proximity to such uses would reduce vehicle trips, and thereby reduce impacts to air quality, greenhouse gas emissions, and transportation. Therefore, although the proposed project would have a direct growth-inducing effect, indirect growth-inducing effects would be minimized due to the balance of land uses in the proposed project.

6. Significant Impacts, Irreversible Changes, and Growth-Inducing Impacts

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7. Alternatives to the Proposed Project

7.1 INTRODUCTION

7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines § 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (15126.6[b])
- "The specific alternative of 'no project' shall also be evaluated along with its impact." (15126.6[e][1])
- "The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." (15126.6[e][2])
- "The range of alternatives required in an EIR is governed by a 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project." (15126.6[f])
- "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries…, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6[f][1]).
- "Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR." (15126.6[f][2][A])

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, "[i]f an alternative would cause…significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."

7.1.2 Project Objectives

As described in Section 3.2, the following objectives have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

1. Provide for a mix of uses onsite by developing residential, commercial, and recreational uses on infill and underutilized parcels near the Mather Field/Mills Station.
2. Increase the City's housing stock by providing a range of housing density types, including affordable housing.
3. Increase employment opportunities in the City.
4. Improve the jobs-housing balance in the City of Rancho Cordova and provide new housing close to jobs and services.
5. Promote healthy living and physical activity by providing open space areas and opportunities to utilize alternative transportation options available proximate to the site, including the Mather Field/Mills Station.

7.1.3 Summary of Significant Impacts

The following environmental topics would result in potentially significant impacts with implementation of the proposed project. However due to proposed mitigation measures these impacts would ultimately be reduced to a less than significant level. The DEIR has determined that there would be no significant and unavoidable impacts from the implementation of the proposed project.

Air Quality

- **Impact 5.1-2:** Construction activities associated with the proposed project could generate short-term emissions in exceedance of Sacramento Metropolitan Air Quality Management District's (SMAQMD) threshold criteria.

Biological Resources

- **Impact 5.2-1:** Development of the proposed project could significantly impact the following sensitive species: special status birds and bats.
- **Impact 5.2-3:** The proposed project could affect wildlife movement of special status species.

Cultural Resources

- **Impact 5.3-2:** Development of the project could impact archaeological resources.
- **Impact 5.3-3:** Grading activities could potentially disturb human remains.

Greenhouse Gas Emissions

- **Impact 5.5-1:** The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Hazards and Hazardous Materials

- **Impact 5.6-1:** The project could potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- **Impact 5.6-2:** The proposed project could potentially create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- **Impact 5.6-3:** The proposed project could potentially emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- **Impact 5.6-4:** The proposed project would be located on a site that is included on a list of hazardous materials sites compiled under Government Code Section 65962.5, which could create a significant hazard to the public or the environment.
- **Impact 5.6-6:** The proposed project could potentially impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Tribal Cultural Resources

- **Impact 5.12-1:** The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is: i) listed or eligible for listing in the California Register of Historical Resources

or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); ii) determined by the lead agency to be significant pursuant to criteria in Public Resources Code section 5024.1(c). In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

7.2 ALTERNATIVES CONSIDERED AND REJECTED

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this EIR.

7.2.1 Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (CEQA Guidelines § 15126[5][B][1]). Key factors in evaluating the feasibility of potential offsite locations for EIR project alternatives include:

- If it is in the same jurisdiction.
- Whether development as proposed would require a General Plan Amendment.
- Whether the project applicant could reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). (CEQA Guidelines Section 15126.6[f][1])

The proposed project involves the construction of community-commercial buildings, housing, public open space, and a parking structure on a 9.85-acre vacant site. The project site is zoned Residential Mixed-Use–Folsom Boulevard Specific Plan, incorporating medium- and high-density housing, office, and commercial services. Although there may be other vacant sites that can accommodate this mixed-use project, one of the project's objectives is to develop diverse on-site uses on underutilized parcels near Mather Field/Mills Station. There are no sites of a similar size and proximity to Light Rail and the Mather Field/Mills Station that would be suitable for the uses planned with the proposed project. In addition, any development of the size and type proposed by the proposed project would have substantially the same environmental impacts. As there are no off-site locations that could accommodate the uses and scale of development proposed with the proposed project, an alternate site was eliminated from consideration.

7.2.2 Residential-Only Alternative

The Residential-Only Alternative would only develop the residential component of the proposed project (up to 394 dwelling units). Eliminating the non-residential component of the proposed project would result in accounting for more non-residential square footage elsewhere in the City and would require future residents to travel further for services that are currently planned onsite, likely increasing VMT. Given the Specific Plan's

location and proximity to the Mather Field Mills light rail station, this site is suitable for both residential and non-residential uses, including commercial uses. According to the Folsom Boulevard Specific Plan (FBSP), the project site has a land use designation of Residential Mixed Use (FB-RMU,) which allows for medium- and high-density housing (between 6.1 and 40 dwelling units per acre). Therefore, the project site could allow between 61 and 394 units. The proposed project has the potential to generate 322 residents and 280 jobs while the Residential-Only Alternative would allow up to 1,056 residents. The proximity to major transit system makes this site ideal for mixed use. Limiting the property to only residential would force commercial interests to locate elsewhere in the region. In addition, this alternative would only meet three of the project objectives—this alternative would not be able to provide for a mix of uses near the Mather Field/Mills Station nor improve the jobs-housing balance by provide new housing close to jobs and services. The Residential-Only Alternative would not be feasible as it would not be compatible with the goals and policies regarding the jobs-housing balance, and would instead only focus on increasing the housing supply.

7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed above, the following alternatives have been determined to represent a reasonable range of alternatives which have the potential to feasibly attain most of the basic objectives of the project, but which may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in the following sections.

- No Project/Existing General Plan Alternative
- Reduced Development Alternative

An EIR must identify an "environmentally superior" alternative, and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. Section 7.7 identifies the Environmentally Superior Alternative. The preferred land use alternative (proposed project) is analyzed in detail in Chapter 5 of this DEIR.

7.3.1 No Project/Existing General Plan Alternative

The No Project/Existing General Plan Alternative is required to discuss the existing conditions at the time the notice of preparation is published and evaluate what would reasonably be expected to occur in the foreseeable future if the proposed project is not approved (CEQA Guidelines, Section 15126.6[e]). Pursuant to CEQA, this alternative is based on current plans and consistent with available infrastructure and community services. Therefore, the No Project Alternative assumes that the proposed project would not be adopted, and development on the site would be consistent with the projected buildout in the General Plan.

Table 7-1, *No Project Alternative Buildout Statistical Summary*, compares the buildout summary of the proposed project with the No Project/Existing General Plan Alternative. The proposed project designates 42 percent of the site for residential uses, 33 percent for non-residential uses, and 25 percent for open space. The proposed project assumes 29 units per acre density to generate 120 dwelling units and a floor area ratio (FAR) of

approximately 1.01 to calculate non-residential square footage. Under the No Project/Existing General Plan Alternative the density and FAR are the same as the proposed project; however, the amount of land allocated to each land use type is modified. Since the FBSP requires a greater than 50 percent residential use on the site, the No Project/Existing General assumes 51 percent of the site for residential use and 49 percent for non-residential development. There is no open space requirement under the FBSP.

Table 7-1 No Project/Existing General Plan Alternative Buildout Statistical Summary

	Proposed Project	No Project/ Existing General Plan Alternative
Dwelling Units	120	146
Population	322	390[1]
Jobs	280	463[2]
Non-Residential Square Footage	140,000	231,267
Jobs-to-Housing Ratio	2.3	3.2

[1] Based on the average household size of 2.68 persons per household from the General Plan EIR.
[2] Based on the approximate 2 employees per 1,000 square feet from the General Plan EIR (see Chapter 5.9, *Population and Housing*).

7.3.1.1 AIR QUALITY

Under this No Project Alternative, new development would also occur on the site although with an increase in residential units and non-residential square footage compared to the proposed project. As with the proposed project the entire site would be developed consistent with the existing zoning. Therefore, construction activities and associated exhaust and fugitive dust emissions would occur like the proposed project. The No Project Alternative would result in an increase in vehicle trips and building energy use, compared to existing conditions and development assumed in the General Plan. Air quality impacts under this Alternative would be greater than the proposed project and would still result in potentially significant short-term construction impacts and require mitigation measure AQ-1, which requires the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standards to reduce impacts to less than significant impacts.

7.3.1.2 BIOLOGICAL IMPACTS

Under this No Project Alternative, new development would also occur on the site; therefore, construction and operational activities would still occur. Development activities under the No Project Alternative could disturb the habitat and movement of special status species. Because this alternative would also disturb the entire project site, biological resources impacts under this No Project Alternative would be the same as the proposed project. Both scenarios would be required to include mitigation measure BIO-1, which protects nesting birds, and BIO-2, which protects bat roosting habitat to reduce impacts to less than significant impacts.

7.3.1.3 CULTURAL RESOURCES

Under this No Project Alternative, new development would also occur on the site. Therefore development activities under the No Project Alternative could still potentially disturb human remains and impact archaeological resources. Cultural resources impacts under this Alternative would be similar to the proposed project and would require mitigation measures CUL-1 and CUL-2 to reduce impacts to less than significant.

Mitigation measure CUL-1 mandates that construction work must stop within a 100-foot radius of cultural or human-related subsurface deposits and a qualified archaeologist must evaluate the find's significance and modify the no-work radius, using professional judgment. Mitigation measure CUL-2 states that the California Code requires archaeologists to protect human remains or potentially human remains from disturbance, and to inform the Sacramento County Coroner of any such discovery, as per Section 7050.5 of the Health and Safety Code.

7.3.1.4 ENERGY

Under this No Project Alternative, new development would occur on the site. Development intensity under this alternative would be greater than the proposed project, in terms of housing, and therefore, energy use from residential uses would be increased compared to the proposed project. Because the types of non-residential uses under this alternative cannot be determined at this time, it is unknown what the energy demand would be for those uses. However, any future use would be required to comply with the same energy-conserving regulations as the proposed project, so it is assumed that this alternative would not result in wasteful or inefficient energy use or conflict with plans for renewable energy or energy efficiency. Impacts under this alternative would be increased to that of the proposed project; however impacts would remain less than significant.

7.3.1.5 GREENHOUSE GAS EMISSIONS

Under the No Project Alternative, new development would generate greenhouse gas (GHG) emissions from the construction and operation activities. The No Project Alternative would result in an increase in vehicle trips, compared to existing conditions due to the increase in population. GHG impacts under this alternative would be greater than the proposed project. Therefore this No Project Alternative could exceed SMAQMD Annual Construction Significance Threshold and would require mitigation measures GHG-1, which implements SMAQMD Tier 1 Best Management Practices, and GHG-2, which implements SMAQMD Tier 2 Best Management Practices in order to reduce impacts to less than significant.

7.3.1.6 HAZARDS AND HAZARDOUS MATERIALS

Under this No Project Alternative, new development would also occur on the site; therefore, remediation, construction, and operational activities would still occur. Development activities under the No Project Alternative would require remediation of the hazardous materials on the project site. Because this alternative would introduce commercial and residential uses that could expose people to hazardous materials, the impacts would be the same as for the proposed project. Both scenarios would be required to include mitigation measure HAZ-1, which incorporates all recommendations from an approved Site Cleanup Plan and Addendum to the Site Cleanup Plan prepared by Tetra Tech; impacts would be reduced to less than significant.

7.3.1.7 LAND USE AND PLANNING

Under this No Project Alternative, new development would also occur on the site; however, neither scenario would result in dividing an established community. As both scenarios would not conflict with either the 2006 General Plan EIR or the FBSP, impacts would be similar and less than significant.

7.3.1.8 MINERAL RESOURCES

Under either scenario, the project site is within MRZ-3. MRZ-3 Zones are Mineral Resources Zones where the significance of mineral deposits cannot be determined from the available data. Similar to the proposed project, the No Project Alternative would be unlikely to cause a loss of known mineral resources due to previous ground disturbance activities on the project site. The project site is in an urban area with residential, commercial, and residential uses to the north, east, south, and west. Under the No Project Alternative, the project would still result in urban use. Therefore, under both scenarios the project would unlikely reveal any mineral resources due to previous development and would be compatible with the surrounding environment. The impact would be similar and less than significant.

7.3.1.9 NOISE

Under this No Project Alternative, new development would also occur on the site; therefore, noise from construction and operation would still occur. Noise impacts under this No Project Alternative would be similar to the proposed project, and impacts would be less than significant.

7.3.1.10 POPULATION AND HOUSING

The No Project Alternative would generate 146 dwelling units, 390 residents, and 425 jobs. Compared to the proposed project, the No Project Alternative would result in a increase of 26 dwelling units, 68 residents, and an increase in 145 jobs. Like the proposed project, the No Project Alternative would not displace housing or people. Both scenarios would not result in unplanned population growth in the project area since they would not result in more housing units, residents, and jobs then what was projected in the 2006 General Plan EIR or FBSP. Impacts would be the same.

7.3.1.11 PUBLIC SERVICES

The No Project Alternative would create an increase in demand for fire, police, school, and library services and facilities in the City. Development under the No Project Alternative would result in more residents compared to the proposed project. However, compliance with the General Plan policies, City's Municipal Code, and payment of fees for Government Code Section 65996 would reduce impacts. Impacts would be less than significant under both scenarios.

7.3.1.12 RECREATION

Development would occur under this No Project Alternative; however, no open space would be developed on the site. The proposed project would introduce up to 2.5 acres of public open space with 1.3 to 1.5 acres of Neighborhood and Community Greens and 0.75 to 1.0-acre of Plaza and Green Space. The existing General Plan and FBSP do not specify requirement for parkland or open space; therefore, this No Project Alternative would generate additional residents that would increase the use of existing park and recreational facilities and result in environmental impacts to provide new and/or expanded recreational facilities. Under both scenarios, compliance with Cordova Recreation and Parks District Quimby Parks requirements (land dedication or fees) would be required. Neither the proposed project nor the No Project Alternative would result in significant

impacts to recreational facilities. Impacts of the No Project Alternative would be greater than the proposed project.

7.3.1.13 TRIBAL CULTURAL RESOURCES

Under this No Project Alternative, new development would also occur on the site. Impacts under the No Project Alternative would be similar to the proposed project. Future development under this alternative and the proposed project could result in potentially significant impacts to the uncovering of tribal cultural resources. The No Project Alternative would also require mitigation measure TCR-1 which states that before grading permits, a qualified archaeological monitor must be on call during ground-disturbing activities and if archeological resources are discovered, construction must stop within 25 feet and an archaeologist will be consulted to determine if further study is required. Impacts under this alternative, as with the proposed project, would be similar and less than significant.

7.3.1.14 UTILITIES AND SERVICE SYSTEMS

The No Project Alternative would create an increase in demand for potable water, wastewater generation, and solid waste disposal in the City. Development under the No Project Alternative would result in more residents compared to the proposed project. However, compliance with the General Plan policies and the City's Municipal Code would reduce impacts. Impacts would be less than significant under both scenarios.

7.3.1.15 CONCLUSION

The No Project Alternative would increase impacts on air quality, energy, greenhouse gases, population and housing, public services, recreation, and utilities and service systems compared to the proposed project. All other impacts would be similar to the proposed project. The No Project Alternative would be developed at 51 percent of the site for residential use and 49 percent for non-residential development, with a similar residential density and commercial uses FAR as the proposed project. Under this Alternative, all project objectives would be met except for Objective 1, because no open space would be developed under this scenario; therefore it would not meet the recreational uses goal stated in Objective 1.

7.3.2 Reduced Development

The Reduced Development Alternative would reduce residential and nonresidential development and increase the amount of public open space at the project site.

Table 7-2, *Reduced Development Alternative Buildout Statistical Summary*, compares the buildout summary of the proposed project with the Reduced Development Alternative. Under the Reduced Development Alternative the density and FAR are the same as the proposed project; however, the amount of land allocated to each land use type is modified to reduce development for residential and non-residential development while increasing the amount of open space. The Reduced Development Alternative designates 33 percent of the site for residential uses, 33 percent for non-residential uses, and 34 percent for open space.

Table 7-2 Reduced Development Alternative Buildout Statistical Summary

	Proposed Project	Reduced Development Alternative
Dwelling Units	120	94
Population	322	253[1]
Jobs	280	286[2]
Non-residential Square Footage	140,000	143,007
Jobs-to-Housing Ratio	2.3	3.0

[1] Based on the average household size of 2.68 persons per household from the General Plan EIR.
[2] Based on the approximate 2 employees per 1,000 square feet from the General Plan EIR (see Chapter 5.9, *Population and Housing*).

7.3.2.1 AIR QUALITY

Under this Reduced Development Alternative, new development would also occur on the site although with a decrease in residential units and non-residential square footage and an increase in open space compared to the proposed project. Although the Reduced Development Alternative would result in less development, construction activities and associated exhaust and fugitive dust emissions would occur like the proposed project. The Reduced Development Alternative would result in an increase in vehicle trips and building energy use, compared to existing conditions and development assumed in the General Plan. Air quality impacts under this Alternative would be less than the proposed project but would still result in potentially significant impacts in regard to short-term construction impacts and require mitigation measure AQ-1, which requires the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard to reduce impacts to less than significant.

7.3.2.2 BIOLOGICAL IMPACTS

Under this Reduced Development Alternative, new development would also occur on the site; therefore, construction and operational activities would still occur. Development activities under the Reduced Development Alternative could disturb the habitat and movement of special status species. Because this alternative would also disturb the entire project site, biological resources impacts under this Reduced Development Alternative would be the same as the proposed project. Both scenarios would be required to include mitigation measure BIO-1, which protects nesting birds, and BIO-2, which protects bat roosting habitat to reduce impacts to less than significant impacts.

7.3.2.3 CULTURAL RESOURCES

Under this Reduced Development Alternative, new development would also occur on the site. Therefore, development activities under the Reduced Development Alternative could still potentially disturb human remains and impact archaeological resources. Cultural resources impacts under this Alternative would be similar to the proposed project and would require mitigation measures CUL-1 and CUL-2 to reduce impacts to less than significant. Mitigation measure CUL-1 mandates that construction work must stop within a 100-foot radius of cultural or human-related subsurface deposits and a qualified archaeologist must evaluate the find's significance and modify the no-work radius, using professional judgment. Mitigation measure CUL-2 states that the California Code requires archaeologists to protect human remains or potential human remains from

disturbance, and to inform the Sacramento County Coroner of any such discovery, per Section 7050.5 of the Health and Safety Code.

7.3.2.4 ENERGY

Under this Reduced Development Alternative, new development would occur on the site. Development intensity under this alternative would be less than the proposed project, in terms of housing, and therefore, energy use from residential uses would be decreased compared to the proposed project. Because the types of non-residential uses under this alternative cannot be determined at this time, it is unknown what energy demand would be for those uses. However, any future use would be required to comply with the same energy conserving regulations as the proposed project so it is assumed that this alternative would not result in wasteful or inefficient energy use or conflict with plans for renewable energy or energy efficiency. Impacts under this alternative would be less than the proposed project and impacts would be less than significant.

7.3.2.5 GREENHOUSE GAS EMISSIONS

Under this Reduced Development Alternative, new development would GHG emissions from the construction and operation activities. The Reduced Development Alternative would result in an increase in vehicle trips compared to existing conditions due to the increase in population. GHG impacts under this alternative would be less than the proposed project. However, this Alternative could still exceed SMAQMD Annual Construction Significance Threshold and would also require mitigation measures GHG-1, which requires the project to implement SMAQMD Tier 1 Best Management Practices, and GHG-2, which would require the project to implement SMAQMD Tier 2 Best Management Practices in order to reduce impacts to less than significant.

7.3.2.6 HAZARDS AND HAZARDOUS MATERIALS

The Reduced Development Alternative would still introduce commercial and residential uses, exposing people to hazardous materials. The impacts of this alternative are the same as the proposed project. Both scenarios require mitigation measure HAZ-1, which incorporates recommendations from an approved Site Cleanup Plan and Addendum prepared by Tetra Tech, to reduce impacts to less than significant.

7.3.2.7 LAND USE AND PLANNING

Under this Alternative, new development would also occur on the site; however, the development of this alternative would not result in dividing an established community. Under this Reduced Development Alternative, the project would conflict with the FBSP since the FBSP requires greater than 50 percent residential use on the site, and the Reduced Development Alternative would result in fewer residential units than the proposed project. Therefore impacts would be greater than the proposed project but this conflict would not result in a physical environmental effect.

7.3.2.8 MINERAL RESOURCES

The project site is within the MRZ-3 zone. MRZ-3 Zones are Mineral Resources Zones where the significance of mineral deposits cannot be determined from the available data. Similar to the proposed project, the No Project Alternative would be unlikely to cause a loss of known mineral resources due to previous ground

disturbance activities on the project site. The project site is in an urban area with residential, commercial, and residential uses to the north, east, south, and west. Under the No Alternative, the project would still result in urban use. Therefore under both scenarios the project would be unlikely to reveal any mineral resources due to previous development and would be compatible with the surrounding environment. The impact would be similar and less than significant.

7.3.2.9 NOISE

Under this Reduced Development Alternative, new development would also occur on the site; therefore, noise from construction and operation would still occur. Noise generated on site under this Reduced Development Alternative would be similar to the proposed project, but because the site would be developed with less intense uses, construction noise and traffic noise would be less than the proposed project. Impacts under the Reduced Development Alternative would be less than significant.

7.3.2.10 POPULATION AND HOUSING

The Reduced Development Alternative would include 94 dwelling units and generate 253 residents and 286 jobs. Compared to the proposed project, the Reduced Development Alternative would result in a decrease of 26 dwelling units and 69 residents, and an increase in 6 jobs. Like the proposed project, the Reduced Development Alternative would not displace housing or people. Because the Reduced Development Alternative would not result in unplanned population growth in the project area—in comparison to the 2006 General Plan EIR or the FBSP that increase housing units, residents, and jobs compared to existing conditions—impacts would be similar.

7.3.2.11 PUBLIC SERVICES

The Reduced Development Alternative would create an increase in demand for fire, police, school, and library services and facilities in the city. Development under the Reduced Development Alternative would result in fewer residents compared to the proposed project. Compliance with the General Plan policies, City's Municipal Code, and payment of fees for Government Code Section 65996 would reduce impacts. Impacts would be less than significant.

7.3.2.12 RECREATION

Under this Reduced Development Alternative approximately 3.35 acres of open space would be developed on the site. The proposed project would introduce up to 2.5 acres of public open space with 1.3 to 1.5 acres of Neighborhood and Community Greens and 0.75 to 1.0 acre of Plaza and Green Space. The Reduced Development Alternative would generate additional residents that would increase the use of existing park and recreational facilities and result in environmental impacts to provide new and/or expanded recreational facilities. This alternative would be required to comply with Cordova Recreation and Parks District Quimby Parks requirements (land dedication or fees). Neither the proposed project nor the Reduced Development Alternative would result in significant impacts to recreational facilities. Impacts of the Reduced Development Alternative would be less than the proposed project.

7.3.2.13 TRIBAL CULTURAL RESOURCES

Under this Reduced Development Alternative, new development would also occur on the site. Impacts under the Reduced Development Alternative would be similar to the proposed project. Future development under this alternative and the proposed project could result in potentially significant impacts to the uncovering tribal cultural resources. The Reduced Development Alternative would also require mitigation measure TCR-1 which states that before grading permits, a qualified archaeological monitor must be on call during ground-disturbing activities and if archeological resources are discovered, construction must stop within 25 feet and an archaeologist will be consulted to determine if further study is needed. Impacts under this alternative would be similar to those of the proposed project and less than significant with the mitigation measure.

7.3.2.14 UTILITIES AND SERVICE SYSTEMS

The Reduced Development Alternative would create an increase in demand for potable water, wastewater generation, and solid waste disposal in the City. Development under the Reduced Development Alternative would result in fewer residents compared to the proposed project. However, like the proposed project, compliance with the General Plan policies and City's Municipal Code would reduce impacts on utilities. Impacts would be less than significant.

7.3.2.15 CONCLUSION

The Reduced Development Alternative would increase impacts related to land use and planning compared to the proposed project. All other impacts would be similar or less than compared to the proposed project. The Reduced Development Alternative would be developed at a similar residential density and commercial uses would have similar FARs as the proposed project. Under this Alternative, all project objectives would be met; however, the reduction in residential units compared to the proposed project, particularly with the site's proximity to a light rail stop, makes this alternative less attractive in terms of the use of alternative transportation. Further, the reduction in residential units also makes this alternative less compatible with Objective 2: Increase the City's housing stock by providing a range of housing density types, including affordable housing.

7.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" to the proposed project. Because the No Project Alternative would result in an overall increase in the level of impacts identified for the proposed project, the Reduced Development Alternative has been identified as "environmentally superior" to the proposed project. Because the proposed project would not result in significant and unavoidable impacts, additional alternatives were not analyzed.

7. Alternatives to the Proposed Project

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8. Impacts Found Not to Be Significant

California Public Resources Code Section 21003 (f) states: "…it is the policy of the state that…[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." This policy is reflected in the State California Environmental Quality Act (CEQA) Guidelines (Guidelines) Section 15126.2(a), which states that "[a]n EIR [Environmental Impact Report] shall identify and focus on the significant environmental impacts of the proposed project" and Section 15143, which states that "[t]he EIR shall focus on the significant effects on the environment."

State CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant. This chapter includes an environmental analysis and finding of no impact and less than significant for the topics not included in Chapter 5, *Environmental Analysis,* of this DEIR.

8.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The 2006 EIR indicated that numerous scenic vistas of the American River are provided from various public areas, including Folsom Boulevard. Development with the American River Parkway is regulated via the provisions of the American River Parkway Plan. The American River is adjacent to the City's northern boundary and is approximately 1.30 miles north of the project site. Given the distance, varying topography, and development between the project site and the American River, impacts to scenic resources would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. As indicated in the 2006 EIR and on the California State Scenic Highway System Map, there are no State-Designated or State-Eligible Scenic Highways within the city (Caltrans 2022). Additionally, as indicated in the 2006 EIR, there are no locally designated scenic highways within the city. As such, the proposed project would not affect scenic resources within a State Scenic Highway. Therefore, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. The 2006 EIR indicated that intensification of urban uses within the city would change the visual character of the area. The Folsom Boulevard Specific Plan Area indicates that the maximum height for the project site is 65 feet or 4 stories, however, if vertical mixed-use, where residential uses are located above non-residential uses, is proposed, then there is no maximum height. The 2006 EIR indicated that there could be areas where no height restrictions are proposed which could result in development that is not compatible with low-rise development. The 2006 EIR identified that even with the implementation of the General Plan Policies and Mitigation Measure 4.13.3 impacts would be significant and unavoidable as high-rise structures would irrevocably alter the skyline and visual character of the city. Compared to the 2006 EIR, the proposed project would not result in new or substantially more severe significant impacts. Therefore, impacts would be less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. As indicated in the 2006 EIR, development in the city would increase the amount of daytime glare and nighttime lighting through intensification, however, with the implementation of lighting standards and General Plan policies, impacts would be less than significant. Although the project site is vacant and implementation of the proposed project would increase light and glare in the area, the 2006 EIR accounted for the increase in light and glare, as such impacts would be similar. Therefore, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

8.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The 2006 EIR and California Important Farmland Finder indicate that the project site is designated Urban and Built-Up (CDC 2022a). While areas within the city are designated Prime Farmland and

Farmland of Statewide Importance, the project site does not contain any such designated areas, and project construction would occur within the project site boundaries. Therefore, no lands currently designated as farmland would be converted to non-agricultural uses. No impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. According to the 2006 EIR, the project site is not part of a Williamson Act contract, nor is it designated as agricultural uses. While areas of the city are within a Williamson Act contract and are designated as agricultural, project construction would occur within the project site boundaries. As such, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The project site is not zoned as forestland or timberland; the project site is zoned RMU (FBSP). Project construction would occur within the project site boundaries. Therefore, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site does not contain forestland, and therefore would not result in the loss of forestland or conversion of forestland to non-forest uses. Project construction would occur within the project site boundaries. Therefore, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The project site is zoned RMU (FBSP) and is located in an urbanized portion of the city. There are no forestlands or agricultural uses onsite. Project construction would occur within the project site boundaries. As such, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

8.3 GEOLOGY AND SOILS

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. As indicated in the 2006 EIR and Regulatory Maps, the city is not located within an Alquist-Priolo earthquake zone (CDC 2022b). The proposed project would be required to comply with the most recent version California Building Code (CBC) to minimize impacts as a result of seismic events. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As indicated in the 2006 EIR and the Fault Activity Map of California, there are no known active faults occurring within Sacramento County (CDC 2015). However, as with most of California, the project site could be subject to minor ground shaking. The proposed project would be required to comply with the most recent version CBC to minimize impacts as a result of seismic events. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The 2006 EIR indicated that the potential for soil liquefaction is considered minimal as development would be required to comply with the most recent version of the CBC. The 2006 EIR indicated that groundwater in the City is greater than 50 feet, and therefore the potential for liquefaction, including at the project site, is low. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

iv) Landslides?

No Impact. According to the California Department of Conservation, the project site is not within a landslide zone (CDC 2022c). The project site is located within a flat urbanized portion of the city, and the likelihood of landslides impacting the site is low. Additionally, the proposed project would be required to comply with the most recent version of the CBC. As such, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. As indicated in the 2006 EIR, construction activities that would disturb one or more acres would be subject to the State's National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit. Applicants would be required to prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP) that would include Best Management Practices (BMPs) to avoid soil erosion. Additionally, Chapter 16.44, Land Grading and Erosion Control, is intended to minimize impacts to surrounding properties as a result of grading activities. Chapter 16.44 establishes administrative procedures, minimum standard of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. The proposed project would be required to comply with the NPDES, SWPPP, and Chapter 16.44 of the Rancho Cordova Municipal Code, which would reduce the impacts of soil erosion and loss of topsoil. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less Than Significant Impact. The project site is flat and not located in a landslide zone (CDC 2022c). Due to the low groundwater table (greater than 50 feet) in the city, the potential for liquefaction and collapse at the project site are low. The potential for lateral spreading is also considered low as there are no active faults in the project area. The 2006 EIR indicated that subsidence in the county did not exceed 0.40 feet when minor land subsidence was observed between 1912 and the mid-1960s. Therefore, the likelihood of subsidence in the city, including the project site, is considered low. The proposed project would be required to comply with the most recent version of the CBC to ensure soil impacts are minimized. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. The 2006 EIR indicated that the majority of the City has soil characterized as having expansive soils. The proposed project would be required to comply with the most recent version of the CBC which would minimize impacts related to expansive soils. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The 2006 EIR stated that all commercial and industrial development, as well as all residential development with lots smaller than two acres, would be required to connect to the public sewer system. Rural residential areas would allow septic tanks. The proposed project is located in an urbanized area of the city and would provide a mix of uses onsite. Therefore, the proposed project would connect to the City's public sewer system. As such, no impact would occur, and the proposed project would not result in new or substantially more severe significant impacts.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The 2006 EIR indicated that the database search did not identify any evidence of the existence of paleontological resources or potential in the city. The 2006 EIR stated that development under the General Plan could impact undiscovered paleontological resources, but the likelihood of paleontological resources existing in the city would be low. The project site would require ground-disturbing activities; in addition to comply with the policies and actions of the General Plan, the proposed project would implement Mitigation Measure 4.11.2 of the 2006 EIR, which would require that paleontological resources studies be conducted for all applicable discretionary projects. The studies should identify paleontological resources in the project area, and provide mitigation measures for any resources in the project area that cannot be avoided. Mitigation Measure 4.11.2 would reduce impacts to less than significant. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

8.4 HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The 2006 EIR stated that runoff can occur during construction and operational activities which could contaminate surface water and groundwater. However, the City of Rancho Cordova operates under a National Pollutant Discharge Elimination System (NPDES) permit for municipal discharges to surface waters (NPDES No. CAS0085324). The permit requires that the City impose water quality and watershed protection measures for all development projects. Additionally, the City has identified a range of BMPs to address stormwater discharges in the City. As stated in the 2006 DEIR, implementation of Mitigation Measure MM4.9.1a and Mitigation Measure MM4.9.1b would reduce impacts. Mitigation measure MM4.9.1a adds a new policy under Goal NR.5 to continue to cooperate and participate with the County, other cities, and the Regional Water Quality Control Board regarding compliance with the joint National Pollutant Discharge Elimination System Permit (NPDES No. CAS082597) or any subsequent permit and support water quality improvement projects in order to maintain compliance with regional, state and federal water quality requirements. Mitigation measure MM4.9.1b adds an action item under Policy NR.5.3 which states that future land uses that are anticipated to utilize hazardous materials or generate hazardous waste shall be required to provide adequate containment facilities to ensure that surface water and groundwater resources are protected from accidental releases. This shall include double-containment, levees to contain spills, and monitoring wells for underground storage tanks, as required by local, state and federal standards. The land use and zoning designation for the project site would be the same as what the 2006 EIR analyzed.

In addition, as mentioned in Section 5.6, *Hazards and Hazardous Materials*, the project site operated a former dry-cleaning site on its northwest corner from 1971 to 2003. Tetrachloroethylene (PCE) was stored and dispensed from a 45-gallon container near the site, as well as in an above-ground tank and drums near the

facility's back. PCE concentrations were revealed in the project site's groundwater. Tech reports state that the elevated soil vapor concentrations detected since 2019 seem less likely to be attributed to the volatilization of residual PCE in the groundwater, in comparison to the potential impact from residual PCE in the vadose zone. This is due to the concentrations of PCE in groundwater and the depth of the groundwater at the project site, after previous remedial efforts. The contamination within the groundwater in the project site is an existing condition that would not be caused or exacerbated by the proposed project. Refer to Section 5.6, *Hazards and Hazardous Materials*, for more information on PCE concentrations in the groundwater.

The proposed project would be required to comply with local, state, and federal regulations governing water quality. Therefore, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The project site is within the Sacramento Valley–South American Groundwater Basin (DWR 2022). Currently, there are no structures on the project. The project site is occupied by paved areas with patches of vegetated areas. The proposed project does not propose groundwater wells that would extract groundwater from the aquifer. Although the project site would create impervious surfaces that could impede water recharge, the project site also includes open space and pervious surfaces, as shown in Figure 3.3, *Conceptual Site Plan*, in Chapter 3, *Project Description*. Therefore, the proposed project would not substantially affect recharge capabilities for the Basin. Therefore, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in a substantial erosion or siltation on- or off-site?

Less Than Significant Impact. See Impact 8.3(b), above. As indicated in the 2006 EIR, construction activities that would disturb one or more acres would be subject to the State's National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit. Applicants would be required to prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP) that would include BMPs to avoid soil erosion for example using erosion control techniques such as mulching and matting, filter fences, straw bales, diversion terracing, and sediment basins (CASQA 2003). Additionally, Chapter 16.44 of the City's Municipal Code, Land Grading and Erosion Control, is intended to minimize impacts to surrounding properties as a result of grading activities. Chapter 16.44 establishes administrative procedures, minimum standard of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff from new development projects. The proposed project would be required to comply with the NPDES, SWPPP, and Chapter 16.44 of the Municipal Code, which would reduce the impacts of soil erosion, thereby ensuring that waterways are not substantially impacted. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact. The 2006 EIR stated urban development increases the amount of impervious surfaces which does not allow precipitation to saturate the ground and enter the groundwater table; this can also result in flooding. In addition, downstream drainage system capacity issues may also be exasperated if not properly mitigated onsite. With the implementation of, onsite flood control mitigation measures, the City's General Plan policies, and the City's Municipal Code Chapter 16.44, Land Grading and Erosion Control, the impacts to flooding would be reduced. Chapter 16.44 establishes administrative procedures, minimum standard of review, and implementation and enforcement procedures for controlling pollutant runoff from new development projects. The chapter also ensures compliance with the City's NPDES Permit, which is issued by the Regional Water Quality Control Board. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. See Impact 8.5(a), above. The City's NPDES permit requires the provision of water quality control measures that would treat stormwater drainage. Additionally, the implementation of BMPs, Mitigation Measures MM 4.9.1a and MM 4.9.1b, and onsite flood control mitigation measures would reduce sources of polluted runoff from entering the stormwater drainage system. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

iv) Impede or redirect flood flows?

Less Than Significant Impact. According to FEMA, the project site is not within a flood zone (FEMA 2012). The 2006 EIR states that the project site is within a 500-year floodplain. Since the likelihood of floods on the project site is low, the proposed project would have a less than significant impact on impeding or redirecting flood flows, and the proposed project would not result in new or substantially more severe significant impacts.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. According to FEMA the project site is not within a flood zone, while the 2006 EIR indicates it is within a 500-year floodplain. Since the project site is not within a flood hazard area, the risk release of pollutants due to project inundation is low.

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. Although there are no large water tanks in the area that could impact the proposed project site, there are dams in the region that could create flooding impacts. Thirteen dams in the greater Los Angeles area moved or

cracked during the 1994 Northridge earthquake. However, none were severely damaged. This low damage level was due in part to the completion of the retrofitting of dams and reservoirs pursuant to the 1972 State Dam Safety Act.

Inundation occurs when there is a break in a dam and water is released, washing downstream and causing flooding. The 2006 EIR stated that failure of either the Cordova Meadows Levee or the Sunriver Levee along the American River could potentially result in the inundation of properties within the northern portion of the City. However, according to the 2006 EIR, such an event has an extremely low probability of occurring and is not considered to be a reasonably foreseeable event. The 2006 EIR indicated that there are planning efforts by the US Army Corps of Engineers to improve flood capacity of the Folsom Reservoir, and improvements have been made to the Folsom Dam. As shown in the Dam Failure/Inundation Map Web Publisher provided by the Department of Water Resources, the project site is not within or near a dam failure inundation area (DWR 2023).

The project site is over 90 miles east of the Pacific Ocean, and therefore is not within a tsunami hazard zone.

As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The proposed project would not obstruct or conflict with the implementation of a water quality control plan or sustainable water management plan. The proposed project would comply with the water quality and use requirements of these plans through the implementation of BMPs such as erosion control measures approved in the Chapter 16.44, Land Grading and Erosion Control, in the City's Municipal Code. Therefore, impacts would be less than significant.

8.5 TRANSPORTATION

a) The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Less Than Significant Impact.

Roadways

The proposed project would include an internal through road at the central portion of the site that connects La Loma Drive to El Caprice Drive. This roadway is proposed to include two shared vehicular and bicycle lanes and on-street parking. The internal roadway would also feature a midblock crossing between the proposed plaza and the community green space. This roadway would provide access to the proposed parking structure and an internal loop on the north portion of the project site for the residential uses. The parking structure would also be accessible via La Loma Drive south of the access point for the new project roadway. This roadway would be constructed in compliance with the City's roadway design and improvement standards.

Automobile delay, as described by Level of Service (LOS) or other measurements of vehicular capacity or traffic congestion, is no longer considered a significant impact under CEQA. However, per the General Plan's Circulation Element Policy C.1.2, the City strives to maintain an LOS of D or better at all roadways and intersections. Policy C.1.2 states that congestion in excess of LOS D may be accepted, provided that provisions are made to improve traffic flow and/or promote non-vehicular transportation as part of a development project or a City-initiated project. As determined in the 2006 General Plan EIR, the segment of Folsom Boulevard fronting the project site would operate at LOS F under the buildout conditions of the General Plan. The General Plan EIR adopted Mitigation Measure 4.4.1, which directs subsequent development projects to implement system improvements that would impact roadways operating at or better than LOS D. Such improvements could include development of on- or off-street bicycle or pedestrian circulation and providing or funding public transportation facilities.

The proposed project includes several design features that would reduce vehicle trips to and from the site and therefore implement Mitigation Measure 4.4.1, that is, provide consistency with Policy C.1.2. This includes the proposed project's mixed-use design, its proximity to a high-quality transit stop (Mather Field Mills light rail station), and inclusion of affordable housing (see OPR's 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA).

Circulation Element Policy C.5.2 requires that new development projects analyze their contribution to increased traffic and implement improvements necessary to address their impact on facilities not covered by a fee program. The 2007 IS/MND also adopted Mitigation Measure 15.2, which also requires projects under the Folsom Boulevard Specific Plan to pay their fair share of traffic mitigation fees as determined by City staff.

The proposed project would be required under Chapters 16.84 and 16.86 of the City's Municipal Code to pay the applicable development impacts per the most recent fee schedule.

The proposed project is therefore consistent with the City's roadway-related plans, policies, and ordinances.

Bicycle and Pedestrian Facilities

The proposed project would provide green space and pedestrian pathways throughout the project site, connecting bicyclists and pedestrians with the existing sidewalks, crossings, and bike lanes on the roadways surrounding the project site. As required by Municipal Code Section 23.719.110, Bicycle Parking Requirements, the proposed project would provide bicycle parking stalls for short term use in the commercial area and secure bicycle parking stalls in the residential portion for long-term tenant use, satisfying City Bicycle Master Plan Policy 3.3. The proposed project does not involve any additional bicycle facility improvements; however, the project would enhance the environment for pedestrians and bicyclists in the vicinity of the project site by providing a new roadway connecting La Loma Drive to El Caprice Drive.

The proposed project would construct a mix of residential and retail uses within the project site aligning with City Bicycle Master Plan Policy 7.2, which encourages the use of active transportation by locating different land uses within close proximity of one another and providing safe connections for people walking and bicycling in the area. The adopted Bicycle and Pedestrian Master Plans identified bicycle and pedestrian facilities improvements on roadways in the vicinity of the project site, including the construction of planned connection

between bicycle routes on Mather Field Road and Paseo Drive. This improvement would provide improved bicycle and pedestrian access to and from the project site, and construction and operation of the proposed project would not conflict with this future improvement. Therefore, the proposed project would not conflict with any programs, plans, ordinances, or policies addressing pedestrian and bicycle facilities.

Transit Service

The project site is located approximately 120 feet from the Mather Field Mills Gold Line light rail transit station along Folsom Boulevard. Visitors and residents of the proposed project would have direct access to the Gold Line service. The SacRT bus lines operate from a stop adjacent to the project site at the Folsom Lake College Rancho Cordova campus. The proposed project would, by design, encourage transit use in the area due to it being a mixed-use, infill development. The proposed project would promote pedestrian activity and connection between commercial and residential uses, as described in General Plan Action C.3.3.2, and comply with the policies regarding transit service. Additionally, the proposed project would not reconstruct or reconfigure the surrounding roadway network, including the alteration of any existing transit stops. Therefore, the Mills Crossing project would not conflict with any programs, plans, ordinances, or policies addressing transit services or facilities.

The proposed project would therefore not conflict with any policies, programs, or ordinances addressing the circulation system, and impacts would be less than significant.

b) The proposed project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

Less Than Significant Impact. Per the City of Rancho Cordova Transportation Impact Guidelines, the proposed project would not substantially increase regional VMT. Section 5.12.1.1 of the Impact Guidelines use a variety of screening criteria to identify projects that can be expected to result in a less-than-significant VMT impact. As described below, the proposed project would screen from analysis under several criteria in the Impact Guidelines.

- **Residential Located in a VMT Efficient Area**: The proposed project would construct up to 120 dwelling units in a VMT "efficient area" per SACOG's location-based screening map (SACOG 2023).
- **Proximity to Transit**: The proposed project is a mixed-use project located within a ½ mile of a major transit stop and along a high-quality transit corridor. SacRT's Gold Line light rail service travels adjacent to Folsom Boulevard, and the Mather Field Mills transit stop is located approximately 150 feet from the project site. Bus service is also available at two stops in the vicinity of the project site in front of the Folsom Lake College Rancho Cordova campus and near the Mather Field Mills light rail station.
- **Affordable Housing**: The housing portion of the proposed project is proposed to include affordable units.

As the proposed project would screen from review, it would be consistent with CEQA Guidelines § 15064.3, subdivision (b), and impacts would be less than significant.

c) The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Less Than Significant Impact. Construction and operations of the proposed project would be required to follow all local regulations related to design and safety. The design of the Mills Crossing Project is subject to plan review and an encroachment and traffic control permit is required for all improvements.

The proposed project would include up to 120 housing units including a multi-family development and townhomes. The proposed project also includes a commercial retail and event center component with open space and pathways provided throughout the project site. Internal circulation for vehicles, bicyclists, and pedestrians would be required to follow the City's Design Guidelines: Provisions for a Quality Community. Additionally, the proposed project would follow site design standards set forth in the City Municipal Code, including those in Section 23.707.040 pertaining to pedestrian access and open space, Section 23.719.090 regarding parking design standards, and Section 23.722.050 related to on-site pedestrian pathway standards. Vehicular access would be provided via two entrances on the east and west boundaries of the project site at La Loma Drive and El Caprice Drive. Internal access and access through the proposed project would be provided via a new City roadway that connects La Loma Drive and El Caprice Drive. The proposed project would provide adequate site distance at all access points. Additionally, the proposed project plans are subject to review by the City Building & Safety Division and Public Works Department ensuring City standards, including those pertaining to site accessibility and safety, are met. Therefore, the Mills Crossing project would not substantially increase hazards in the area.

i) The proposed project would not result in inadequate emergency access.

Less Than Significant Impact. The project site is in an urban area with an established roadway network. The surrounding roadways provide adequate circulation and access for emergency response. Project-related construction activities have the potential to result in short-term, temporary impacts to surrounding roadways from partial lane closures or the presence of construction vehicles, which may cause temporary traffic slowdown. Any impacts associated with construction activities would be temporary in nature and would be generally confined to the project site.

Furthermore, construction activities would not affect access on any major roadways that may serve as emergency evacuation routes for the region, such as US-50. All construction activities would be subject to emergency access standards and requirements of Sacramento Metropolitan Fire District (Metro Fire) to ensure traffic safety. Chapter 33 of the 2022 CFC contains applicable standards for fire safety during construction and demolition including required provisions for emergency access. As detailed in item c, the proposed project is required to obtain an encroachment permit and submit a traffic control plan for work within public right of way which would demonstrate safe traffic handling during construction including maintaining adequate emergency access. Additionally, emergency access would be subject to review by the City and responsible emergency service agencies; thus, ensuring the project would be designed to meet all applicable emergency access and design standards.

The final site plan for the project would also be subject to approval by Metro Fire. Three emergency vehicle access points are provided for the residential components of the proposed project including access to La Loma

Drive and El Caprice Drive. The proposed project design is required to follow the standards and regulations set forth in the 2022 California Building Standards Code, Title 24, California Code of Regulations, Part 9 (2022 California Fire Code) as adopted by the City (City of Rancho Cordova Municipal Code Chapter 17.04). Appendix D of the 2022 CFC provides minimum dimensions and design standards for fire apparatus roads to maintain adequate emergency access during operations of commercial and residential developments. For these reasons, the proposed project would not result in inadequate emergency access.

8.6 WILDFIRE

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The project site is not within a designated Very High Fire Hazard Severity Zone (FHSZ) (CAL FIRE 2023b). Future development from the proposed project would be subject to compliance with the 2022 CBC (or the most current version) and the 2022 edition of the CFC (or the most current version). Section 4905.2, Construction Methods and Requirements within Established Limits, of the 2022 CFC (Part 9 of Title 24 of the California Code of Regulations) includes construction methods intended to mitigate wildfire exposure. The project applicant must adhere to the wildfire protection building construction standards outlined in the California Building Standards Code, including Chapter 12-7A, Materials and Construction Methods for Exterior Wildfire Exposure. In addition, the City of Rancho Cordova is covered under the Sacramento County Emergency Operations Plan and the 2021 Sacramento County Local Hazard Mitigation Plan (LHMP); these plans guide to effectively respond to any emergency, including wildfires.

Construction associated with the proposed project could temporarily block local roadways during excavation or paving, but would not impair the existing evacuation route since the City of Rancho Cordova has not designated any evacuation routes. The site is served by Folsom Boulevard, a four-lane roadway with a raised and landscaped center median, La Loma Drive, and El Caprice Drive which are two-lane roadways. Construction is unlikely to block all of Folsom Boulevard because any cross-cutting of the roadway for utility extension can be done in phases to ensure access through the area if needed. Construction activity could temporarily block La Loma and El Caprice Drives; however, both of these roadways connect to other throughways such as Malaga Way/Capitates Drive, which in turn connect either back to Folsom Boulevard or to Coloma Road, offering different routes out of the vicinity. Therefore, even the temporary closure of all or part of one of the local roadways adjacent to the proposed project still allows movement and evacuation out of the area.

In addition, all construction projects are reviewed by the City to ensure that do not interfere with emergency response and evacuation plans (SCES 2022). As the proposed project would occur within the project site boundaries, development plans would be reviewed by the City, and there are alternative evacuation routes away from the project site, impacts would be less than significant.

b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire

risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. The project site is not within a designated Very High FHSZ. The project site does not have any built structures and is occupied by paved areas with patches of vegetation, including trees. The project site is generally flat and would not exacerbate wildfire risk due to slope. The LHMP states high winds are common occurrences in the city throughout the entire year, and straight line winds are primarily a public safety and economic concern (Sacramento 2021, pg. E-80). High winds can increase wildfire risks especially during periods of dry vegetation. The proposed project would need to comply with the CBC, which helps regulate construction techniques that minimize damage from windstorms such as Section 1609, Wind Load. In addition, the City's Municipal Code, Chapter 17.12, Weed Control, would help to prevent fire hazards by requiring firebreaks and removal of accumulation. Moreover, the City's LHMP and Emergency Operations Plan provide guidance to effectively respond to and mitigate wildfires.

Although the project site is not in or near a State Responsibility Area (SRA) or a Very High FHSZ, compliance with applicable laws and regulations regarding wildfire emergencies would ensure that the proposed project would not exacerbate wildfire risk, and impacts would be less than significant.

c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project site is not within a designated Very High FHSZ. Currently, there are no built structures on the project site, and the proposed project would require the expansion of connections to utilities such as electricity, water, and sewer. The proposed project would also introduce circulation network into the project site. However, General Plan Policy C.1.7 requires the installation of traffic pre-emption devices for emergency vehicles (police and fire) at all newly constructed intersections and seeks to retrofit all existing intersections to incorporate these features. Since the project site is not within a FHSZ or Very High FHSZ, impacts would be less than significant.

d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not located in an SRA or Very High FHSZ, and project development would not exacerbate wildfire risk on-site. As indicated in Section 8.3, *Geology and Soils,* and Section 8.5, *Hydrology and Water Quality,* the project site is not within a landslide hazard area or floodplain (CDC 2022c; FEMA 2012). Therefore, the proposed project would not expose people or structures to significant risks. Construction activities related to the proposed project would be subject to compliance with the CFC and would include BMPs. Section 3303, Owner's Responsibility for Fire Protection, of the CFC requires that landowners, or an authorized agent, to prepare a site safety plan prior to building permit issuance. BMPs may include but are not limited to grading in a pattern that slows stormwater flow and reduce the potential for erosion, landslides, and downstream flooding. Operationally, drainage could facilitate in areas of open space proposed by the project (See Figure 3-3, *Conceptual*

Site Plan). However, General Plan Policy S.2.4 would ensure that adequate drainage exists for both existing and new development. As such, impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

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9. Organizations Consulted and Qualifications of Preparers

ORGANIZATIONS

Native American Tribes

Wilton Rancheria

City of Rancho Cordova Department of Community Development: Planning Division

Stefan Heisler, Housing Manager

QUALIFICATIONS OF PREPARERS

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Associate

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Project Planner

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Angel Castro
Planner

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Joseph Ruiz
Planner

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- Master of Urban and Regional Planning, University of California, Irvine

9. Organizations Consulted and Qualifications of Preparers

CONTRIBUTING EIR CONSULTANTS

- ECORP Consulting, Inc.

APPENDICES

Appendix 2-1	**NOP and NOP Comments**
Appendix 5.1-1	**Air Quality and Greenhouse Gas Emissions Assessment**
Appendix 5.2-1	**Biological Resources Assessment**
Appendix 5.3-1	**Archeological Resources Inventory Report**
Appendix 5.4-1	**Energy Calculations for Mills Crossing**
Appendix 5.6-1	**Site Cleanup Plan**
Appendix 5.6-2	**Site Cleanup Plan Addendum**
Appendix 5.6-3	**Site Remediation Notice of Exemption**
Appendix 5.9-1	**Noise Impact Assessment**

Appendix 2-1 NOP and NOP Comments

Date: January 6, 2023

Subject: **Notice of Preparation of a Draft Subsequent Environmental Impact Report and Scoping Meeting for the Mills Crossing Civic Center Project**

To: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies
Organizations and Interested Persons

Lead Agency: City of Rancho Cordova
Department of Community Development – Planning Division
2729 Prospect Park Drive
Rancho Cordova, CA 95670
Phone: (916) 851-8700
Contact: Stefan Heisler, Housing Manager
Email: sheisler@cityofranchocordova.org

Notice of Preparation: This is to notify the public agencies and the general public that the City of Rancho Cordova, as Lead Agency, will prepare a subsequent environmental impact report (SEIR) for the Mills Crossing Civic Center Project (referred to as the "proposed project"). The City is interested in the input and/or comments of public agencies and the general public as to the scope and content of the environmental information that should be evaluated in the SEIR. Public agencies will need to use the SEIR prepared by the City when considering applicable permits, or other approvals for the proposed project.

Project Title: Mills Crossing Civic Center Project

Project Location: A 9.85-acre site at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova (Assessor's Parcels Numbers [APN] 076-0020-019, -20, -21, -22).

Scoping Meeting: **Thursday January 19, 2023 starting at 6:00 PM**, the City of Rancho Cordova Department of Community Development will conduct an in-person public scoping meeting to solicit input and comments from public agencies and the general public on the proposed SEIR for the Mills Crossing Civic Center Project.

This public scoping meeting will be held:

- **In-person:**

Rancho Cordova City Hall
2729 Prospect Park Drive
Rancho Cordova, CA 95670

The scoping meeting will include a materials describing the proposed Mills Crossing Civic Center Project, followed by an opportunity for members of the public to discuss the project with City and consultant staff and provide comment on environmental topics which should be discussed and analyzed in the SEIR.

If you have any questions regarding this scoping meeting, contact Stefan Heisler at sheisler@cityofranchocordova.org, or (916) 851-8700. Additional information about the proposed project is available at the following City webpage:

https://www.cityofranchocordova.org/residents/new-businesses-and-projects/mills-crossing-civic-center

Comment Period: Consistent with the time limits mandated by State law, your input, comments, or responses must be received in writing and sent at the earliest possible date, but not later than 5:00 PM on February 6, 2023.

Comments/ Input: Please send your input, comments, or responses (including the name for a contact person in your agency, if applicable) to:

Attn: Stefan Heisler, Housing Manager
City of Rancho Cordova Department of Community Development
2729 Prospect Park Drive
Rancho Cordova, CA 95670
sheisler@cityofranchocordova.org

If sending input, comments, or responses via email, please write "Mills Crossing Civic Center NOP Comments" in the subject line.

Project Location and Existing Uses

The 9.85-acre project site is located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County (see Figure 1, *Regional Location*). The project site is vacant and includes grassy and paved areas. The project site is surrounded by residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova Civic Center to the east, light industrial uses to the south, and commercial and residential uses to the west (see Figure 2, *Aerial Photograph*). The project site is listed on the Department of Toxic Substance Control's Envirostor site for evaluation.

Project Description

The proposed project would result in the following uses:

- Community-Commercial Buildings (up to 132,000 square feet) and would include:

	Gross Area (SF)	Building
Health & Wellness	27,500	1
Community-Commercial	25,000	1
Community-Commercial	27,000	3
Arts Center - Theater	18,000	2
Arts Center - Flex Studios	17,000	2
Community Event Hall	9,000	3
Commercial-Retail	7,200	4
Total	**130,700**	

- Housing Units (up to 120 units):
  - Between 55-60 Multi-Family Affordable Apartments
  - Between 50-60 Zero Lot Line Townhouse-Style Homes for Sale

- Public Open Space (up to 2.5 acres):
  - Between 1.3-1.5 acres of Neighborhood and Community Greens
  - Between 0.75-1.0-acre of Plaza and Green Space
- Parking Structure which would include between 275-325 parking stalls.

Figure 3, *Conceptual Site Plan*, shows the proposed layout of these uses on the project site. It is anticipated that construction of the project would occur from 2024 through 2029.

Areas of Potential Impacts

The California Environmental Quality Act (CEQA) Guidelines Section 15128 allows environmental issues, for which there is no likelihood of significant impact, to be "scoped out" and not analyzed further in the SEIR. As the project site was assumed for development in the General Plan EIR, some footprint-related topics can be focused out of the SEIR as adequately addressed in the General Plan EIR.

Environmental Topics	Evaluated in EIR	Not Evaluated in EIR
Aesthetics		X
Agriculture and Forestry		X
Air Quality	X	
Biological Resources	X	
Cultural Resources	X	
Energy	X	
Geology and Soils		X
Greenhouse Gas Emissions	X	
Hazardous Materials		X
Hydrology/Water Quality		X
Land Use/Planning	X	
Mineral Resources	X	
Noise	X	
Population/Housing	X	
Public Services	X	
Parks and Recreation	X	
Transportation	X	
Tribal Cultural Resources	X	
Utilities/Service Systems	X	
Wildfire		X

Requested Actions

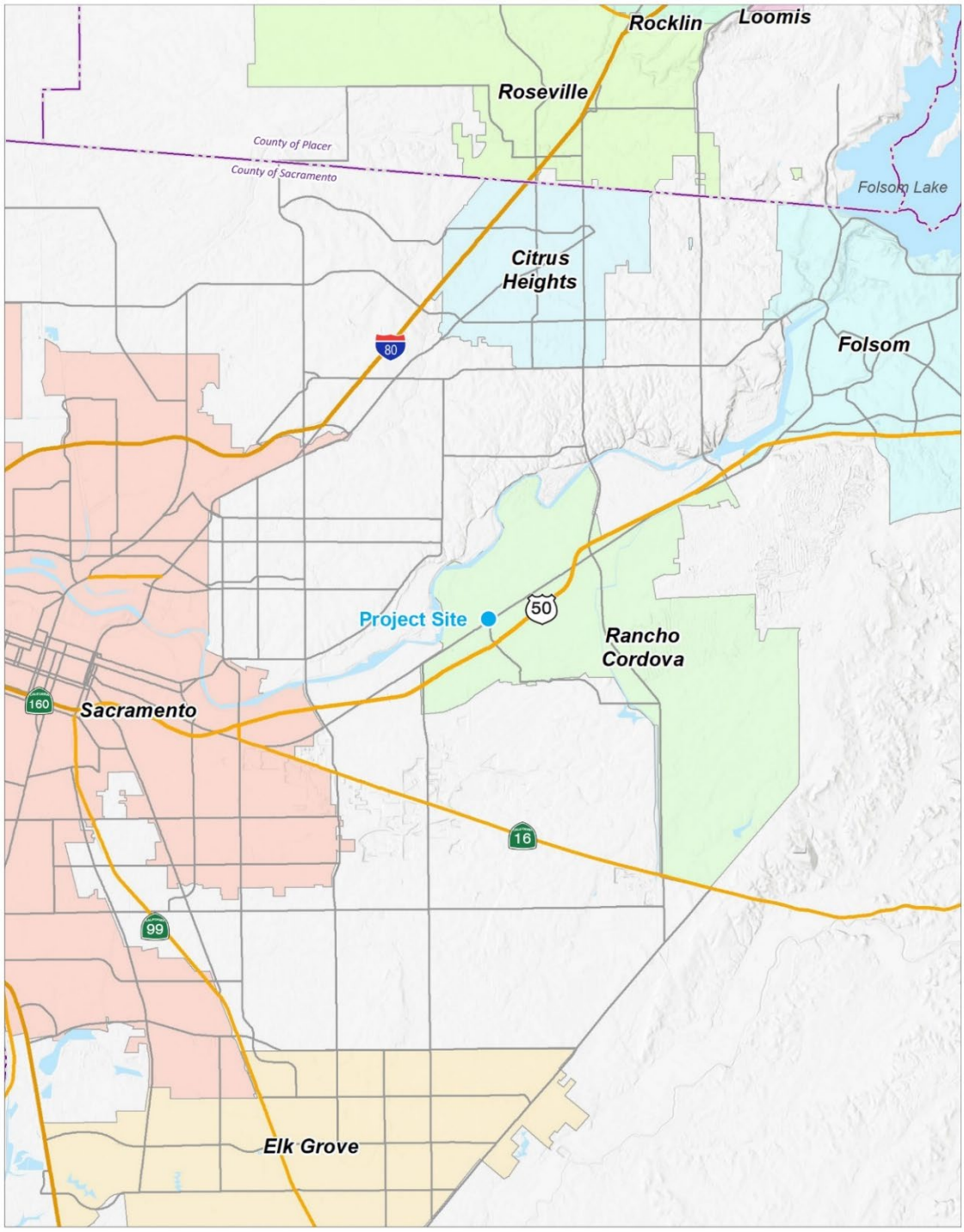
This section presents the actions that would be required to implement the proposed project.

City of Rancho Cordova

- Site Plan Approval
- Building Permits
- Certify SEIR and Adopt Mitigation Monitoring and Reporting Program

Central Valley Regional Water Quality Control Board

- Issuance of National Pollutant Discharge Elimination System (NPDES) Permit
- Issuance of Construction Permit



0 3
Scale (Miles)

Note: Unincorporated county areas are shown in white.

Figure 1
Regional Location

PLACEWORKS



Source: Nearmap, Inc., 2022.

0 270
Scale (Feet)

Project Boundary

Figure 2
Aerial Photograph

PLACEWORKS



Source: City of Rancho Cordova, 2022.

0 100
Scale (Feet)

Project Boundary

PLACEWORKS

Figure 3
Site Plan

From: Nancy
To: Stefan Heisler
Subject: Comments on Mills Crossing plan
Date: Thursday, January 5, 2023 5:45:08 PM

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1. Parking seems excessive when there is so much street parking available; the Folsom Lake College parking lot is NEVER even close to full and could be leased for events. Public transportation should be encouraged as the space is right across the street from buses and light rail. Reduce parking and add more green space or a craft center (like in Davis).
2. Please landscape with native plants and trees - CA Native Plant Society should be used as a resource. No more crepe myrtle please - those trees are getting tiresome. Add oaks or CA sycamore...shrubs with native fruit for birds. Save on maintenance, support plant diversity and wildlife with native plants.

Nancy Marsh
[redacted]

Powering forward. Together.

SMUD®

Sent Via E-Mail

January 7, 2023

Stefan Heisler, Housing Manager
City of Rancho Cordova
Department of Community Development – Planning Division
2729 Prospect Park Drive
Rancho Cordova, CA 95670
sheisler@cityofranchocordova.org

Subject: **Mills Crossing Civic Center Project / 2023010102 / NOP**

Dear Mr. Heisler:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Notice of Preparation of a Draft EIR (NOP) for the Mills Crossing Civic Center Project (Project, SCH 2021040039). SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

It is our desire that the Project will acknowledge any impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
  - https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services
  - https://www.smud.org/en/Corporate/Do-Business-with-SMUD/Land-Use/Transmission-Right-of-Way
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency
- Climate Change
- Cumulative impacts related to the need for increased electrical delivery
- The potential need to relocate and or remove any SMUD infrastructure that may be affected in or around the project area

More specifically, SMUD would like to have the following details related to the electrical infrastructure incorporated into the project description:

- South of Folsom Blvd, there are existing 69/12kV OH/UG facilities
- On project site, there are existing 12kV OH/UG facilities
- Structural setbacks of less than 14-feet shall require the applicant to conduct a pre-engineering meeting with all utilities to ensure proper clearances are maintained
- To maintain adequate trench integrity, building foundations must have a minimum horizontal clearance of 5 feet from any SMUD trench. Developer to verify with other utilities (Gas, Telephone, etc.) for their specific clearance requirements
- Proposed SMUD facilities located on the customer's property outside of the existing or proposed PUE(s) may require a dedicated SMUD easement
- The Applicant shall dedicate and provide a vehicular access road; SMUD will supply the minimum specifications during the acquisition process. (or: The Applicant shall dedicate and provide all-weather vehicular access for service vehicles that are up to 26,000 pounds. At a minimum: (a) the drivable surface shall be 20-feet wide; and (b) all SMUD underground equipment and appurtenances shall be within 15-feet from the drivable surface)
- SMUD requires a minimum 12.5-foot PUE adjacent to all public roads for 12kV facilities
- The developer shall dedicate any private drive, ingress and egress easement, or Irrevocable Offer of Dedication (and 10 feet adjacent thereto) as a public utility easement for overhead and underground facilities and appurtenances
- If alternative locations are not provided, existing overhead/underground 12kV facilities will need to remain in order to maintain existing services not part of development
- If applicable existing overhead lines will be removed and existing underground cables will be relocated at developer's expense to maintain existing services within development

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this Project. If you have any questions regarding this letter, please do not hesitate to contact me at 916.732.7406, or by email at jerry.park@smud.org.

Sincerely,



Jerry Park
Environmental Services Specialist
Sacramento Municipal Utility District

cc: Entitlements

STATE OF CALIFORNIA Gavin Newsom, *Governor*

NATIVE AMERICAN HERITAGE COMMISSION

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
Jan 13 2023
STATE OF CALIFORNIA

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January 9, 2023

Stefan Heisler
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

Re: 2023010102, Mills Crossing Civic Center Project, Sacramento County

Dear Mr. Heisler:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).

2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.

3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).

4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:

- **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:

- **a.** If part or all of the APE has been previously surveyed for cultural resources.
- **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
- **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
- **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
- **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

cc: State Clearinghouse

From: PGE Plan Review
To: Stefan Heisler
Subject: RE: Notice of Preparation of a Draft Subsequent Environmental Impact Report
Date: Tuesday, January 10, 2023 7:59:53 AM
Attachments: image002.png
image003.jpg

Classification: Public

Good morning, Stefan,

Thank you for your email. Once detailed project plans are available, please send via email and we will review.

Best Regards,

Pacific Gas and Electric Company
Plan Review Team
Email: pgeplanreview@pge.com

From: Stefan Heisler <sheisler@cityofranchocordova.org>
Sent: Friday, January 6, 2023 9:23 AM
To: sacplan@saccounty.gov; smithtodd@saccounty.net; pjohns@folsom.ca.us; jlaurain@adamsbroadwell.com; michael@lozeaudrury.com; Hannah Hughes <hannah@lozeaudrury.com>; Maya Vishwanath <maya@lozeaudrury.com>; Egbert, Adam <age1@pge.com>; Adam Lindgren <adam@meyersnave.com>; Adam Lindgren <alindgren@cityofranchocordova.org>; agcom@saccounty.net; Albert Stricker <astricker@cityofranchocordova.org>; Amanda Norton <anorton@cityofranchocordova.org>; Andrew Saltmarsh <asaltmarsh@crpd.com>; Audie Foster <audie.foster@amwater.com>; Benjamin Turner <dlrp@consrv.ca.gov>; Bree Chuong <bchuong@sacsheriff.com>; Brian Bailey <baileyb@saccounty.net>; Caltrans District 3 Local Development Review <D3.Local.Development@dot.ca.gov>; Cameron Shew <ShewC@saccounty.net>; Chris Bohrer <cbohrer@egusd.net>; hunleyc@saccounty.net; pacec@saccounty.net; Cristina James <cjames@crpd.com>; Civic Thread General Project Email <ProjectReview@civicthread.org>; Cristian Ganea <Ganea.cristian@metrofire.ca.gov>; Cyrus Abhar <cabhar@cityofranchocordova.org>; darrowm@saccounty.net; Dave Ghirardelli <ghirardellid@saccounty.net>; Dennis Barber <DBarber@republicservices.com>; Dov Kadin <dkadin@sacog.org>; Elizabeth Sparkman <esparkman@cityofranchocordova.org>; eric_fredericks@dot.ca.gov; Erin Naderi <enaderi@cityofranchocordova.org>; Gary Gasperi <GasperiG@saccounty.net>; gchew@sacog.org; gwickham@fcusd.org; hockerl@saccounty.net; smalleyj@saccounty.net; Jeremiah Zillig <jzillig@cityofranchocordova.org>; jimd@sac-city.k12.ca.us; jhurley@airquality.org; Joanne McCarthy <JMccarth@fcusd.org>; rogersjo@saccounty.net; klizon@sacog.org; Kim Juran <kjuran@cityofranchocordova.org>; Laura Fickle <lfickle@cityofranchocordova.org>; Liisa Behrends <lbehrends@cityofranchocordova.org>; Lisbet Gullone <lgullone@gmail.com>; Lori Murphy

<lmurphy@cityofranchocordova.org>; lpertl@smud.org; ltaylor@crpd.com; Maria Lopez <mlopez@cityofranchocordova.org>; Mary Pakenham-Walsh <Mary.R.Pakenham-Walsh@usace.army.mil>; Micah Runner <mrunner@cityofranchocordova.org>; Michelle Havens <michelle_havens@fws.gov>; Michelle Mingay <mmingay@cityofranchocordova.org>; mike@cecwest.com; Nancy Quaresma <NANCY_QUARESMA@comcast.com>; Palmer Hilton <philton@meyersnave.com>; Palmer Hilton <philton@cityofranchocordova.org>; phindmarsh@placeworks.com; PGE Plan Review <pgeplanreview@pge.com>; Pham Saechao <psaechao@egusd.net>; Quoc Nham <qnham@cityofranchocordova.org>; rachel.delrio@smud.org; blackmarr@saccounty.net; saccounty wateragency <scwaplanning@saccounty.net>; crrdstaff@metrofire.ca.gov; Sacramento Regional Transit <rtplanning2@sacrt.com>; Sarah Poe <spoe@sacrt.com>; SASD General Review Email <sasddevservices@sacsewer.com>; Sean Twilla <seantwilla@gswater.com>; SMAQMD Project Review <projectreview@airquality.org>; Smud <Entitlements@smud.org>; Stefan Heisler <sheisler@cityofranchocordova.org>; Steve Harriman <sharriman@cityofranchocordova.org>; USFWS <sacramentovalleydivision@doimspp.onmicrosoft.com>; Victor Ramos <vramos@cityofranchocordova.org>; whughes@smud.org; Nicholas Sosa <nsosa@cityofranchocordova.org>; Darcy Goulart <dgoulart@cityofranchocordova.org>
Subject: Notice of Preparation of a Draft Subsequent Environmental Impact Report

CAUTION: EXTERNAL SENDER!

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CITY OF RANCHO CORDOVA NOTICE OF PREPARATION OF A DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT FOR THE MILLS CROSSING PROJECT

Dated: January 6, 2023

TO: Responsible Agencies, Interested Parties, and Organizations

SUBJECT: Mills Crossing Project Preparation of Draft SEIR — CITY OF RANCHO CORDOVA, SACRAMENTO COUNTY

The City of Rancho Cordova, as Lead Agency, intends to prepare a Draft Subsequent Environmental Impact Report (SEIR) for the Mills Crossing project (Project). In accordance with Section 15082 of the CEQA Guidelines, the City has prepared this Notice of Preparation (NOP) to provide responsible agencies and other interested parties with sufficient information describing the Project and its potential environmental effects.

PROJECT LOCATION: The Project is located at 10153-10179 Folsom Blvd (APNs: 076-0020-019, -020, -021, & -022)

PROPERTY OWNER: City of Rancho Cordova
APPLICANT/DEVELOPER: City of Rancho Cordova

2729 Prospect Park Drive
2729 Prospect Park Drive
Rancho Cordova, CA 95670
Rancho Cordova, CA 95670

PROJECT DESCRIPTION: The City of Rancho Cordova is proposing a mixed-use project located on a property zoned Residential Mixed Use (RMU) within the Folsom Blvd Specific Plan (FBSP) designation of the General Plan. The project will include approximately 130,700 SF of community-commercial buildings, up to 120 housing units including multi-family apartments and zero lot line townhouse-style homes, up to 2.5 acres of public open space, and a parking structure with up to 325 parking stalls. The Community-commercial component will include health and wellness, community serving commercial, an arts center with black box theater and flex studios, a community event hall, and retail.

Hazardous Waste Sites: Pursuant to Section 15087(c)(6) of the Guidelines for California Environmental Quality Act, the City of Rancho Cordova acknowledges that a portion of the property, specifically the parcel in the west corner of the project site (APN: 076-0020-021) is listed as a site for evaluation on the Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2022).

Public Comment Opportunity: The public review and comment period for the NOP will extend for 30 days **starting January 6, 2023 and ending February 6, 2023 at 5:00 PM**. The NOP can be viewed and/or downloaded at the following website: **https://www.cityofranchocordova.org/residents/new-businesses-and-projects/mills-crossing-civic-center**

A Scoping Meeting will be held on Thursday, January 19, 2023 at 6:00 p.m. in the City of Rancho Cordova City Hall, American River Room North, located at 2729 Prospect Park Drive, Rancho Cordova, CA 95670

Comments/Questions: Comments and/or questions regarding the NOP may be directed to:
Stefan Heisler, Housing Manager
City of Rancho Cordova Housing Division
2729 Prospect Park Dr.
Rancho Cordova, CA 95670
or **sheisler@cityofranchocordova.org**

Stefan Heisler
Housing Manager
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670
(916) 851-8757
sheisler@cityofranchocordova.org
www.cityofranchocordova.org



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Department of Transportation
Ron E. Vicari, Director

Divisions
Administration
Maintenance & Operations
Engineering & Planning

County of Sacramento

January 25, 2023

Stefan Heisler
Housing Manager
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

SUBJECT: COMMENTS ON NOTICE OF PREPARATION OF A DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING FOR THE MILLS CROSSING CIVIC CENTER PROJECT.

Stefan Heisler,

The County of Sacramento appreciates the opportunity to comment on the Notice of Preparation of a Draft Subsequent Environmental Impact Report for the Mills Crossing Civic Center Project (The Mills). We anticipate a project of this size may generate enough traffic to cause impacts in Sacramento County. Because of this, we'd ask the city to analyze the following County facilities:

- Intersections (LOS and queuing analysis)
  - Folsom Blvd. at Horn Rd./Paseo Rio Way
  - Folsom Blvd. at Bradshaw Rd.

If any County facilities are impacted from the project, Sacramento County would request to enter a Project Specific Reciprocal Funding Agreement with the City of Rancho Cordova, as necessary. Please feel free to contact me at (916) 876-4108 with any questions or comments.

Sincerely,

_____
Gary Gasperi, P.E., T.E.
Senior, Civil Engineer
Department of Transportation

GG

CC: Matthew Darrow, DOT
Cameron Shew, DOT

Cordova
Recreation & Park District

February 2, 2023

Stefan Heisler
City of Rancho Cordova Housing Division
2729 Prospect Park Dr.
Rancho Cordova, CA 95670
(916) 851-8757

Regarding:	**Mills Crossing Civic Center** **Notice of Preparation (NOP)** **Draft Subsequent Environmental Impact Report (DSEIR)**
Review Documents:	**Mills Crossing Civic Center, Concept 2** **Folsom Boulevard Specific Plan (FBSP)** **Rancho Cordova's Zoning Code and General Plan** **Scoping Meeting Information Provided on January 19, 2023**
Public Comment Opportunity:	**January 6 – February 6, 2023**

Reviewed by: Cordova Recreation and Park District
Laura Taylor, CRPD Park Planning and Development Manager
Lisbet Gullone, CRPD Contract Planner

Cordova Recreation and Park District (CRPD) is responding to the City of Rancho Cordova's Notice of Preparation to prepare a Draft Subsequent Environmental Impact Report for the Mills Crossing Civic Center project.

This comment letter has more requests for clarifications than statements. This is a unique project. Usually CRPD would have more familiarity with a development project before CRPD is asked to comment on an EIR because CRPD, the Developer and City would have already worked together on a land use plan that clearly identifies Quimby park land dedication and City Open Space (or Neighborhood Green Space). The land use plan and ownership responsibilities are often out prior to the NOP for an EIR. CRPD has not previously made comments regarding the proposed Civic Center development.

CRPD Planning staff attended the City's Scoping Meeting held on January 19, 2023. After that meeting Planning staff had email correspondence with Stefan Heisler following up on a few questions.

PROJECT DESCRIPTION

The proposed 10-acre Mills Crossing development is located in the Transit Oriented District Overlay Zone of Mather Field/Mills Light Rail Station on the south side of Folsom Boulevard. Concept 2 of the project will include 130,700 square feet of commercial space, a parking structure for 325 vehicles, 2.5 acres of public open space and up to 120 housing units. The current master plan exhibit shows 48 townhome lots and a four-story apartment building. According to the housing program, the apartment building will include a minimum of 55 affordable units. The final number of residential units within Mills Crossing is not yet known.

Stefan confirmed that the proposed townhomes will be on individual lots. The proposed project falls under Quimby park land requirements for projects with 50 or more lots. Stefan said it is not clear yet if some portion of the public outdoor space in the land use plan is intended to be Quimby park land dedicated to Cordova Recreation and Park District and that further conversations are needed between the City and CRPD.

PARK AND RECREATION SYSTEM IMPACTS

Rancho Cordova's new Civic Center project includes three public outdoor space parcels with a combined area of 2.5 acres. The parcels have inconsistent labels so it is unclear which parcels are intended to be City Open Space or Quimby park land dedications. The project graphic on the City's web page Mills Crossing Civic Center | City of Rancho Cordova indicates a 1.1 acre Community Park. Community Parks are under the jurisdiction of CRPD and are dedicated to CRPD as Quimby park land dedication. However the City Council agenda staff report associated with the 12/6/2021 presentation to the City Council states, "City maintaining ownership, management and control of the community facilities, ...". CRPD has not yet been included on discussions pertaining to the proposed Community Park site. The intent for ownership and maintenance of the Hybrid/Plaza Park also needs clarification.

CRPD anticipates that standard Quimby dedication requirements will be applied to all residential units per the Municipal Code, Chapter 22.40. Once more information about the townhomes and apartment units have been provided CRPD will calculate the Quimby dedication acreage requirement. For order of magnitude consideration, CRPD anticipates the Quimby park land dedication amount for this project to be around 1.25 acres. This project may also need to contribute towards maintenance of the Quimby Community Park and other existing park facilities impacted by the residents of this project by annexing into an existing CRPD Community Facilities District.

CRPD's Recommendations

The Subsequent Environmental Impact Report should include the following information:

- For CRPD to accurately respond to the potential impacts of this project, the land use plan should clearly identify Quimby park land and City Open Space in the proposed project. CRPD looks forward to further discussions with the City on this item.

- Cordova Recreation and Park District should be listed as the jurisdiction responsible for Quimby Parkland.

- Once the Quimby park land (and/or Quimby in-lieu fees) for this project have been clarified for this project then CRPD can provide more information about Quimby in-lieu fees, park impact fees and on-going maintenance assessments for park land.

FUTURE ENTITLEMENT PROCESS

Thank you for notifying CRPD regarding the preparation of additional environmental documents for the Mills Crossing project. Please contact CRPD if you have any questions or comments regarding CRPD's current recommendations.

CRPD will continue to follow the progress of Rancho Cordova's new Civic Center project with great interest.

Respectfully,

Laura L. Taylor, ASLA
Park Planning and Development Manager
Cordova Recreation and Park District

Copy: Patrick Larkin, General Manager for Cordova Recreation and Park District
Elizabeth Sparkman, Rancho Cordova Community Development Director

Regional Transit

Sacramento Regional Transit District
A Public Transit Agency
and Equal Opportunity Employer

Administrative Offices
1400 29th Street
Sacramento, CA 95816
916-321-2800

Mailing Address
P.O. Box 2110
Sacramento, CA 95812-2110

Human Resources
2810 O Street
Sacramento, CA 95816
916-556-0299

Customer Service &
Sales Center
1225 R Street
Sacramento, CA 95811

Route, Schedule & Fare
Information
916-321-BUSS (2877)
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February 4, 2023

Stefan Heisler
Housing Manager
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

NAME OF DEVELOPMENT: Mills Crossing Project
TYPE OF DOCUMENTS: Notice of Preparation (NOP) - Draft Subsequent Environmental Impact Report

Sacramento Regional Transit District (SacRT) appreciates the opportunity to review the NOP for the Draft Subsequent Environmental Impact Report for the Mills Crossing Project. SacRT has provided previous support related to this project, to the Sacramento Area Council of Governments (SACOG) in October 2022 related to the Green Means Go Early Activation Category Application (Attachment 1).

The Mills Crossing Project (Project) is located on a 9.85-acre site at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova. The Project will include approximately 130,700 SF of community-commercial buildings, up to 120 housing units including multi-family apartments and zero lot line townhouse-style homes, up to 2.5 acres of public open space, and a parking structure with up to 325 parking stalls. The Community-commercial component will include health and wellness, community serving commercial, an arts center with black box theater and flex studios, a community event hall and retail.

SacRT's previous letter of support for the Project was primarily focused on transit-oriented development (TOD) goals, and the opportunities that the Project presents. SacRT has a renewed focus on TOD, which helps the community and surrounding neighborhoods by providing benefits such as higher quality of life, increased transit ridership, reduced traffic congestion and driving, healthier lifestyle through more active transportation, and reduced pollution and environmental destruction. SacRT feels that the Mills Crossing Project will provide these benefits such as these.

In addition to the statements described above, SacRT also has the following comments pertaining to the Project:

- SacRT supports the development patterns with a mix of commercial and residential, as they are appropriate for efficient transit operations and supportive of TOD.
- SacRT supports the high-density residential sites located within the planned community and planned pedestrian pathways and crossings to fixed-route transit options.
- SacRT supports the inclusion of 55-60 multi-family affordable housing units.
- SacRT requests review of a traffic impact analysis, to further understand the methodology for planned number of parking spaces.

Comments listed below pertain specifically to the site plan included in the NOP:

- SacRT is in favor of placing the community facilities, commercial/retail spaces, and the arts center facing Folsom Boulevard, and nearest to transit. Additionally, with the public plaza also fronting

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Folsom Boulevard, this provides easy pedestrian access into the center and onto safe crossings and pathways leading directly to housing units.

- SacRT is interested in a revised layout of the residential units within the community. As it is currently proposed, the affordable housing units are located around the perimeter of the Project area, adjacent to La Loma Drive and at the edge of the property line. SacRT would be interested to see the affordable housing units brought closer to the center of the community, around the neighborhood green space, and closer to the planned pathways to transit. SacRT believes that many residents of affordable housing units are likely to be transit-dependent; therefore, placing these units closer to transit options may be more beneficial.

Thank you again for the opportunity to review the NOP for the Mills Crossing Project. SacRT staff looks forward to the continued review of project information as it becomes available and looks forward to collaborating on the transit goals identified in the future SEIR.

Sincerely,

Sarah Poe
Planner, SacRT

Attachment: SacRT Letter of Support – Green Means Go - Mills Crossing Project

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

February 6, 2023

Stefan Heisler, Housing Manager
City of Rancho Cordova Housing Division
2729 Prospect Park Dr.
Rancho Cordova, CA 95670
sheisler@cityofranchocordova.org

Subject: Mills Crossing Project Preparation of Draft SEIR

Dear Stefan Heisler:

Thank you for providing the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District) with the Notice of Preparation (NOP) of a Draft Subsequent Environmental Impact Report (SEIR) for the Mills Crossing project (Project). The project, located at 10153-10179 Folsom Blvd, will include approximately 130,700 SF of community-commercial buildings, up to 120 housing units, including multi-family apartments and zero lot line townhouse-style homes, up to 2.5 acres of public open space, and a parking structure with up to 325 parking stalls. The Community-commercial component will include health and wellness, community serving commercial, an arts center with black box theater and flex studios, a community event hall, and retail. Sac Metro Air District comments on the project CEQA review follow.

CEQA Review:

CEQA Guide:

The Sac Metro Air District recommends that the City of Rancho Cordova utilize the Guide to Air Quality Assessment in Sacramento County[1] (CEQA Guide) as a resource for preparing the DEIR. The CEQA Guide includes recommended thresholds of significance, analysis methods, mitigation measures, and best management practices for project CEQA review in support of regional plans to attain Federal and State air quality and climate goals, reduce public exposure to toxic air contaminants, and disclose project public health effects.

Construction Analysis:

The DEIR's construction analysis should quantify and disclose projected construction emissions of Criteria Pollutants, pollutants regulated by the Clean Air Act, using methods referenced in the CEQA Guide's chapter on Construction-Generated Criteria Air Pollutant and Precursor Emissions. If construction emissions are projected to exceed applicable Sac Metro Air District thresholds of significance, the DEIR should incorporate mitigation measures for construction emissions using methods in this chapter.

[1] Guide to Air Quality Assesment in Sacramento County: https://www.airquality.org/Businesses/CEQA-Land-Use-Planning/CEQA-Guidance-Tools

All projects must implement Sac Metro Air District Basic Construction Emission Control Practices to use the non-zero particulate matter CEQA thresholds of significance. These are also helpful to ensure compliance with Sac Metro Air District's Rule 403, Fugitive Dust.

Please note that all projects are subject to Sac Metro Air District rules and regulations at the time of construction. Please visit our website to find a list of the most common rules that apply during the construction phase of projects[2].

Operational Analysis:

The DEIR's analysis of operational emissions should quantify and disclose projected operational emissions of Criteria Pollutants using methods referenced in the CEQA Guide's chapter on Operational Criteria Air Pollutant and Precursor Emissions[3]. For projects that will exceed Sac Metro Air District's operational emissions thresholds of significance for reactive organic gases, oxides of nitrogen, or particulate matter, Sac Metro Air District recommends the project proponent develop an Air Quality Mitigation Plan (AQMP), using methods described in the CEQA Guide. Consistent with the City of Rancho Cordova General Plan Air Quality Element[4] [5], the AQMP should include measures to reduce operational emissions of these pollutants by 15% or more and can be a standalone document or incorporated into the environmental document. The AQMP must be referenced in the DEIR as an air quality mitigation measure, appended to the document, and referenced as a condition of approval by the lead agency.

Sac Metro Air District recommends using its Recommended Guidance for Land Use Emission Reductions[6] to develop AQMP measures. Should the project need to develop an AQMP, Sac Metro Air District respectfully requests consultation to review the AQMP for technical adequacy before inclusion in the DEIR.

Analysis of operational Criteria Pollutants should also include an analysis of health effects that may result from operational emissions pursuant to the "Friant Ranch" decision. In December 2018, the California Supreme Court issued a decision in the Sierra Club v. County of Fresno case regarding the "Friant Ranch" project ((2018) 6 Cal. 5th 502). The Court determined that CEQA air quality analysis should include a reasonable effort to connect a project's air quality impacts to likely health consequences or explain why it is not feasible to do so in meaningful detail. To analyze health effects pursuant to the Friant Ranch decision, consult Sac Metro Air

[2] Sac Metro Air District Rules Attachment, https://www.airquality.org/LandUseTransportation/Documents/RulesAttachment10-2020Final.pdf

[3] Sac Metro Air District, Guide to Air Quality Assesment in Sacramento County, Chapter 4-Operational, http://www.airquality.org/LandUseTransportation/Documents/Ch4OperationalFinal10-2020.pdf

[4] City of Rancho Cordova General Plan, Chapter XII, page 11; Action AQ.1.2.2.– "*Require project proponents to coordinate with SMAQMD on appropriate methodologies for evaluating project emissions and air quality impacts (e.g., emissions modeling software, SMAQMD's thresholds of significance, etc.).*" Adopted 6/26/2006

[5] City of Rancho Cordova General Plan, Chapter XII, page 11; Action AQ.1.2.3.– *"Require all new development projects that exceed SMAQMD's thresholds of significance to incorporate design, construction material, and/or other operational features that will result in a 15 percent reduction in emissions when compared to an "unmitigated baseline" project."* Adopted 6/26/2006

[6] Sac Metro Air District Guide to Air Quality Assesment in Sacramento County, http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools

District's Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District.[7]

The operational analysis should also study consistency with local and regional plans, including the City of Rancho Cordovoa's Folsom Boulevard Specific Plan[8] and SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the Sacramento region[9].

Greenhouse Gases:

If CEQA analysis demonstrates that Project greenhouse gas (GHG) emissions, from construction or operations will exceed applicable Sac Metro Air District thresholds of significance[10], we recommend mitigating emission impacts using mitigation methods referenced in the CEQA Guide's chapter on GHG Emissions[11].

Permit Requirements:

Equipment in the Community center or commercial operations may be subject to Sac Metro Air District permit requirements. Sac Metro Air District Rule 201 requires any business or person to obtain an Authority to Construct and Permit to Operate before installing or operating new equipment or processes that may release or control air pollutants. To ensure that all Sac Metro Air District rules and regulations are considered, please visit the Sac Metro Air District's website[12] for permit application instructions and forms.

Design Comments:

Clean Air Resiliency Center

Climate-exacerbated hazards and disasters will likely compound existing vulnerabilities and challenges for individuals and communities. With increasing extreme weather events, wildfires, and other worsening natural disasters, it becomes critical to develop and establish local resilience centers that can support the needs of the surrounding community—as well as potentially evacuees—at short notice for potentially extended periods.

The City of Rancho Cordova can assist in this effort by anticipating how the proposed community center can be adapted to serve as a resilience center or provide emergency services, such as a cooling center or clean air centers. We recommend that the project be equipped with MERV-13 or higher-rated air filtration systems to serve as a clean air center during wildfire smoke events. We recommend including an onsite renewable energy system, specifically a solar photovoltaic system coupled with battery storage, to provide emergency

[7] Sac Metro Air District Guidance to address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District, http://www.airquality.org/LandUseTransportation/Documents/SMAQMDFriantRanchFinalOct2020.pdf

[8] Folsom Boulevard Specific Plan, City of Rancho Cordova, 12/16/2013; https://www.cityofranchocordova.org/home/showdocument?id=10725

[9] Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the Sacramento region https://www.sacog.org/metropolitan-transportation-plansustainable-communities-strategy

[10] http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf

[11] http://www.airquality.org/LandUseTransportation/Documents/Ch6GHG2-26-2021.pdf

[12] Sac Metro Air District Permit & Registration Programs webpage: https://www.airquality.org/Businesses/Permits-Registration-Programs

power. Disaster preparedness training, supplies, and other capacity-building features should be included in the final plan for the Project.

Multi-Modal Accommodation

The DEIR should evaluate project support of bicycle and pedestrian transportation as consistent with adopted policies to encourage multi-modal transportation. Specific policies include those in the Folsom Boulevard Specific Plan[13].

Urban Heat Island (UHI) impacts:

Sac Metro Air District participated in the Capital Region Transportation Sector Urban Heat Island Mitigation Project (UHI Project), producing a report on urban heat island effect impacts on the Sacramento region and mitigation strategies for these impacts. According to the report, the heat island effect already presents a serious challenge for our region. Developed areas in Sacramento range from 3 to 9 degrees Fahrenheit warmer than surrounding areas, which results in decreased air quality and associated public health impacts. The urban heat island results from the conversion of undeveloped land to developed land.

Higher ambient temperatures can increase the formation of ozone, a respiratory system irritant. During extreme heat and extended heat waves, these higher temperatures can lead to heat stress, heat stroke, and even heat mortality, especially for the elderly, the young, and those with pre-existing health conditions.

The recommendations below on strategies to reduce urban heat island effect impacts are consistent with the UHI Project.

- Utilize certified cool roofs, consistent with recommendations for solar reflectance and thermal emittance in the California Building Energy Efficiency Standards Table 170.2-A for the Sacramento Climate Zone (Zone 12), as applicable.

- Utilize “cool pavement” for new outdoor pavement, with the highest albedo possible but no less than 0.25. Please visit Sac Metro Air District’s Recommended Cool Pavement Strategies[14] for guidance on cool pavement strategies

- Incorporate new trees to shade new and existing pavements and structures to the full extent feasible.

- We recommend selecting air-quality supportive tree species for these plantings. A list of air-quality-supportive tree species is available in the Sacramento Tree Foundation’s Shady Eighty guide,[15] along with information for each species on tree shade canopy, the distance between plantings, and more.

Communication:

[13] Folsom Boulevard Specific Plan, City of Rancho Cordova, 12/16/2013; https://www.cityofranchocordova.org/home/showdocument?id=10725

[14] Capital Region Transportation Sector Urban Heat Island Mitigation Plan https://www.airquality.org/LandUseTransportation/Documents/UHI%20Mitigation%20Plan.pdf

[15] Sacramento Tree Foundation Shady 80 Guide; https://sactree.org/best-trees-for-sacramento/

To allow for sufficient time for coordination, please send all future environmental documents and notices to ProjectReview@AirQuality.org.

You may contact me at jhurley@airquality.org or 279-207-1130 if you have questions regarding these comments.

-JJ Hurley

Joseph J. Hurley
Air Quality Planner/Analyst
CEQA & Land Use

Cc: Paul Philley, AICP, CEQA, and Land Use Program Supervisor, Sac Metro Air District

CALIFORNIA Water Boards

GAVIN NEWSOM
GOVERNOR

YANA GARCIA
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

6 February 2023

Stefan Heisler
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670
sheisler@cityofranchocordova.org

Governor's Office of Planning & Research

FEB 6 2023

STATE CLEARING HOUSE

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, MILLS CROSSING CIVIC CENTER PROJECT, SCH#2023010102, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 6 January 2023 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Mills Crossing Civic Center Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore, our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations
All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit
Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

you have questions regarding these comments, please contact me at (916) 464-4684 or Peter.Minkel2@waterboards.ca.gov.

Peter Minkel

Peter Minkel
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

9 February 2023

City of Rancho Cordova Department of Community Development
Attn: Stefan Heisler, Housing Manager
2729 Prospect Park Drive
Rancho Cordova, CA
Via email: sheisler@cityofranchocordova.org.

Re: Mills Crossing Civic Center Project Notice of Preparation (SCH #2023010102)

Dear Mr. Heisler,

This letter is in response to the Notice of Preparation for the proposed Mills Crossing Civic Center Project that would be built there in Rancho Cordova. I have reviewed the documents and based on what information is provided there, I have several suggestions of topics to be studied as well as elements to be improved.

Based on the image included in the NOP document, it appears that the project would, as proposed, introduce several hazards by design so the study should be sure to acknowledge and propose mitigation for them. The first is that it looks like there would be an unacceptable number of options for entering the parking structure off of La Loma Drive. As currently shown in the image, the entrance would be accessible from all movements to/from La Loma Dr. However, based on measurements using Google Maps, it would be only 100 feet at most from the intersection of La Loma Dr. and Folsom Blvd. That would be far too close to the intersection to allow all turning movements into the garage (and/or from the existing driveway across the street), presenting an additional threat to any bicyclists using the Class II bike lanes which exist on La Loma Dr. Thus, the EIR must either acknowledge this creation of a hazard by design or identify what mitigation measures would be taken to restrict the parking garage to only allow right in/right out.

Additionally, the Project proposes to construct an entirely new street which would run across the site from La Loma Dr. to El Caprice Dr. which based on measurements, would be roughly 900 feet long. The image is not detailed enough to be able to conclusively determine all features and markings that would be used for this new street. However, what we see is not promising and appears to create several hazards by design. The length is nearly a fifth of a mile, which is enough to create a speeding problem if not managed properly. This would be further influenced by the fact that this new street would create a shortcut between El Caprice Dr. and La Loma Dr. which would induce drivers to use it in an attempt to save time, especially for shorter trips such as from the homes behind the Project to retail locations along Folsom Blvd. This is particularly worrisome given the proposal for a prominent crosswalk approximately in the middle which would connect the proposed Public Plaza + Green Space with the proposed Neighborhood Green where people crossing would be put at heightened risk due to the shortcut.

It borders on criminal to propose infrastructure to be built new in 2023 at the earliest which would cast in place known safety problems. Both the potential speeding problem and cut-through traffic present hazards which must not only be acknowledged in the EIR, but actually mitigated too. Thus, this new road should be designed to discourage cut-through traffic as well as speeding. Fortunately, a route that is slow to drive is not going to be as attractive a route to use as a shortcut so the solutions to both problems build upon each other.

An ideal approach for the City to use would be to take advantage of AB 43 (Friedman, 2021) allowing speed limits below 25 MPH to produce a street that is *designed and built* for 20 MPH travel speeds

from the very beginning. (Some excellent models of the complete package of what this looks like are the reconstructions of Mariaplaats[1] or Adriaen van Ostadelaan,[2] both in Utrecht, NL.) Doing so would mean that the project starts with proven measures via keeping speeds and traffic counts low.[3] This would not at all preclude the street from being used by motor traffic and there would continue to be access to all the residential components as well as the parking garage. However, the focus would be to create an environment where that is the sole reason that a vast majority of motor traffic using the street, **not** just an ancillary action done by a few.

With the examples in mind, it is easier to see what is wrong. The first glaring issue with the new street is that it appears to have on-street parking. Given the provision of an entire parking structure as well as on-street parking mixed in with the residential portion of the Project, the need to still provide more on-street parking is questionable. Instead the space that is currently used for parking can be used to narrow the street by using wider sidewalks and bioswales/planter boxes with trees, all of which is instrumental in helping keep speeds low.[4][5] Doing so also would improve any potential water quality and runoff capture issues and requirements by both reducing the paved surface as well as providing infrastructure which actively helps capture and clean the runoff, not make more of it.

Nevertheless, if it is decided that on-street parking is truly necessary, then it should at least be provided in a manner that makes it abundantly clear that it is not a part of the traveled way if/when no cars are parked there. This can take on a variety of forms, but a vital approach is to use bays as well as elements which provide an unmistakable demarcation between the traveled way and the parking bay. While the examples referenced in the videos above provided parking at sidewalk level, other techniques include providing the gutter between the traveled way and parking and sloping the parking away from the sidewalk (see Figure 1), using a contrasting material to pave the parking bays, and of course, providing bulbouts at the locations where parking is not going to be allowed.

Another issue is the proposed crosswalk referenced earlier. Once again, it is not possible to conclusively determine the exact details of what is proposed based on the image from the NOP document. However, it is vital that such a prominent element be done properly the first time around, both to ensure safety and to avoid needing to search for funding to take corrective actions later to fix a hazardous design which did not need to exist in the first place. Thus, a few items are critical for its design, namely making it a raised crosswalk as well as using bulbouts. Additionally, all other crosswalks associated with the Project site need to receive the same treatment, including what would traditionally be considered or provided in an unmarked manner.

---

[1] BicycleDutch. (2015). *Mariaplaats Utrecht Reconstruction [423].* Retrieved February 15, 2023, from https://www.youtube.com/watch?v=JbNA96FVWyg.

[2] BicycleDutch. (2016). *The reconstructed A. v. Ostadelaan in Utrecht (Netherlands) [502]*. Retrieved February 15, 2023, from https://www.youtube.com/watch?v=Ibcly3iLpS8.

[3] Grundy, C., Steinbach, R., Edwards, P., Green, J., Armstrong, B., & Wilkinson, P. (2009). Effect of 20 mph traffic speed zones on road injuries in London, 1986-2006: controlled interrupted time series analysis. *Bmj*, *339*.

[4] Gitelman, V., Pesahov, F., Carmel, R., & Bekhor, S. (2016). The identification of infrastructure characteristics influencing travel speeds on single-carriageway roads to promote self-explaining roads. *Transportation research procedia*, *14*, 4160-4169.

[5] PE, W. E. M., Coppola, N., & Golombek, Y. (2018). Urban clear zones, street trees, and road safety. *Research in Transportation Business & Management*, *29*, 136-143.

Marven E. Norman
PO Box 1147
San Bernardino, CA 92402

Finally, while it is often presented as a "conservative" choice for developments to overbuild car infrastructure and ignore other forms of transportation for purposes of analysis, given the location of the Project directly adjacent a rail transit station, it is unfathomable that the studies done for this Project would need to make that same error. In a similar vein, it is vital that any offsite traffic mitigation deemed to be "necessary" for the Project **not** contradict and undermine the existing active transportation plans for the City, County, Caltrans, or any other entities. Instead, those items should at a bare minimum, build out what is included in those plans and ideally use the opportunity to actually upgrade those recommended facilities based on the latest standards.

Thank you for taking the time to receive and consider these comments. If there are any questions, please do not hesitate to reach out for clarification.

Sincerely,

Marven E. Norman

CC: SABA

Marven E. Norman
PO Box 1147
San Bernardino, CA 92402



Figure 1: Parking bays in Redlands, CA.

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Appendices

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Appendix 5.1-1 Air Quality and Greenhouse Gas Emission Assessment

Air Quality & Greenhouse Gas Emissions Assessment

Mills Crossing

Rancho Cordova, California

Prepared For:

Placeworks, Inc.
101 Parkshore Drive, Suite 112
Folsom, California 95630

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

June 2023

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Attachment A – CalEEMod Output File for Criteria Pollutant and Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/m3	Micrograms per cubic meter; ppm = parts per million
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
AB	Assembly Bill
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
ATCM	airborne toxics control measure
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BMP	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAAP	Climate Action and Adaptation Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH_4	Methane
City	City of Rancho Cordova
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
County	Sacramento County
DPM	Diesel particulate matter
EO	Executive Order
FB-RMU	Residential Mixed-Use
FBSP	Folsom Boulevard Specific Plan
GHG	Greenhouse gas
GWP	Global warming potential
HVAC	Heating, ventilation, and air conditioning

LIST OF ACRONYMS AND ABBREVIATIONS

IPCC	Intergovernmental Panel on Climate Change
MPO	Metropolitan Planning Organization
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NO_x	Nitric oxides
O_3	Ozone
PERP	portable equipment registration
PM	Particulate matter
PM_{10}	Coarse particulate matter
$PM_{2.5}$	Fine particulate matter
ppm	Parts per million
PRC	Public Resources Code
Project	Mills Crossing Project
RMU (FBSP)	Residential Mixed-Use – Folsom Boulevard Specific Plan
ROGs	Reactive organic gases
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SMAQMD	Sacramento Metropolitan Air Quality Management District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_x	Sulfur oxides
SVAB	Sacramento Valley Air Basin
TACs	Toxic air contaminants
TDM	Transportation Demand Management
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile organic compounds
VMT	Vehicle Miles Traveled

1.0 INTRODUCTION

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Mills Crossing Project (Project), which proposes the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the surrounding environment.

1.1 Project Location and Description

The Project Site is a 9.85-acre property located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County, and encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22. The Proposed Project Area is roughly bounded by Folsom Boulevard to the south, La Loma Drive to the west, El Caprice Drive to the east, and residential housing to the north fronting Malaga Way and Ashbury Court. Surrounding land uses includes the residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova Civic Center to the east, light industrial uses to the south, and commercial and residential uses to the west. The Mather Field/Mills Train Station is located directly across Folsom Boulevard from the Project Site and can be accessed via a pedestrian crosswalk with stop-traffic control. Additionally, the site is fronted by a Class II bike lane on Folsom Boulevard.

The Project Site is located within the Folsom Boulevard Specific Plan area. The Folsom Boulevard Specific Plan (FBSP or Specific Plan) is the primary planning tool the City uses to guide future development and redevelopment within the Specific Plan area. It seeks to increase the density of both housing and commercial activity; increase pedestrian, bicycle, and transit trips to, from, and through the area; increase the visibility of the corridor as a destination; and change the dynamic and image to that of a high demand, thriving urban area. The site is zoned Residential Mixed-Use – Folsom Boulevard Specific Plan (RMU [FBSP]). The RMU (FBSP) Zoning District is intended to designate property for the development of medium and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the City encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development.

The Project Site has a City of Rancho Cordova General Plan land use designation of Residential Mixed-Use (FB-RMU).

The Project proposes a mix of land uses as follows:

Community-Commercial Buildings

The community-commercial buildings would include up to 140,000 square feet of uses, and would include the following:

- Health and Wellness
    - Community Health Clinic – up to 30,000 square feet
- Events and Meetings Space
    - Space for meetings, community and cultural events, banquet, and weddings – up to 15,000 square feet
- Arts Center (Subtotal – up to 35,000 square feet)
    - Flex Theater (black/white/green box) – up to 18,000 square feet
    - Flexible Classrooms and Rehearsal Space – up to 6,000 square feet
    - Production/Artist's Studios – up to 4,000 square feet
    - Gallery/Exhibits – up to 4,000 square feet
    - Administrative Space – up to 3,000 square feet
- Community-Commercial Building (Subtotal – up to 52,500 square feet)
    - Commercial Office-Anchor – up to 25,000 square feet
    - Commercial Office-Shared – up to 10,000 square feet
    - Flexible Studios 1 – up to 5,000 square feet
    - Flexible Studios 2 – up to 7,500 square feet
    - Commercial Kitchen – up to 5,000 square feet
- Commercial-Retail (Subtotal – up to 7,500 square feet)
    - Fresh Market, Food and Beverage, Café, Retail – up to 5,000 square feet
    - Café – up to 2,500 square feet

Housing

The Proposed Project would provide up to 120 dwelling units, as follows:

- Between 55-60 Multi-Family Affordable Apartments
- Between 50-60 Zero Lot Line Townhouse-Style Homes for Sale

Public Open Space

The Proposed Project would include up to 2.5 acres of public open space as follows:

- Between 1.3-1.5 acres of Neighborhood and Community Greens
- Between 0.75-1.0-acre of Plaza and Green Space

Parking Structure

The Proposed Project would include a parking structure with between 275-325 parking spaces.

The Project Site would be accessible via Folsom Boulevard to the south and La Loma Drive to the west of the Project Site.

Construction activities would involve the removal of vegetation and paved areas; grading to finished design elevations; excavation to allow construction of building foundations, utilities, roadways, parking areas, sidewalks, and landscaping. Equipment used during construction may include, but is not limited to, crawler tractors, tractors, loaders, backhoes, excavators, graders, scrapers, cranes, forklifts, generator sets, welders, pavers, paving equipment, rollers, and air compressors. It is anticipated that construction of the Project would occur from 2024 through 2029.

2.0 AIR QUALITY

2.1 Air Quality Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the Sacramento Valley Air Basin (SVAB), which encompasses the Project Site, pursuant to the regulatory authority of the SMAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 Sacramento Valley Air Basin

The California Air Resources Board CARB divides the State into air basins that share similar meteorological and topographical features. The Project site lies in the SVAB, which is comprised all of Butte, Colusa, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties and parts of Solano and Placer County. The air basin is relatively flat, bordered by mountains to the east, west, and north and by the San Joaquin Valley to the south. Air flows into the SVAB through the Carquinez Strait, moving across the Sacramento Delta, and bringing pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storm systems. From May to October, the region's intense heat and sunlight lead to high ozone pollutant concentrations. Summer inversions are strong and frequent but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

2.1.1.1 Meteorological Influences on Air Quality

Regional flow patterns affect air quality patterns by directing pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. However, the mountains surrounding the SVAB can create a barrier to airflow, which can trap air pollutants in the valley when meteorological conditions are right and a temperature inversion exists. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical air flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog, and pollutants near the ground.

The ozone season (May through October) in the valley is characterized by stagnant morning air or light winds, with the delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north out of the valley. During about half of the days from July to September, however, a phenomenon called the Schultz Eddy prevents this from occurring. Instead of allowing the prevailing wind patterns to move north and carry the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of exceeding federal or state standards.

2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

2.1.2.1 Carbon Monoxide

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SVAB are in compliance with the state and federal one- and eight-hour standards.

2.1.2.2 Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO_2, attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

2.1.2.3 Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

2.1.2.4 Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and small than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. $PM_{2.5}$ can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high $PM_{2.5}$ and PM_{10} levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease.

According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM_{10} and $PM_{2.5}$. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.3 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Most recently, CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.1.4 Ambient Air Quality

Ambient air quality at the Project Site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. As described in detail below, the region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2022b). The Sacramento – Branch Center #2 air monitoring station (3847 Branch Cener Road, Sacramento), located

approximately 2.7 miles southwest of the Project Site, monitors ambient concentrations of PM_{10}. The Sacramento-Del Paso Manor air monitoring station (2701 Avalon Drive, Sacramento), located approximately 3.5 miles northwest of the Project Site, monitors ambient concentrations of O_3 and $PM_{2.5}$. Ambient emissions concentrations vary due to localized variation in emissions sources and climate conditions, but the concentrations from this air quality monitoring station should be considered "generally" representative of ambient concentrations in the Project Area.

Table 2-2 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} from the Sacramento – Branch Cener #2 monitoring station and the Sacramento-Del Paso Manor monitoring station. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2019	2020	2021
O_3 - Sacramento-Del Paso Manor Monitoring Station			
Max 1-hour concentration (ppm)	0.087	0.120	0.110
Max 8-hour concentration (ppm) (state/federal)	0.069 / 0.069	0.085 / 0.085	0.091 / 0.091
Number of days above 1-hour standard (state/federal)	0 / 0	4 / 0	7 / 0
Number of days above 8-hour standard (state/federal)	0 / 0	10 / 10	18 / 17
PM_{10} - Sacramento-Branch Center #2 Monitoring Station			
Max 24-hour concentration (µg/m^3) (state/ federal)	55.0 / 53.0	203.0 / 201.0	58.0 57.0
Number of days above 24-hour standard (state/federal)	* / *	* / 7.7	25.4 / 0
$PM_{2.5}$ - Sacramento- Del Paso Manor Monitoring Station			
Max 24-hour concentration (µg/m^3) (state/federal)	41.4 / 41.4	147.3 / 147.3	95.4 / 90.0
Number of days above federal 24-hour standard	3.0	28.1	5.0

Source: CARB 2022a
Note: µg/m^3 = micrograms per cubic meter; ppm = parts per million
* = Insufficient data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10} and $PM_{2.5}$ and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year

periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the Sacramento County portion of the SVAB, which encompasses the Project Site, is included in Table 2-3.

Table 2-3. Attainment Status of Criteria Pollutants in the Sacramento County Portion of the SVAB

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Attainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: CARB 2022b

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2022b).

2.1.5 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Site include residences directly adjacent to the west, north, and east.

2.2 Regulatory Framework

2.2.1 Federal

2.2.1.1 Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SVAB for the criteria pollutants.

2.2.2 State

2.2.2.1 California Clean Air Act

The California Clean Air Act (CCAA) allows the State to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

2.2.2.2 California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to

include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. To comply with California law, the SMAQMD has rolled out a series of air quality plans and reports that constitute the SIP for the Sacramento County portion of the SVAB. The most recent report, the *2021 Sacramento County Second 10-Year PM_{10} Maintenance Plan* as a comprehensive strategy to update emission inventories, demonstrates maintenance efforts and updated control measures, and establishes new motor vehicle emission budgets. Additional plans include the SMAQMD *2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (including 2018 updates) and the *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013). These air quality planning documents present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NOx) as well as PM emissions from stationary, area, mobile, and indirect sources.

2.2.2.3 Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act

CARB's statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the State's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by SB 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

2.2.3 Local

2.2.3.1 Sacramento Metropolitan Air Quality Management District

The SMAQMD is the air pollution control agency for Sacramento County, including the Project Site. The agency's primary responsibility is ensuring that the NAAQS and CAAQS are attained and maintained in the Sacramento County portion of the SVAB. The SMAQMD coordinates the work of government agencies, businesses, and private citizens to achieve and maintain healthy air quality for the Sacramento area. The

SMAQMD develops market-based programs to reduce emissions associated with mobile sources, processes permits, ensures compliance with permit conditions and with SMAQMD rules and regulations, and conducts long-term planning related to air quality. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities.

The following is a list of noteworthy SMAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a CARB portable equipment registration (PERP).
- **Rule 402: Nuisance.** The purpose of this rule is to limit emissions which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.
- **Rule 403: Fugitive Dust.** The purpose of this rule is to require that reasonable precautions be taken so as not to cause or allow the emissions of fugitive dust from non-combustion sources from being airborne beyond the property line from which the emission originates.
- **Rule 442: Architectural Coatings.** The purpose of this rule is to limit the emissions of volatile organic compounds from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the SMAQMD.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

3) Expose sensitive receptors to substantial pollutant concentrations.

4) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

2.3.1.1 Sacramento Metropolitan Air Quality Management District Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (SMAQMD) may be relied upon to make the above determinations. According to the SMAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SMAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2-4.

Table 2-4. SMAQMD Regional Significance Thresholds

Air Pollutant	Construction Activities		Operations	
Reactive Organic Gas	-		65 pounds/day	
Carbon Monoxide	-		-	
Nitrogen Oxide	85 pounds/day		65 pounds/day	
Sulfur Oxide	-		-	
Coarse Particulate Matter (PM_{10})	*80 pounds/day (If all feasible BACT/BMP applied)	*14.6 tons/year	*80 pounds/day (If all feasible BACT/BMP applied)	*14.6 tons/year
Fine Particulate Matter ($PM_{2.5}$)	*82 pounds/day (If all feasible BACT/BMP applied)	*15 tons/year	*82 pounds/day (If all feasible BACT/BMP applied)	*15 tons/year

Source: SMAQMD 2020
Notes: BACT= best available control technology; BMP = best management practices
* = The allowable threshold level is 0 pounds/day or 0 tons/year unless all SMAQMD recommended BACT/BMP are implemented.

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed any significance thresholds would not be considered cumulative considerable.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated primarily using CalEEMod model defaults for Sacramento County, though the timing of construction was adjusted to reflect the anticipated construction schedule of 2024 through 2029. Operational air pollutant emissions were based on the land use mix identified in Section 1.0 of this report and traffic trip generation rates provided by DKS Associates (2023). Two design features attributable to the Project are accounted for in the emissions modeling calculations, specifically the Project's proximity to transit and its number of affordable/below-market residential units.

2.3.3 Impact Analysis Impact Analysis

2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions

Construction Significance Analysis

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation.

Construction-generated emissions associated with the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis. Construction activities would be subject to mitigation measure AQ-1 (presented below), which would implement the SMAQMD's Basic Construction Emission Control Practices, known as Best Management

Practices (BMPs) during the Project's construction. The application of AQ-1 ensures that the construction of the Project will not have significant air quality impacts.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 2-5. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Table 2-5. Construction-Related Emissions						
Construction Year	**Pollutant**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Daily (pounds per day)						
Calendar Year One	3.72	36.00	34.10	0.05	1.78	1.51
Calendar Year Two	5.28	22.90	39.80	0.05	3.69	1.45
Calendar Year Three	5.11	21.60	38.70	0.05	3.61	1.37
Calendar Year Four	5.01	20.80	37.80	0.05	3.54	1.31
Calendar Year Five	4.80	19.70	36.90	0.05	3.46	1.23
SMAQMD Significance Threshold	-	*85 pounds/day*	-	-	**80 pounds/day (If all feasible BACT/BMP applied)*	**82 pounds/day (If all feasible BACT/BMP applied)*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual (tons per year)						
Calendar Year One	0.4	3.6	3.4	<0.0	0.2	0.1
Calendar Year Two	0.6	2.8	4.4	<0.0	0.4	0.2
Calendar Year Three	0.7	2.8	4.6	<0.0	0.5	0.2
Calendar Year Four	0.6	2.7	4.5	<0.0	0.5	0.2
Calendar Year Five	0.6	2.5	4.4	<0.0	0.4	0.2
SMAQMD Significance Threshold	-	-	-	-	**14.6 tons/year*	**15 tons/year*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SMAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include sweeping/cleaning adjacent roadway access areas daily, water exposed surfaces twice daily, and limit speeds on unpaved roads to 15 miles per hour. Emissions taken of the season, summer or winter, with the highest outputs. Building construction, paving and painting assumed to occur simultaneously.
* = The allowable threshold level is 0 pounds/day or 0 tons/year unless all SMAQMD recommended BACT/BMP are implemented.

As shown in Table 2-5, emissions generated during Project construction would not exceed the SMAQMD's daily or annual thresholds of significance with the implementation of mitigation measure AQ-1. This mitigation measure ensures that the SMAQMD's BACT/BMPs are implemented; which, according to air district regulations, allows the particulate matter significance threshold to be non-zero (allowing PM_{10} to be 80 pounds/day or 14.6 tons/year and $PM_{2.5}$ to be 82 pounds/day or 15 tons/year). Without the implementation of AQ-1, the Project's construction emissions would be over the threshold of 0 pounds/day and thus have a significant effect. The City of Rancho Cordova General Plan: Air Quality Element, Policy AQ.1.2 1 promotes the thresholds and standards set out by the SMAQMD and ensures the enforcement of the air pollution control measures during construction periods. Specifically, Policy AQ.1.2.1 requires the evaluation of projects for compliance with SMAQMD thresholds of significance. With AQ-1, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, and no health effects from Project criteria pollutants would occur.

AQ-1: Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust.

The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. The following measures are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Control of fugitive dust is required by District Rule 403 and enforced by District staff.
- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3)

and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

- Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1].
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

2.3.3.2 Project Operation-Generated Criteria Air Quality Emissions

Operational Significance Analysis

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROGs and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. As previously described, operational air pollutant emissions were based on the land use mix identified in Section 1.0 of this report and traffic trip generation rates from Nelson/Nygaard (2023). Long-terms operational emissions attributable to the Project are identified in Table 2-6 and compared to the operational significance thresholds promulgated by the SMAQMD. The PM_{10} and $PM_{2.5}$ non-zero thresholds are reliant on the implementation of the SMAQMD's BACT/BMPs for land use development project operations. The following are the recommendations made by the SMAQMD for land use development project operations:

- Compliance with District rules that control operational PM and NOx emissions. Reference rules regarding wood burning devices, boilers, water heaters, generators and other PM control rules that may apply to equipment to be located at the project.
- Compliance with mandatory measures in the California Building Energy Efficiency Standards (Title 24, Part 6) that pertain to efficient use of energy at a residential or a non-residential land use.
- Compliance with mandatory measures in the California Green Building Code (Title 24, Part 11). Current mandatory measures related to operational PM include requirements for bicycle parking, parking for fuel efficient vehicles, electric vehicle charging, and fireplaces for non-residential projects. Residential project measures include requirements for electric vehicle charging and fireplaces.

The Proposed Project will comply with the above recommendations in order to justify the use of a non-zero operational threshold for PM_{10} and $PM_{2.5}$. As seen by Table 2-6, the air pollutant concentrations are below the SMAQMD significance threshold for the Project.

Table 2-6. Operational-Related Emissions

Emission Source	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer Emissions						
Area	8.76	0.16	18.60	0.01	0.02	0.02
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	17.30	15.30	168.00	0.40	36.0	9.33
Total:	**26.06**	**15.46**	**186.60**	**0.41**	**36.02**	**9.35**
SMAQMD Significance Threshold	*65 pounds/day*	*65 pounds/day*	-	-	**80 pounds/day*	**82 pounds/day*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	6.24	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	15.60	18.00	139.00	0.36	36.00	9.33
Total:	**21.84**	**18.00**	**139.00**	**0.36**	**36.00**	**9.33**
SMAQMD Significance Threshold	*65 pounds/day*	*65 pounds/day*	-	-	**80 pounds/day*	**82 pounds/day*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Emission projections are predominately based on the land use mix identified in Section 1.0 of this report and traffic trip generation rates from DKS Associates (2023).
* = The allowable threshold level is 0 pounds/day or 0 tons/year unless all SMAQMD recommended BACT/BMP are implemented.

As shown in Table 2-6, the Project's emissions would not exceed any SMAQMD thresholds for any criteria air pollutants during operation.

As identified in Table 2-3, the Sacramento County portion of the SVAB is listed as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, and PM_{10} (CARB 2022b). O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely

affect the human respiratory system. As shown in Table 2-6, the Proposed Project would result in increased emissions of the O_3 precursor pollutants ROG and NOx, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SMAQMD is contained in the SMAQMD *2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2018), *2021 Sacramento County Second 10-Year PM_{10} Maintenance Plan*, and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013). These air quality planning documents present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NOx) as well as PM emissions from stationary, area, mobile, and indirect sources. Each of these air quality planning documents provide control measures that reduce emissions to attain and maintain federal ambient air quality standards such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SMAQMD are designed to meet the objectives of these air quality planning documents and in doing so achieve and maintain attainment status with state and federal standards. As noted above, the Project would increase the emission of certain pollutants, but would not exceed the thresholds of significance established by the SMAQMD for purposes of reducing air pollution and its deleterious health effects.

2.3.3.3 Project Consistency with Air Quality Planning

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project Site is located within the SVAB, which is under the jurisdiction of the SMAQMD. SMAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. The SMAQMD is required to submit air quality plans and rate-of-progress milestone evaluations in accordance with the federal Clean Air Act. The SMAQMD air quality attainment plans and reports, which include the *2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2018), *2021 Sacramento County Second 10-Year PM_{10} Maintenance Plan*, and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013), present comprehensive strategies to reduce the O_3 precursor pollutants (ROG and NO_x) as well as PM emissions from stationary, area, mobile, and indirect sources.

A project is consistent with regional air quality planning efforts in part if it is consistent with the population and housing assumptions that were used in the development of the SMAQMD air quality plans and does nothing to inhibit the region's achievement of air quality standards. Growth projections in the City of Rancho

Cordova are based largely on the City of Rancho Cordova General Plan. As such, projects that propose development consistent with the growth anticipated by the General Plan would generally be consistent with the SMAQMD regional air quality planning efforts. The Project Site is located within the Folsom Boulevard Specific Plan area and has a City of Rancho Cordova General Plan land use designation of Residential Mixed-Use (FB-RMU). The site is zoned Residential Mixed-Use – Folsom Boulevard Specific Plan (RMU [FBSP]). The Folsom Boulevard Specific is the primary planning tool the City uses to guide future development and redevelopment within the Specific Plan area. It seeks to increase the density of both housing and commercial activity; increase pedestrian, bicycle, and transit trips to, from, and through the area; increase the visibility of the corridor as a destination; and change the dynamic and image to that of a high demand, thriving urban area. The RMU (FBSP) Zoning District is intended to designate property for the development of medium and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the City encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development. The Project proposes a mix of uses onsite by developing residential, commercial, and recreational uses on infill and underutilized parcels. As such, the Project is consistent with the City's General Plan, Folsom Boulevard Specific Plan, and City Zoning Code and is therefore consistent with the types, intensity, and patterns of land use envisioned for the site. Furthermore, as shown in Tables 2-5 and 2-6, all Project emissions would fall below SMAQMD significance thresholds. For these reasons the Project would not conflict with SMAQMD's air quality planning.

It is additionally noted that the Project is considered "infill development" as it proposes to redevelop a previously developed property and enhance the physical design of the urban environment. Under Public Resources Code (PRC) section 21061.3, an "infill site" is defined as a site that "has been previously developed for qualified urban uses." In turn, a "qualified urban use" is defined, pursuant to PRC section 21072, as "a residential, commercial, or public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses." Additionally, the Project Site is located in an "urbanized area," which is defined under PRC section 21071 as "an incorporated city" that meets the criteria of having a population of at least 100,000 persons. These aspects of the Project would result in the generation of a reduced amount of criteria air pollutant emissions. According to the USEPA, redevelopments (namely at brownfield sites such as the Project Site) produce 32 to 57 percent less emissions per capita relative to conventional developments (USEPA 2011); this is because the number of daily vehicle trips and daily vehicle miles traveled (VMT) associated with the redevelopment tend to be lower compared with development on vacant land.

The Proposed Project would be located in close proximity to the Mather Field/Mills Train Station, which is directly across Folsom Boulevard from the Project Site and can be accessed via a pedestrian crosswalk with stop-traffic control. The public transit accessibility would result in fewer vehicle trips and VMT compared to the statewide average and encourage walking and non-automotive forms of transportation, thus resulting in the reduction of, or no increase in, transportation-related emissions, a primary goal of SMAQMD air quality planning. Furthermore, the site is fronted by a Class II bike lane on Folsom Boulevard.

The Project Site can be identified for its "location efficiency." Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within, such as an "urban area," "compact infill," or "suburban center." The Project Site represents an urban/compact infill location within an

area of the city developed with residential and commercial uses. The Project Site is served by existing public transportation as previously described; it is within an active urban center surrounded with many existing offsite office, commercial, and residential buildings. The Project would locate additional residential land uses in close proximity to existing offsite office, commercial, and residential uses. Therefore, the Project would provide future Project residents with potential work opportunities and commercial service options in close proximity to the site. Additionally, the Project would locate potential employment opportunities for residents already living in the vicinity. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transportation related air pollutant emissions, a primary goal of SMAQMD air quality planning.

The Project would increase housing density in the vicinity over current conditions. Increased density reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies to reduce emissions, a primary goal of SMAQMD air quality planning.

2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Site include residences directly adjacent to the west, north, and east.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of DPM, ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The Sacramento County portion of the SVAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. Thus, existing O_3, PM_{10} and $PM_{2.5}$ levels in the SVAB are at unhealthy levels during certain periods. However, as shown in Table 2-5 the Project would not exceed the SMAQMD significance thresholds for construction emissions.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SMAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in

CO emissions in excess of the SMAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. PM10 exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM and PM_{10} contains $PM_{2.5}$ as a subset. As with O_3 and NOx, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SMAQMD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract additional mobile sources that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. The Project would not have a high carcinogenic or non-carcinogenic risk during operation.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the Sacramento County portion of the SVAB is designated as in attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD's) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO "hot spot" analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD), the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The Proposed Project is anticipated to result in 4,354 daily traffic trips (DKS Associates 2023). Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and there is no likelihood of the Project traffic exceeding CO values.

2.3.3.5 Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which

a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

According to the SMAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. The Proposed Project does not include any uses identified by the SMAQMD as being associated with odors.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and N_2O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the

last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
N_2O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1]USEPA 2016a, [2] USEPA 2016b, [3] USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In 2022, CARB released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric

tons of CO_2e in 2020, though the intensity of this decrease was most likely from light duty vehicles after shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level as in 2019 despite a 44 percent decrease in in-state hydropower generation (due to below average precipitation levels), which was more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2020, accounting for 23 percent (CARB 2022c).

3.2 Regulatory Framework

3.2.1 State

3.2.1.1 Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (SB) 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the State, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

3.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

3.2.1.4 Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

3.2.1.5 Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008, which became effective in January 2009, helps facilitate AB 32's GHG reduction goals by addressing the emissions from passenger vehicles. The main objectives of the bill aim to reduce GHG emissions through extensive transportation, housing, and land use planning. SB 375 directs CARB to establish regional targets to reduce GHG emissions from passenger vehicle use. CARB administers 2035 targets for each of the regions throughout the State. The corresponding metropolitan planning organizations (MPOs) in each region are required to prepare and adopt a Sustainable Communities Strategy (SCS) that helps to adhere to the CARB administered targets. Sustainable Community Strategies play a vital role in regional transportation plans by allowing transportation, land use, and housing strategies to align with the State's GHG emission goals. Project Plans that are consistent with their region's SCS may be subject to a more streamlined CEQA process.

3.2.1.6 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2022 California Building Codes include provisions related to energy efficiency to reduce energy consumption and greenhouse gas emissions from buildings. Some of the key energy efficiency components of the codes are:

1. Energy Performance Requirements: The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components.
2. Lighting Efficiency: The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures.
3. HVAC Systems: The codes establish requirements for heating, ventilation, and air conditioning (HVAC) systems, including the use of high-efficiency equipment, duct sealing, and controls.
4. Building Envelope: The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort.
5. Renewable Energy: The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on non-renewable energy sources.
6. Commissioning: The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently.

Overall, the energy efficiency provisions of the 2022 California Building Codes aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The 2022 Building Energy Efficiency Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The exact amount by which the 2022 Building Codes are more efficient compared to the 2019 Building Codes would depend on the specific provisions that have been updated and the specific building being considered. However, in general, the 2022 Building Codes have been updated to include increased requirements for energy efficiency, such as higher insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 standards are a major step toward meeting Zero Net Energy.

3.2.2 Local

3.2.2.1 Sacramento Metropolitan Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SMAQMD has established operational GHG reduction thresholds, as well as construction-related thresholds. The GHG targets and reduction recommendations made by the SMAQMD have taken into considerations reports and guidelines from various state agencies and organizations, such as the California Air Pollution Control Officers Association CEQA & Climate Change guidelines, the CARB Scoping Plan, the California Natural Resource Agency's CEQA Guidelines, and other reputable sources. In February 2021, the SMAQMD revised the Greenhouse Gas Emissions Chapter within their CEQA Guide.

The SMAQMD has both construction and operational thresholds for GHG emissions within their CEQA Guide. Their construction thresholds establish a bright line threshold of 1,100 metric tons/year. Similarly, SMAQMD recommends a comparison of a project's annual operational GHG emissions to a significance threshold of 1,100 metric tons per year, though coupled with implementation of SMAQMD Tier 1 Best Management Practices (BMPs). Specifically, if a project's annual operational GHG emissions are calculated to fall under 1,100 metric tons and the project implements all SMAQMD Tier 1 BMPs, GHG-related impacts would be less than significant. If the threshold is exceeded, or in the case the project does not implement the Tier 1 BMPs, then the project may have a cumulatively considerable contribution to a significant cumulative environmental impact.

The Tier 1 BMPs are:

- BMP 1 – projects shall be designed and constructed without natural gas infrastructure; and
- BMP 2 - projects shall meet the current CalGreen Tier 2 standards[1], except all electric vehicle capable spaces shall instead be electric vehicle ready.

[1] CalGreen contains voluntary "Tier 1" and "Tier 2" standards that are not mandatory statewide but could be required by a City or County. These are 'reach' standards, related to energy efficiency, that can be adopted by local jurisdictions and may be incorporated as mandatory standards in future code cycles.

If Tier 1 BMPs are not fully implemented then emissions, including natural gas emissions, should be estimated and the project should mitigate any natural gas emissions and require all prewiring necessary so that the building is ready for a future retrofit to all-electric (e.g., such that electric space heating, water heating, drying, and cooking appliances could be installed). If emissions still exceed 1,100 metric tons of CO_2e per year, then the project must implement SMAQMD's Tier 2 BMP 3:

- Office projects must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for the County.
- Residential projects must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in the County.
- Retail projects must achieve no net increase in total VMT.

If the project achieves BMP 3, then the operational impact is considered less than significant, and no further analysis is needed. If a project cannot incorporate the required BMPs, other reductions or purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required. Carbon offsets are instruments that can be bought, sold, and traded. Like a stock or equity that represents a unit of ownership in a company, a carbon offset represents a unit of GHG emissions reductions. Each offset is essentially a certification that a certain quantity of GHG emissions has been avoided, prevented, or sequestered. Offset registries that the SMAQMD may approve have developed a broad consensus around the standards that are necessary to ensure that offsets are environmentally sound, namely, that offsets be real, permanent, quantifiable, verifiable, enforceable, and additional. Approved registries may include but are not limited to any of the following: (i) the Climate Action Reserve, the American Carbon Registry and Verra, which are all approved by CARB; (ii) any entity approved at any time by CARB to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.

3.2.2.2 Sacramento Metropolitan Air Quality Management District

The Sacramento Area Council of Government's (SACOG's) Metropolitan Transportation Plan/Sustainable Communities Strategy 2020 (MTP/SCS) is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for and the year 2035, and thus establishes an overall GHG target for the region beyond 2020 applicable to these subsectors of the transportation sector. CARB assigned SACOG a 19 percent GHG reduction target from 2005 levels by 2035. The GHG reduction target is the percent reduction in passenger vehicle GHG emission per capita, compared to Year 2005. This change represents a reduction from just over 23 pounds per capita on a given weekday in 2005, to just under 19 pounds by 2035 (SACOG 2020).

3.2.2.3 City of Rancho Cordova Climate Action and Adaptation Plan

The City of Rancho Cordova has drafted the City Climate Action and Adaptation Plan (CAAP), which at the time of this analysis was in the public review process and therefore not yet adopted. The CAAP is intended to serve as a comprehensive roadmap to community sustainability and resilience in the city. The purposes

of the CAAP are to identify strategies and measures the City can take to reduce GHG emissions to levels that align with the State of California's goals and set forth strategies to adapt and promote resilience to the impacts of climate change. In drafting the CAAP, the City evaluated the volume of emissions generated in a baseline year (2019) and identified City-specific targets and goals that determine the amount of community-wide emissions that need to be reduced in Rancho Cordova to align with statewide GHG reduction targets for 2030 and 2045. The City then developed GHG reduction measures to achieve the City's 2030 target and make substantial progress towards the City's 2045 goal. Additionally, in preparation of the CAAP, the City conducted a climate change vulnerability assessment to better understand its vulnerability to climate hazards. This was then used to inform and develop a set of adaptation strategies, objectives, and actions to improve community resilience in the context of climate change. The successful implementation and administration of the CAAP would reduce emissions and reduce climate related risks in the city, as well as provide other co-benefits like strengthening the city's economy, improving risk management, cleaning the environment, and improving the health and wellness of residents.

The CAAP provides new development project applicants in the city the opportunity to use CEQA streamlining tools for projects that are consistent with the CAAP. Demonstrating consistency with the CAAP establishes that a project will not result in an "additional environmental effect" related to GHG emissions. A project's consistency with the CAAP will be determined through a Consistency Checklist ("Checklist"). The Checklist, which has yet to be made available at the time of this analysis, will contain GHG reduction measures applicable to development projects that are required to be implemented on a project-by-project basis to achieve the City's 2030 reduction target and make substantial progress toward the 2045 goal. Once the CAAP is adopted, new development projects will need to incorporate all potentially applicable Plan measures to demonstrate consistency with the CAAP. By incorporating applicable GHG reduction measures in the Checklist into project designs or conditions of approval, the City will ensure that new development is consistent with applicable GHG reduction measures in the CAAP and will contribute its "fair share" in achieving the identified GHG reduction targets. Projects that do not demonstrate consistency may, at the City's discretion, prepare a more comprehensive project-specific analysis of GHG emissions consistent with CEQA requirements.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases or

The Appendix G thresholds for GHG emissions do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation

measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 CCR 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130). As a note, the CEQA Guidelines were amended in response to Senate Bill 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the SVAB is the SMAQMD, the regional air pollution control officer for the basin. As previously stated, to provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SMAQMD has set thresholds and required BMPs to implement throughout the Project construction and operations. The numeric bright line thresholds and BMPs described in Section 3.2.2.1 above were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The City Rancho Cordova may set a project-specific threshold based on the context of each particular project, including using the SMAQMD expert recommendation. For the Proposed Project, the SMAQMD's 1,100 metric tons of CO_2e per year threshold and implementation of SMAQMD BMPs are used as the significance threshold for the Project. Additionally, the Project is assessed for consistency with SACOG's MTP/SCS. As previously described, the MTP/SCS is the latest update of a long-range policy and planning program that establishes GHG emissions goals for automobiles and light-duty trucks for the year 2035, and thus establishes an overall GHG target for the region beyond 2020 applicable to these subsectors of the transportation sector. CARB assigned SACOG a 19 percent GHG reduction target from 2005 levels by 2035 (SACOG 2020).

3.3.2 Methodology

GHG impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where GHG emission quantification was required, emissions were modeled using the CalEEMod software, version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction generated GHG emissions were calculated primarily using CalEEMod model defaults for Sacramento County, though the timing of construction was adjusted to reflect the anticipated construction schedule of 2024 through 2029. Operational GHG emissions were based on the land use mix identified in Section 1.0 of this report and traffic trip generation rates provided by Nelson/Nygaard (2023). Two design features attributable to the Project are accounted for in the emissions modeling calculations, specifically the Project's proximity to transit and its number of affordable/below-market residential units.

3.3.3 Impact Analysis

3.3.3.1 Generation of GHG Emissions

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction generated GHG emissions

that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

Table 3-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Calendar Year One	499
Calendar Year Two	890
Calendar Year Three	973
Calendar Year Four	963
Calendar Year Five	939
SMAQMD Annual Construction Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 3-2, Project construction would result in the maximum generation of 973 metric tons of CO_2e over the third calendar year of construction, which is below the SMAQMD significance threshold. Once construction is complete, the generation of these GHG emissions would cease.

Operational Significance Analysis

Operation of the Project would result in an increase in GHG emissions primarily associated with motor vehicle trips and onsite energy sources. Long-term operational GHG emissions attributed to the Project are identified in Table 3-3.

As previously described, SMAQMD specifies that all projects must adhere to the Tier 1 BMP requirements in order to be considered less than significant. In order to ensure compliance with the SMAQMD guidelines, this Project is subject to mitigation measure GHG-1 (see below), which will ensure that Tier 1 BMPs are implemented. The long-term Project operational GHG emissions identified in Table 3-3 account for SMAQMD Tier 1 BMP 1, which requires that all development be designed and constructed without natural gas infrastructure. Due to limitations in the modeling software, GHG-reductions resulting from Tier 1 BMP 2, which requires projects to meet the current CalGreen Tier 2 standards with the exception that all electric vehicle capable spaces be electric vehicle ready, are unable to be quantified.

Table 3-3. Operational-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Area	8
Energy	608
Mobile	4,441
Waste	190
Water	19
Refrigeration	2
Total	**5,268**
SMAQMD Annual Operational Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**Yes**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: Emission projections are predominately based on the land use mix identified in Section 1.0 of this report and traffic trip generation rates from DKS Associates(2023). SMAQMD Tier 1 BMP 1, which requires that all development be designed and constructed without natural gas infrastructure, is included in the modeling calculations per mitigation measure GHG-1.

As shown in Table 3-3, the Proposed Project's operational GHG emissions would be approximately 5,268 metric tons of CO_2e per year, which exceeds the SMAQMD significance threshold of 1,100 metric tons of CO_2e per year. Projects that exceed 1,100 metric tons of CO_2e per year after implementation of the Tier 1 BMPs must also implement SMAQMD Tier 2 BMPs. As previously discussed, the SMAQMD's Tier 2 BMP are as follows:

- Office projects must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for the County.
- Residential projects must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in the County.
- Retail projects must achieve no net increase in total VMT.

If the project achieves this SMAQMD Tier 2 BMP, then the operational impact is considered less than significant, and no further analysis is needed. If a project cannot incorporate the required BMPs, other reductions or purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required. Carbon offsets are instruments that can be bought, sold, and traded. Like a stock or equity that represents a unit of ownership in a company, a carbon offset represents a unit of GHG emissions reductions. Each offset is essentially a certification that a certain quantity of GHG emissions has been avoided, prevented, or sequestered. Offset registries that the SMAQMD may approve have developed a broad consensus around the standards that are necessary to ensure that offsets are environmentally sound, namely that offsets be real, permanent, quantifiable, verifiable, enforceable, and additional. Approved

registries may include but are not limited to any of the following: (i) the Climate Action Reserve, the American Carbon Registry, and Verra, which are all approved by CARB; (ii) any entity approved at any time by CARB to act as an "offset project registry" under the state's cap-and-trade program; (iii) other regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.

Therefore, in addition to mitigation measure GHG-1, mitigation measure GHG-2 is required in order for the Project's contribution of GHG emissions to be considered less than significant.

Mitigation Measures

GHG-1: Implement SMAQMD Tier 1 Best Management Practices.

The implementing agency will require the Project to implement Sacramento Metropolitan Air Quality Management District Tier 1 Best Management Practices:

- **BMP 1** - projects shall be designed and constructed without natural gas infrastructure.
- **BMP 2** - projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

GHG-2: Implement SMAQMD Tier 2 Best Management Practices.

The implementing agency will require the Project to implement Sacramento Metropolitan Air Quality Management District Tier 2 Best Management Practices:

- **BMP 3** - The Project applicant shall coordinate with the City of Rancho Cordova to implement feasible transportation demand management (TDM) strategies, which would decrease the vehicle miles traveled generated by the Project as follows:

  1. The Project office space component must achieve a 15 percent reduction in VMT per worker compared to the existing average VMT per capita for Sacramento County.
  2. The Project residential component must achieve a 15 percent reduction in VMT per resident compared to the existing average VMT per capita in Sacramento County.
  3. The Project retail component must achieve no net increase in total VMT.

Examples of potential measures include (but are not limited to): paid parking, employee telecommuting, employee shuttle service, expansion of transit service coverage / subsidized transit fares, enhanced bicycle and pedestrian connections, and flexible work schedules.

In the case that the necessary VMT reductions are infeasible, the purchasing and retiring GHG/carbon offsets from a SMAQMD-approved registry is required. Approved registries may include but are not limited to any of the following: (i) the Climate Action Reserve, the American Carbon Registry and Verra; (ii) any entity approved at any time by the California Air Resources Board to act as an "offset project registry" under the state's cap-and-trade program; (iii) other

regulatory or voluntary credits that demonstrate, based on substantial evidence, that the offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.

Adherence to both mitigation measures GHG-1 and GHG-2 are required in order for the Project's contribution of GHG emissions to be considered less than significant.

3.3.3.2 Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

As previously described, SACOG's MTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks. As shown in Table 3-3, GHG emissions resulting from Project-related transportation sources are one of the most potent sources of emissions, and therefore comparison to the MTP/SCS is an appropriate indicator of whether the Project is consistent with the MTP/SCS. Since the development site is classified as a "Center and Corridor Community" in the MTP/SCS (SACOG 2020, Appendix D), it is included in an area where urban development is predicted by SACOG. According to the MTP/SCS, land uses in Center and Corridor Communities are typically higher density and more mixed than surrounding land uses. Centers and Corridors are identified in local plans as historic downtowns, main streets, suburban or urban commercial corridors, rail station areas, central business districts, or town centers. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the communities surrounding them. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types. The Project is consistent with the "Center and Corridor Community" classification in the MTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the MTP/SCS with implementation of the future development within the Project Area.

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LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Criteria Pollutant and Greenhouse Gas Emissions

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutant and Greenhouse Gas Emissoins

Mills Crossing Detailed Report

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4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.4.1. Mitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.5.1. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Mills Crossing
Construction Start Date	1/2/2024
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	3.00
Location	38.58510137581632, -121.31208673995633
County	Sacramento
City	Rancho Cordova
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	608
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Medical Office Building	30.0	1000sqft	0.69	30,000	0.00	—	—	—
Library	15.0	1000sqft	0.34	15,000	0.00	—	—	—
Strip Mall	35.0	1000sqft	0.80	35,000	0.00	—	—	—
Strip Mall	52.5	1000sqft	1.21	52,500	0.00	—	—	—
High Turnover (Sit Down Restaurant)	7.50	1000sqft	0.17	7,500	0.00	—	—	—
Condo/Townhouse	60.0	Dwelling Unit	1.50	63,600	0.00	—	168	—
City Park	2.50	Acre	2.50	0.00	100,000	100,000	—	—
Unenclosed Parking with Elevator	325	Space	1.17	130,000	—	—	—	—
Apartments Mid Rise	60.0	Dwelling Unit	1.50	57,600	—	—	168	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Transportation	T-3	Provide Transit-Oriented Development
Transportation	T-4	Integrate A ordable and Below Market Rate Housing

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	5.28	36.0	39.8	0.05	1.60	2.86	3.69	1.47	0.69	1.51	—	8,426	8,426	0.31	0.37	14.8	8,560
Mit.	5.28	36.0	39.8	0.05	1.60	2.86	3.69	1.47	0.69	1.51	—	8,426	8,426	0.31	0.37	14.8	8,560
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.15	36.0	36.0	0.05	1.60	2.86	3.70	1.47	0.69	1.51	—	8,118	8,118	0.33	0.37	0.38	8,238
Mit.	5.15	36.0	36.0	0.05	1.60	2.86	3.70	1.47	0.69	1.51	—	8,118	8,118	0.33	0.37	0.38	8,238
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.58	19.7	25.2	0.04	0.87	2.04	2.57	0.80	0.49	0.98	—	5,786	5,786	0.23	0.27	4.15	5,875
Mit.	3.58	19.7	25.2	0.04	0.87	2.04	2.57	0.80	0.49	0.98	—	5,786	5,786	0.23	0.27	4.15	5,875
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.65	3.60	4.60	0.01	0.16	0.37	0.47	0.15	0.09	0.18	—	958	958	0.04	0.04	0.69	973
Mit.	0.65	3.60	4.60	0.01	0.16	0.37	0.47	0.15	0.09	0.18	—	958	958	0.04	0.04	0.69	973
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	3.72	36.0	34.1	0.05	1.60	0.18	1.78	1.47	0.04	1.51	—	5,498	5,498	0.22	0.05	0.83	5,520
2025	5.28	22.5	39.8	0.05	0.83	2.86	3.69	0.77	0.69	1.45	—	8,426	8,426	0.31	0.37	14.8	8,560
2026	5.11	21.2	38.7	0.05	0.74	2.86	3.61	0.69	0.69	1.37	—	8,337	8,337	0.31	0.37	13.5	8,468
2027	5.01	20.4	37.8	0.05	0.68	2.86	3.54	0.62	0.69	1.31	—	8,253	8,253	0.30	0.36	12.2	8,379
2028	4.80	19.3	36.9	0.05	0.59	2.86	3.46	0.55	0.69	1.23	—	8,157	8,157	0.29	0.28	11.0	8,259
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.71	36.0	33.8	0.05	1.60	0.18	1.78	1.47	0.04	1.51	—	5,476	5,476	0.22	0.05	0.02	5,496
2025	5.15	22.9	36.0	0.05	0.83	2.86	3.70	0.77	0.69	1.45	—	8,118	8,118	0.33	0.37	0.38	8,238
2026	5.02	21.6	35.1	0.05	0.75	2.86	3.61	0.69	0.69	1.37	—	8,037	8,037	0.32	0.37	0.35	8,157
2027	4.83	20.8	34.4	0.05	0.68	2.86	3.54	0.62	0.69	1.31	—	7,959	7,959	0.31	0.36	0.32	8,075
2028	4.72	19.7	33.8	0.05	0.59	2.86	3.46	0.55	0.69	1.23	—	7,869	7,869	0.31	0.36	0.28	7,985
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.08	19.7	18.7	0.03	0.87	0.11	0.98	0.80	0.03	0.83	—	3,002	3,002	0.12	0.03	0.23	3,013
2025	3.33	15.5	24.0	0.03	0.58	1.75	2.33	0.54	0.42	0.96	—	5,299	5,299	0.21	0.23	3.90	5,377
2026	3.58	15.3	25.2	0.04	0.53	2.04	2.57	0.49	0.49	0.98	—	5,786	5,786	0.23	0.27	4.15	5,875
2027	3.45	14.7	24.7	0.04	0.48	2.04	2.52	0.45	0.49	0.93	—	5,729	5,729	0.22	0.25	3.76	5,814
2028	3.32	13.8	23.9	0.04	0.42	2.01	2.43	0.39	0.48	0.87	—	5,586	5,586	0.21	0.25	3.34	5,670
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.38	3.60	3.41	< 0.005	0.16	0.02	0.18	0.15	< 0.005	0.15	—	497	497	0.02	< 0.005	0.04	499
2025	0.61	2.84	4.37	0.01	0.11	0.32	0.43	0.10	0.08	0.17	—	877	877	0.03	0.04	0.65	890
2026	0.65	2.80	4.60	0.01	0.10	0.37	0.47	0.09	0.09	0.18	—	958	958	0.04	0.04	0.69	973
2027	0.63	2.69	4.51	0.01	0.09	0.37	0.46	0.08	0.09	0.17	—	948	948	0.04	0.04	0.62	963
2028	0.61	2.51	4.37	0.01	0.08	0.37	0.44	0.07	0.09	0.16	—	925	925	0.04	0.04	0.55	939

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.72	36.0	34.1	0.05	1.60	0.18	1.78	1.47	0.04	1.51	—	5,498	5,498	0.22	0.05	0.83	5,520
2025	5.28	22.5	39.8	0.05	0.83	2.86	3.69	0.77	0.69	1.45	—	8,426	8,426	0.31	0.37	14.8	8,560
2026	5.11	21.2	38.7	0.05	0.74	2.86	3.61	0.69	0.69	1.37	—	8,337	8,337	0.31	0.37	13.5	8,468
2027	5.01	20.4	37.8	0.05	0.68	2.86	3.54	0.62	0.69	1.31	—	8,253	8,253	0.30	0.36	12.2	8,379
2028	4.80	19.3	36.9	0.05	0.59	2.86	3.46	0.55	0.69	1.23	—	8,157	8,157	0.29	0.28	11.0	8,259
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.71	36.0	33.8	0.05	1.60	0.18	1.78	1.47	0.04	1.51	—	5,476	5,476	0.22	0.05	0.02	5,496
2025	5.15	22.9	36.0	0.05	0.83	2.86	3.70	0.77	0.69	1.45	—	8,118	8,118	0.33	0.37	0.38	8,238
2026	5.02	21.6	35.1	0.05	0.75	2.86	3.61	0.69	0.69	1.37	—	8,037	8,037	0.32	0.37	0.35	8,157
2027	4.83	20.8	34.4	0.05	0.68	2.86	3.54	0.62	0.69	1.31	—	7,959	7,959	0.31	0.36	0.32	8,075
2028	4.72	19.7	33.8	0.05	0.59	2.86	3.46	0.55	0.69	1.23	—	7,869	7,869	0.31	0.36	0.28	7,985
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.08	19.7	18.7	0.03	0.87	0.11	0.98	0.80	0.03	0.83	—	3,002	3,002	0.12	0.03	0.23	3,013
2025	3.33	15.5	24.0	0.03	0.58	1.75	2.33	0.54	0.42	0.96	—	5,299	5,299	0.21	0.23	3.90	5,377
2026	3.58	15.3	25.2	0.04	0.53	2.04	2.57	0.49	0.49	0.98	—	5,786	5,786	0.23	0.27	4.15	5,875
2027	3.45	14.7	24.7	0.04	0.48	2.04	2.52	0.45	0.49	0.93	—	5,729	5,729	0.22	0.25	3.76	5,814
2028	3.32	13.8	23.9	0.04	0.42	2.01	2.43	0.39	0.48	0.87	—	5,586	5,586	0.21	0.25	3.34	5,670
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.38	3.60	3.41	< 0.005	0.16	0.02	0.18	0.15	< 0.005	0.15	—	497	497	0.02	< 0.005	0.04	499
2025	0.61	2.84	4.37	0.01	0.11	0.32	0.43	0.10	0.08	0.17	—	877	877	0.03	0.04	0.65	890
2026	0.65	2.80	4.60	0.01	0.10	0.37	0.47	0.09	0.09	0.18	—	958	958	0.04	0.04	0.69	973

2027	0.63	2.69	4.51	0.01	0.09	0.37	0.46	0.08	0.09	0.17	—	948	948	0.04	0.04	0.62	963
2028	0.61	2.51	4.37	0.01	0.08	0.37	0.44	0.07	0.09	0.16	—	925	925	0.04	0.04	0.55	939

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.0	15.5	186	0.40	0.28	35.8	36.0	0.27	9.08	9.35	364	44,456	44,820	34.6	1.67	120	46,301
Mit.	23.2	13.0	159	0.33	0.24	29.9	30.2	0.23	7.61	7.83	364	37,834	38,198	34.3	1.41	103	39,580
% Reduced	11%	16%	15%	16%	15%	16%	16%	15%	16%	16%	—	15%	15%	1%	15%	14%	15%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.9	18.0	139	0.36	0.26	35.8	36.0	0.24	9.08	9.33	364	40,859	41,224	34.7	1.82	16.7	42,650
Mit.	19.3	15.1	117	0.30	0.22	29.9	30.2	0.20	7.61	7.81	364	34,812	35,176	34.4	1.54	16.3	36,512
% Reduced	12%	16%	16%	16%	16%	16%	16%	16%	16%	16%	—	15%	15%	1%	15%	3%	14%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	22.3	12.9	117	0.26	0.20	24.7	24.9	0.19	6.27	6.46	364	30,151	30,516	34.3	1.33	45.5	31,815
Mit.	20.0	10.7	99.6	0.22	0.17	20.5	20.7	0.16	5.21	5.37	364	25,700	26,065	34.1	1.12	40.2	27,292
% Reduced	11%	17%	15%	17%	16%	17%	17%	15%	17%	17%	—	15%	15%	1%	15%	12%	14%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.07	2.35	21.4	0.05	0.04	4.51	4.54	0.03	1.14	1.18	60.3	4,992	5,052	5.68	0.22	7.53	5,267
Mit.	3.64	1.96	18.2	0.04	0.03	3.75	3.78	0.03	0.95	0.98	60.3	4,255	4,315	5.64	0.19	6.65	4,518

% Reduced	11%	17%	15%	17%	16%	17%	17%	15%	17%	17%	—	15%	15%	1%	15%	12%	14%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	17.3	15.3	168	0.40	0.26	35.8	36.0	0.24	9.08	9.33	—	40,674	40,674	1.55	1.57	106	41,287
Area	8.76	0.16	18.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.5	66.5	< 0.005	< 0.005	—	66.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,662	3,662	0.13	0.02	—	3,671
Water	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Waste	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Total	26.0	15.5	186	0.40	0.28	35.8	36.0	0.27	9.08	9.35	364	44,456	44,820	34.6	1.67	120	46,301
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.6	18.0	139	0.36	0.26	35.8	36.0	0.24	9.08	9.33	—	37,144	37,144	1.72	1.72	2.74	37,702
Area	6.24	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,662	3,662	0.13	0.02	—	3,671
Water	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Waste	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Total	21.9	18.0	139	0.36	0.26	35.8	36.0	0.24	9.08	9.33	364	40,859	41,224	34.7	1.82	16.7	42,650
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.3	12.7	104	0.26	0.18	24.7	24.9	0.17	6.27	6.45	—	26,390	26,390	1.31	1.23	31.5	26,821

Area	7.96	0.11	12.7	< 0.005	0.01	—	0.01	0.02	—	0.02	0.00	45.5	45.5	< 0.005	< 0.005	—	45.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,662	3,662	0.13	0.02	—	3,671
Water	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Waste	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Total	22.3	12.9	117	0.26	0.20	24.7	24.9	0.19	6.27	6.46	364	30,151	30,516	34.3	1.33	45.5	31,815
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.62	2.33	19.0	0.05	0.03	4.51	4.54	0.03	1.14	1.18	—	4,369	4,369	0.22	0.20	5.22	4,441
Area	1.45	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	7.54	7.54	< 0.005	< 0.005	—	7.57
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	606	606	0.02	< 0.005	—	608
Water	—	—	—	—	—	—	—	—	—	—	6.09	8.77	14.9	0.02	0.01	—	19.4
Waste	—	—	—	—	—	—	—	—	—	—	54.2	0.00	54.2	5.42	0.00	—	190
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.31	2.31
Total	4.07	2.35	21.4	0.05	0.04	4.51	4.54	0.03	1.14	1.18	60.3	4,992	5,052	5.68	0.22	7.53	5,267

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.5	12.8	141	0.33	0.22	29.9	30.2	0.20	7.61	7.81	—	34,052	34,052	1.30	1.32	88.6	34,565
Area	8.76	0.16	18.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.5	66.5	< 0.005	< 0.005	—	66.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,662	3,662	0.13	0.02	—	3,671
Water	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Waste	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Total	23.2	13.0	159	0.33	0.24	29.9	30.2	0.23	7.61	7.83	364	37,834	38,198	34.3	1.41	103	39,580

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.1	15.1	117	0.30	0.22	29.9	30.2	0.20	7.61	7.81	—	31,097	31,097	1.44	1.44	2.30	31,564
Area	6.24	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,662	3,662	0.13	0.02	—	3,671
Water	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Waste	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Total	19.3	15.1	117	0.30	0.22	29.9	30.2	0.20	7.61	7.81	364	34,812	35,176	34.4	1.54	16.3	36,512
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.0	10.6	86.9	0.21	0.15	20.5	20.7	0.14	5.21	5.36	—	21,939	21,939	1.10	1.02	26.2	22,298
Area	7.96	0.11	12.7	< 0.005	0.01	—	0.01	0.02	—	0.02	0.00	45.5	45.5	< 0.005	< 0.005	—	45.7
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,662	3,662	0.13	0.02	—	3,671
Water	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Waste	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Total	20.0	10.7	99.6	0.22	0.17	20.5	20.7	0.16	5.21	5.37	364	25,700	26,065	34.1	1.12	40.2	27,292
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.19	1.94	15.9	0.04	0.03	3.75	3.77	0.03	0.95	0.98	—	3,632	3,632	0.18	0.17	4.34	3,692
Area	1.45	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	7.54	7.54	< 0.005	< 0.005	—	7.57
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	606	606	0.02	< 0.005	—	608
Water	—	—	—	—	—	—	—	—	—	—	6.09	8.77	14.9	0.02	0.01	—	19.4
Waste	—	—	—	—	—	—	—	—	—	—	54.2	0.00	54.2	5.42	0.00	—	190
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.31	2.31
Total	3.64	1.96	18.2	0.04	0.03	3.75	3.78	0.03	0.95	0.98	60.3	4,255	4,315	5.64	0.19	6.65	4,518

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	6.82	5.96	0.01	0.29	—	0.29	0.27	—	0.27	—	938	938	0.04	0.01	—	942
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.24	1.09	< 0.005	0.05	—	0.05	0.05	—	0.05	—	155	155	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.97	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	174	174	0.01	0.01	0.71	176
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.72	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	154	154	< 0.005	0.01	0.02	156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.3	43.3	< 0.005	< 0.005	0.08	44.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.18	7.18	< 0.005	< 0.005	0.01	7.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	6.82	5.96	0.01	0.29	—	0.29	0.27	—	0.27	—	938	938	0.04	0.01	—	942
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.24	1.09	< 0.005	0.05	—	0.05	0.05	—	0.05	—	155	155	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.97	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	174	174	0.01	0.01	0.71	176
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.72	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	154	154	< 0.005	0.01	0.02	156

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.3	43.3	< 0.005	< 0.005	0.08	44.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.18	7.18	< 0.005	< 0.005	0.01	7.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	9.85	9.02	0.01	0.44	—	0.44	0.40	—	0.40	—	1,451	1,451	0.06	0.01	—	1,456
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.80	1.65	< 0.005	0.08	—	0.08	0.07	—	0.07	—	240	240	0.01	< 0.005	—	241
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.06	1.14	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	203	203	0.01	0.01	0.83	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	0.83	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.02	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.6	50.6	< 0.005	< 0.005	0.10	51.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.37	8.37	< 0.005	< 0.005	0.02	8.49

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	9.85	9.02	0.01	0.44	—	0.44	0.40	—	0.40	—	1,451	1,451	0.06	0.01	—	1,456
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.80	1.65	< 0.005	0.08	—	0.08	0.07	—	0.07	—	240	240	0.01	< 0.005	—	241
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.06	1.14	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	203	203	0.01	0.01	0.83	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	0.83	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.02	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	50.6	50.6	< 0.005	< 0.005	0.10	51.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.37	8.37	< 0.005	< 0.005	0.02	8.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	3.03	3.13	< 0.005	0.14	—	0.14	0.13	—	0.13	—	492	492	0.02	< 0.005	—	494
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.55	0.57	< 0.005	0.03	—	0.03	0.02	—	0.02	—	81.5	81.5	< 0.005	< 0.005	—	81.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.72	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	154	154	< 0.005	0.01	0.02	156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.3	26.3	< 0.005	< 0.005	0.05	26.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.36	4.36	< 0.005	< 0.005	0.01	4.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	3.03	3.13	< 0.005	0.14	—	0.14	0.13	—	0.13	—	492	492	0.02	< 0.005	—	494
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.55	0.57	< 0.005	0.03	—	0.03	0.02	—	0.02	—	81.5	81.5	< 0.005	< 0.005	—	81.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.72	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	154	154	< 0.005	0.01	0.02	156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.3	26.3	< 0.005	< 0.005	0.05	26.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.36	4.36	< 0.005	< 0.005	0.01	4.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.75	1.93	< 0.005	0.08	—	0.08	0.07	—	0.07	—	319	319	0.01	< 0.005	—	320
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.7	52.7	< 0.005	< 0.005	—	52.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	< 0.005	0.01	0.02	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	0.01	2.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.75	1.93	< 0.005	0.08	—	0.08	0.07	—	0.07	—	319	319	0.01	< 0.005	—	320
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.7	52.7	< 0.005	< 0.005	—	52.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	< 0.005	0.01	0.02	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.7	16.7	< 0.005	< 0.005	0.03	16.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	0.01	2.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	6.34	7.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,455	1,455	0.06	0.01	—	1,460
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.16	1.44	< 0.005	0.05	—	0.05	0.04	—	0.04	—	241	241	0.01	< 0.005	—	242
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.79	0.55	11.3	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,135	2,135	0.03	0.08	8.20	2,166
Vendor	0.07	2.99	1.11	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,651	1,651	0.11	0.24	4.29	1,731
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.70	8.35	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,895	1,895	0.05	0.08	0.21	1,919
Vendor	0.06	3.20	1.14	0.01	0.02	0.43	0.46	0.02	0.12	0.14	—	1,650	1,650	0.11	0.24	0.11	1,726
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.38	5.17	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,180	1,180	0.02	0.05	2.14	1,196
Vendor	0.04	1.91	0.68	0.01	0.01	0.26	0.28	0.01	0.07	0.08	—	1,001	1,001	0.07	0.15	1.12	1,048
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.94	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	195	195	< 0.005	0.01	0.36	198
Vendor	0.01	0.35	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	166	166	0.01	0.02	0.19	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	6.34	7.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,455	1,455	0.06	0.01	—	1,460
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.16	1.44	< 0.005	0.05	—	0.05	0.04	—	0.04	—	241	241	0.01	< 0.005	—	242

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.79	0.55	11.3	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,135	2,135	0.03	0.08	8.20	2,166
Vendor	0.07	2.99	1.11	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,651	1,651	0.11	0.24	4.29	1,731
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.70	8.35	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,895	1,895	0.05	0.08	0.21	1,919
Vendor	0.06	3.20	1.14	0.01	0.02	0.43	0.46	0.02	0.12	0.14	—	1,650	1,650	0.11	0.24	0.11	1,726
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.38	5.17	0.00	0.00	1.15	1.15	0.00	0.27	0.27	—	1,180	1,180	0.02	0.05	2.14	1,196
Vendor	0.04	1.91	0.68	0.01	0.01	0.26	0.28	0.01	0.07	0.08	—	1,001	1,001	0.07	0.15	1.12	1,048
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.94	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	195	195	< 0.005	0.01	0.36	198
Vendor	0.01	0.35	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	166	166	0.01	0.02	0.19	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.75	0.48	10.6	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,093	2,093	0.03	0.07	7.48	2,122
Vendor	0.06	2.80	1.07	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,618	1,618	0.11	0.24	3.90	1,697
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.63	7.79	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,859	1,859	0.04	0.08	0.19	1,882
Vendor	0.06	3.00	1.09	0.01	0.02	0.43	0.46	0.02	0.12	0.14	—	1,617	1,617	0.11	0.24	0.10	1,692
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.39	5.68	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,362	1,362	0.03	0.05	2.31	1,381
Vendor	0.04	2.11	0.77	0.01	0.02	0.31	0.33	0.02	0.08	0.10	—	1,155	1,155	0.08	0.17	1.20	1,210
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	1.04	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	226	226	< 0.005	0.01	0.38	229
Vendor	0.01	0.38	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	191	191	0.01	0.03	0.20	200
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.75	0.48	10.6	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,093	2,093	0.03	0.07	7.48	2,122
Vendor	0.06	2.80	1.07	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,618	1,618	0.11	0.24	3.90	1,697
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.63	7.79	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,859	1,859	0.04	0.08	0.19	1,882
Vendor	0.06	3.00	1.09	0.01	0.02	0.43	0.46	0.02	0.12	0.14	—	1,617	1,617	0.11	0.24	0.10	1,692
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.48	0.39	5.68	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,362	1,362	0.03	0.05	2.31	1,381
Vendor	0.04	2.11	0.77	0.01	0.02	0.31	0.33	0.02	0.08	0.10	—	1,155	1,155	0.08	0.17	1.20	1,210

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.07	1.04	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	226	226	< 0.005	0.01	0.38	229
Vendor	0.01	0.38	0.14	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	191	191	0.01	0.03	0.20	200
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.73	0.48	9.98	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,055	2,055	0.03	0.07	6.79	2,084
Vendor	0.06	2.63	1.03	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,581	1,581	0.10	0.23	3.50	1,656
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.59	0.62	7.31	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,826	1,826	0.04	0.08	0.18	1,850
Vendor	0.06	2.81	1.05	0.01	0.02	0.43	0.46	0.02	0.12	0.14	—	1,581	1,581	0.10	0.23	0.09	1,652
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.39	5.35	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,338	1,338	0.02	0.05	2.10	1,356
Vendor	0.04	1.97	0.74	0.01	0.02	0.31	0.32	0.02	0.08	0.10	—	1,129	1,129	0.07	0.17	1.08	1,181
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.98	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	222	222	< 0.005	0.01	0.35	225
Vendor	0.01	0.36	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	187	187	0.01	0.03	0.18	196
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.73	0.48	9.98	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,055	2,055	0.03	0.07	6.79	2,084
Vendor	0.06	2.63	1.03	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,581	1,581	0.10	0.23	3.50	1,656
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.59	0.62	7.31	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,826	1,826	0.04	0.08	0.18	1,850
Vendor	0.06	2.81	1.05	0.01	0.02	0.43	0.46	0.02	0.12	0.14	—	1,581	1,581	0.10	0.23	0.09	1,652
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.39	5.35	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,338	1,338	0.02	0.05	2.10	1,356
Vendor	0.04	1.97	0.74	0.01	0.02	0.31	0.32	0.02	0.08	0.10	—	1,129	1,129	0.07	0.17	1.08	1,181
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.98	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	222	222	< 0.005	0.01	0.35	225
Vendor	0.01	0.36	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	187	187	0.01	0.03	0.18	196
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	6.29	9.11	0.02	0.21	—	0.21	0.19	—	0.19	—	1,689	1,689	0.07	0.01	—	1,695
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.15	1.66	< 0.005	0.04	—	0.04	0.04	—	0.04	—	280	280	0.01	< 0.005	—	281
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.41	9.37	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,013	2,013	0.02	0.01	6.14	2,024
Vendor	0.06	2.46	0.99	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,539	1,539	0.10	0.23	3.10	1,613
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.55	6.90	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,788	1,788	0.04	0.08	0.16	1,812
Vendor	0.06	2.63	1.02	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,539	1,539	0.10	0.23	0.08	1,610
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.34	4.96	0.00	0.00	1.34	1.34	0.00	0.31	0.31	—	1,293	1,293	0.02	0.05	1.87	1,310
Vendor	0.04	1.82	0.70	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,084	1,084	0.07	0.16	0.95	1,135

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.91	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	214	214	< 0.005	0.01	0.31	217
Vendor	0.01	0.33	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	179	179	0.01	0.03	0.16	188
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	6.29	9.11	0.02	0.21	—	0.21	0.19	—	0.19	—	1,689	1,689	0.07	0.01	—	1,695
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	1.15	1.66	< 0.005	0.04	—	0.04	0.04	—	0.04	—	280	280	0.01	< 0.005	—	281
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.41	9.37	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,013	2,013	0.02	0.01	6.14	2,024
Vendor	0.06	2.46	0.99	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,539	1,539	0.10	0.23	3.10	1,613
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.55	6.90	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,788	1,788	0.04	0.08	0.16	1,812
Vendor	0.06	2.63	1.02	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,539	1,539	0.10	0.23	0.08	1,610
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.34	4.96	0.00	0.00	1.34	1.34	0.00	0.31	0.31	—	1,293	1,293	0.02	0.05	1.87	1,310
Vendor	0.04	1.82	0.70	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,084	1,084	0.07	0.16	0.95	1,135
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.91	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	214	214	< 0.005	0.01	0.31	217
Vendor	0.01	0.33	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.02	—	179	179	0.01	0.03	0.16	188
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	4.52	6.06	0.01	0.21	—	0.21	0.19	—	0.19	—	917	917	0.04	0.01	—	920
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.83	1.11	< 0.005	0.04	—	0.04	0.04	—	0.04	—	152	152	0.01	< 0.005	—	152
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.90	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.65	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	< 0.005	0.01	0.02	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	94.1	94.1	< 0.005	< 0.005	0.17	95.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	4.52	6.06	0.01	0.21	—	0.21	0.19	—	0.19	—	917	917	0.04	0.01	—	920
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.83	1.11	< 0.005	0.04	—	0.04	0.04	—	0.04	—	152	152	0.01	< 0.005	—	152
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.90	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.65	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	< 0.005	0.01	0.02	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	94.1	94.1	< 0.005	< 0.005	0.17	95.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	5.08	7.10	0.01	0.23	—	0.23	0.21	—	0.21	—	1,079	1,079	0.04	0.01	—	1,083
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.93	1.30	< 0.005	0.04	—	0.04	0.04	—	0.04	—	179	179	0.01	< 0.005	—	179
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.85	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	167	167	< 0.005	0.01	0.60	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.62	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	148	148	< 0.005	0.01	0.02	150

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.45	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	0.18	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	5.08	7.10	0.01	0.23	—	0.23	0.21	—	0.21	—	1,079	1,079	0.04	0.01	—	1,083
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.93	1.30	< 0.005	0.04	—	0.04	0.04	—	0.04	—	179	179	0.01	< 0.005	—	179
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.85	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	167	167	< 0.005	0.01	0.60	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.62	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	148	148	< 0.005	0.01	0.02	150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.45	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	0.18	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.03	18.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	4.96	7.11	0.01	0.21	—	0.21	0.20	—	0.20	—	1,079	1,079	0.04	0.01	—	1,083
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	1.30	< 0.005	0.04	—	0.04	0.04	—	0.04	—	179	179	0.01	< 0.005	—	179
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.80	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.54	166
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.58	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	146	146	< 0.005	0.01	0.01	148
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.43	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	107	107	< 0.005	< 0.005	0.17	108
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.03	17.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	4.96	7.11	0.01	0.21	—	0.21	0.20	—	0.20	—	1,079	1,079	0.04	0.01	—	1,083
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.91	1.30	< 0.005	0.04	—	0.04	0.04	—	0.04	—	179	179	0.01	< 0.005	—	179
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.80	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.54	166
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.58	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	146	146	< 0.005	0.01	0.01	148
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.43	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	107	107	< 0.005	< 0.005	0.17	108
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.03	17.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.67	6.98	0.01	0.18	—	0.18	0.17	—	0.17	—	1,065	1,065	0.04	0.01	—	1,068
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.85	1.27	< 0.005	0.03	—	0.03	0.03	—	0.03	—	176	176	0.01	< 0.005	—	177
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.03	0.75	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	161	161	< 0.005	< 0.005	0.49	161
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.55	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	143	143	< 0.005	0.01	0.01	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.40	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	103	103	< 0.005	< 0.005	0.15	105
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02	17.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.24. Paving (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.63	9.91	0.01	0.26	—	0.26	0.24	—	0.24	—	1,511	1,511	0.06	0.01	—	1,516
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.67	6.98	0.01	0.18	—	0.18	0.17	—	0.17	—	1,065	1,065	0.04	0.01	—	1,068
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.85	1.27	< 0.005	0.03	—	0.03	0.03	—	0.03	—	176	176	0.01	< 0.005	—	177
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.03	0.75	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	161	161	< 0.005	< 0.005	0.49	161
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.04	0.55	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	143	143	< 0.005	0.01	0.01	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.40	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	103	103	< 0.005	< 0.005	0.15	105
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02	17.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.54	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	81.0	81.0	< 0.005	< 0.005	—	81.3
Architectural Coatings	1.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.4	13.4	< 0.005	< 0.005	—	13.5
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.11	2.27	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	427	427	0.01	0.02	1.64	433
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.14	0.14	1.67	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	379	379	0.01	0.02	0.04	384
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	236	236	< 0.005	0.01	0.43	239
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.1	39.1	< 0.005	< 0.005	0.07	39.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.26. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.54	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	81.0	81.0	< 0.005	< 0.005	—	81.3
Architectural Coatings	1.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.4	13.4	< 0.005	< 0.005	—	13.5
Architectural Coatings	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.11	2.27	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	427	427	0.01	0.02	1.64	433
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.14	0.14	1.67	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	379	379	0.01	0.02	0.04	384
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	236	236	< 0.005	0.01	0.43	239
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.1	39.1	< 0.005	< 0.005	0.07	39.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.61	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.10	2.12	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	419	419	0.01	0.01	1.50	424
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.14	0.13	1.56	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	372	372	0.01	0.02	0.04	376
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	1.14	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	272	272	0.01	0.01	0.46	276
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.1	45.1	< 0.005	< 0.005	0.08	45.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.28. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.61	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.10	2.12	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	419	419	0.01	0.01	1.50	424
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.14	0.13	1.56	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	372	372	0.01	0.02	0.04	376
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	1.14	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	272	272	0.01	0.01	0.46	276
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.1	45.1	< 0.005	< 0.005	0.08	45.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.59	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.10	2.00	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	411	411	0.01	0.01	1.36	417
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.12	1.46	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	365	365	0.01	0.02	0.04	370
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.07	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	268	268	< 0.005	0.01	0.42	271
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.3	44.3	< 0.005	< 0.005	0.07	44.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.30. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.59	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.10	2.00	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	411	411	0.01	0.01	1.36	417
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.12	1.46	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	365	365	0.01	0.02	0.04	370
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.07	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	268	268	< 0.005	0.01	0.42	271
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.3	44.3	< 0.005	< 0.005	0.07	44.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.31. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.57	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.1	94.1	< 0.005	< 0.005	—	94.4
Architectural Coatings	1.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.6	15.6	< 0.005	< 0.005	—	15.6
Architectural Coatings	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.08	1.87	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	403	403	< 0.005	< 0.005	1.23	405
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	1.38	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	358	358	0.01	0.02	0.03	362
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.99	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	259	259	< 0.005	0.01	0.37	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.06	43.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.32. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.57	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.1	94.1	< 0.005	< 0.005	—	94.4
Architectural Coatings	1.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.6	15.6	< 0.005	< 0.005	—	15.6
Architectural Coatings	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.08	1.87	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	403	403	< 0.005	< 0.005	1.23	405
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	1.38	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	358	358	0.01	0.02	0.03	362
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.99	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	259	259	< 0.005	0.01	0.37	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.06	43.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.39	0.35	3.79	0.01	0.01	0.81	0.81	0.01	0.20	0.21	—	918	918	0.04	0.04	2.39	932
Library	0.20	0.17	1.91	< 0.005	< 0.005	0.41	0.41	< 0.005	0.10	0.11	—	463	463	0.02	0.02	1.20	470
Strip Mall	2.27	2.01	22.0	0.05	0.03	4.68	4.71	0.03	1.19	1.22	—	5,318	5,318	0.20	0.21	13.8	5,398

High Turnover (Sit Down Restaurant)	12.1	10.7	117	0.28	0.18	24.9	25.1	0.17	6.33	6.50	—	28,357	28,357	1.08	1.10	73.7	28,785
Condo/Townhouse	1.38	1.26	13.8	0.03	0.02	2.96	2.99	0.02	0.75	0.77	—	3,369	3,369	0.13	0.13	8.77	3,419
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.92	0.84	9.23	0.02	0.01	1.98	1.99	0.01	0.50	0.52	—	2,250	2,250	0.08	0.09	5.86	2,283
Total	17.3	15.3	168	0.40	0.26	35.8	36.0	0.24	9.08	9.33	—	40,674	40,674	1.55	1.57	106	41,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.35	0.41	3.15	0.01	0.01	0.81	0.81	0.01	0.20	0.21	—	838	838	0.04	0.04	0.06	851
Library	0.18	0.21	1.59	< 0.005	< 0.005	0.41	0.41	< 0.005	0.10	0.11	—	423	423	0.02	0.02	0.03	429
Strip Mall	2.06	2.36	18.2	0.05	0.03	4.68	4.71	0.03	1.19	1.22	—	4,856	4,856	0.23	0.23	0.36	4,929
High Turnover (Sit Down Restaurant)	11.0	12.6	97.3	0.25	0.18	24.9	25.1	0.17	6.33	6.50	—	25,896	25,896	1.20	1.20	1.91	26,286
Condo/Townhouse	1.25	1.48	11.4	0.03	0.02	2.96	2.99	0.02	0.75	0.77	—	3,076	3,076	0.14	0.14	0.23	3,122
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Apartment Mid Rise	0.84	0.99	7.62	0.02	0.01	1.98	1.99	0.01	0.50	0.52	—	2,054	2,054	0.09	0.09	0.15	2,085
Total	15.6	18.0	139	0.36	0.26	35.8	36.0	0.24	9.08	9.33	—	37,144	37,144	1.72	1.72	2.74	37,702
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.06	0.07	0.57	< 0.005	< 0.005	0.15	0.15	< 0.005	0.04	0.04	—	141	141	0.01	0.01	0.17	144
Library	0.03	0.04	0.29	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	71.4	71.4	< 0.005	< 0.005	0.09	72.5
Strip Mall	0.38	0.40	3.31	0.01	0.01	0.85	0.86	0.01	0.22	0.22	—	820	820	0.04	0.04	0.99	832
High Turnover (Sit Down Restaurant)	1.76	1.40	11.4	0.03	0.02	2.53	2.55	0.02	0.64	0.66	—	2,470	2,470	0.14	0.12	2.93	2,513
Condo/Townhouse	0.23	0.25	2.08	0.01	< 0.005	0.54	0.55	< 0.005	0.14	0.14	—	519	519	0.02	0.02	0.63	527
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.15	0.17	1.39	< 0.005	< 0.005	0.36	0.36	< 0.005	0.09	0.09	—	347	347	0.01	0.01	0.42	352
Total	2.62	2.33	19.0	0.05	0.03	4.51	4.54	0.03	1.14	1.18	—	4,369	4,369	0.22	0.20	5.22	4,441

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	0.33	0.29	3.22	0.01	< 0.005	0.69	0.69	< 0.005	0.17	0.18	—	781	781	0.03	0.03	2.03	792
Library	0.17	0.15	1.63	< 0.005	< 0.005	0.35	0.35	< 0.005	0.09	0.09	—	394	394	0.02	0.02	1.02	400
Strip Mall	1.93	1.71	18.7	0.04	0.03	3.98	4.01	0.03	1.01	1.04	—	4,524	4,524	0.17	0.18	11.8	4,592
High Turnover (Sit Down Restaurant)	10.3	9.11	99.6	0.24	0.15	21.2	21.4	0.14	5.39	5.53	—	24,122	24,122	0.92	0.93	62.7	24,486
Condo/Townhouse	1.17	1.07	11.8	0.03	0.02	2.52	2.54	0.02	0.64	0.66	—	2,866	2,866	0.11	0.11	7.46	2,908
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.56	0.51	5.61	0.01	0.01	1.20	1.21	0.01	0.31	0.31	—	1,366	1,366	0.05	0.05	3.56	1,387
Total	14.5	12.8	141	0.33	0.22	29.9	30.2	0.20	7.61	7.81	—	34,052	34,052	1.30	1.32	88.6	34,565
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.30	0.35	2.68	0.01	< 0.005	0.69	0.69	< 0.005	0.17	0.18	—	713	713	0.03	0.03	0.05	724
Library	0.15	0.17	1.35	< 0.005	< 0.005	0.35	0.35	< 0.005	0.09	0.09	—	360	360	0.02	0.02	0.03	365
Strip Mall	1.75	2.01	15.5	0.04	0.03	3.98	4.01	0.03	1.01	1.04	—	4,131	4,131	0.19	0.19	0.31	4,193
High Turnover (Sit Down Restaurant)	9.33	10.7	82.8	0.22	0.15	21.2	21.4	0.14	5.39	5.53	—	22,029	22,029	1.02	1.02	1.63	22,360
Condo/Townhouse	1.06	1.26	9.71	0.03	0.02	2.52	2.54	0.02	0.64	0.66	—	2,617	2,617	0.12	0.12	0.19	2,656

City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.51	0.60	4.63	0.01	0.01	1.20	1.21	0.01	0.31	0.31	—	1,248	1,248	0.06	0.06	0.09	1,266
Total	13.1	15.1	117	0.30	0.22	29.9	30.2	0.20	7.61	7.81	—	31,097	31,097	1.44	1.44	2.30	31,564
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.06	0.06	0.49	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.03	—	120	120	0.01	0.01	0.15	122
Library	0.03	0.03	0.25	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	60.7	60.7	< 0.005	< 0.005	0.07	61.7
Strip Mall	0.32	0.34	2.82	0.01	0.01	0.73	0.73	< 0.005	0.18	0.19	—	697	697	0.03	0.03	0.84	708
High Turnover (Sit Down Restaurant)	1.50	1.19	9.69	0.02	0.02	2.15	2.17	0.02	0.55	0.56	—	2,101	2,101	0.12	0.10	2.49	2,138
Condo/Townhouse	0.19	0.21	1.77	< 0.005	< 0.005	0.46	0.46	< 0.005	0.12	0.12	—	442	442	0.02	0.02	0.53	448
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	0.09	0.10	0.84	< 0.005	< 0.005	0.22	0.22	< 0.005	0.06	0.06	—	211	211	0.01	0.01	0.25	214
Total	2.19	1.94	15.9	0.04	0.03	3.75	3.77	0.03	0.95	0.98	—	3,632	3,632	0.18	0.17	4.34	3,692

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	772	772	0.03	< 0.005	—	774
Library	—	—	—	—	—	—	—	—	—	—	—	170	170	0.01	< 0.005	—	170
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,025	1,025	0.04	< 0.005	—	1,027
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	317	317	0.01	< 0.005	—	317
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	575	575	0.02	< 0.005	—	576
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	376	376	0.01	< 0.005	—	377
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	428	428	0.01	< 0.005	—	428
Total	—	—	—	—	—	—	—	—	—	—	—	3,662	3,662	0.13	0.02	—	3,671
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	772	772	0.03	< 0.005	—	774
Library	—	—	—	—	—	—	—	—	—	—	—	170	170	0.01	< 0.005	—	170

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,025	1,025	0.04	< 0.005	—	1,027
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	317	317	0.01	< 0.005	—	317
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	575	575	0.02	< 0.005	—	576
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	376	376	0.01	< 0.005	—	377
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	428	428	0.01	< 0.005	—	428
Total	—	—	—	—	—	—	—	—	—	—	—	3,662	3,662	0.13	0.02	—	3,671
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	128	128	< 0.005	< 0.005	—	128
Library	—	—	—	—	—	—	—	—	—	—	—	28.1	28.1	< 0.005	< 0.005	—	28.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	170	170	0.01	< 0.005	—	170
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	52.4	52.4	< 0.005	< 0.005	—	52.5
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	95.2	95.2	< 0.005	< 0.005	—	95.4
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	62.3	62.3	< 0.005	< 0.005	—	62.4

Apartment Mid Rise	—	—	—	—	—	—	—	—	—	—	—	70.8	70.8	< 0.005	< 0.005	—	70.9
Total	—	—	—	—	—	—	—	—	—	—	—	606	606	0.02	< 0.005	—	608

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	772	772	0.03	< 0.005	—	774
Library	—	—	—	—	—	—	—	—	—	—	—	170	170	0.01	< 0.005	—	170
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,025	1,025	0.04	< 0.005	—	1,027
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	317	317	0.01	< 0.005	—	317
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	575	575	0.02	< 0.005	—	576
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	376	376	0.01	< 0.005	—	377
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	428	428	0.01	< 0.005	—	428
Total	—	—	—	—	—	—	—	—	—	—	—	3,662	3,662	0.13	0.02	—	3,671
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	772	772	0.03	< 0.005	—	774
Library	—	—	—	—	—	—	—	—	—	—	—	170	170	0.01	< 0.005	—	170
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1,025	1,025	0.04	< 0.005	—	1,027
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	317	317	0.01	< 0.005	—	317
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	575	575	0.02	< 0.005	—	576
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	376	376	0.01	< 0.005	—	377
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	428	428	0.01	< 0.005	—	428
Total	—	—	—	—	—	—	—	—	—	—	—	3,662	3,662	0.13	0.02	—	3,671
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	128	128	< 0.005	< 0.005	—	128
Library	—	—	—	—	—	—	—	—	—	—	—	28.1	28.1	< 0.005	< 0.005	—	28.2
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	170	170	0.01	< 0.005	—	170
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	52.4	52.4	< 0.005	< 0.005	—	52.5
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	95.2	95.2	< 0.005	< 0.005	—	95.4
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Unenclos Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	62.3	62.3	< 0.005	< 0.005	—	62.4
Apartmen ts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	70.8	70.8	< 0.005	< 0.005	—	70.9
Total	—	—	—	—	—	—	—	—	—	—	—	606	606	0.02	< 0.005	—	608

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restauran t)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/To wnhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclos ed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Strip Mall	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Condo/Townhouse	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	5.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.52	0.16	18.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	66.5	66.5	< 0.005	< 0.005	—	66.7
Total	8.76	0.16	18.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.5	66.5	< 0.005	< 0.005	—	66.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.24	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.31	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.54	7.54	< 0.005	< 0.005	—	7.57
Total	1.45	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	7.54	7.54	< 0.005	< 0.005	—	7.57

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.52	0.16	18.6	< 0.005	0.02	—	0.02	0.02	—	0.02	—	66.5	66.5	< 0.005	< 0.005	—	66.7
Total	8.76	0.16	18.6	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	66.5	66.5	< 0.005	< 0.005	—	66.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	5.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.24	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consumer Products	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.31	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.54	7.54	< 0.005	< 0.005	—	7.57
Total	1.45	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	7.54	7.54	< 0.005	< 0.005	—	7.57

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	8.04	10.5	18.5	0.03	0.02	—	24.4
Library	—	—	—	—	—	—	—	—	—	—	1.00	1.30	2.31	< 0.005	< 0.005	—	3.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.9	18.0	31.8	0.05	0.03	—	42.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	4.86	6.32	11.2	0.02	0.01	—	14.8
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
City Park	—	—	—	—	—	—	—	—	—	—	0.00	5.14	5.14	< 0.005	< 0.005	—	5.15

Unenclosed	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
Total	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	8.04	10.5	18.5	0.03	0.02	—	24.4
Library	—	—	—	—	—	—	—	—	—	—	1.00	1.30	2.31	< 0.005	< 0.005	—	3.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.9	18.0	31.8	0.05	0.03	—	42.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	4.86	6.32	11.2	0.02	0.01	—	14.8
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
City Park	—	—	—	—	—	—	—	—	—	—	0.00	5.14	5.14	< 0.005	< 0.005	—	5.15
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
Total	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	1.33	1.73	3.06	< 0.005	< 0.005	—	4.05
Library	—	—	—	—	—	—	—	—	—	—	0.17	0.22	0.38	< 0.005	< 0.005	—	0.50

Strip Mall	—	—	—	—	—	—	—	—	—	—	2.29	2.98	5.27	0.01	0.01	—	6.97
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	0.81	1.05	1.85	< 0.005	< 0.005	—	2.45
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	0.75	0.97	1.72	< 0.005	< 0.005	—	2.27
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.85	0.85	< 0.005	< 0.005	—	0.85
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	0.75	0.97	1.72	< 0.005	< 0.005	—	2.27
Total	—	—	—	—	—	—	—	—	—	—	6.09	8.77	14.9	0.02	0.01	—	19.4

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	8.04	10.5	18.5	0.03	0.02	—	24.4
Library	—	—	—	—	—	—	—	—	—	—	1.00	1.30	2.31	< 0.005	< 0.005	—	3.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.9	18.0	31.8	0.05	0.03	—	42.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	4.86	6.32	11.2	0.02	0.01	—	14.8

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
City Park	—	—	—	—	—	—	—	—	—	—	0.00	5.14	5.14	< 0.005	< 0.005	—	5.15
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
Total	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	8.04	10.5	18.5	0.03	0.02	—	24.4
Library	—	—	—	—	—	—	—	—	—	—	1.00	1.30	2.31	< 0.005	< 0.005	—	3.05
Strip Mall	—	—	—	—	—	—	—	—	—	—	13.9	18.0	31.8	0.05	0.03	—	42.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	4.86	6.32	11.2	0.02	0.01	—	14.8
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7
City Park	—	—	—	—	—	—	—	—	—	—	0.00	5.14	5.14	< 0.005	< 0.005	—	5.15
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	4.52	5.87	10.4	0.02	0.01	—	13.7

Total	—	—	—	—	—	—	—	—	—	—	36.8	53.0	89.8	0.13	0.08	—	117
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	1.33	1.73	3.06	< 0.005	< 0.005	—	4.05
Library	—	—	—	—	—	—	—	—	—	—	0.17	0.22	0.38	< 0.005	< 0.005	—	0.50
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.29	2.98	5.27	0.01	0.01	—	6.97
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	0.81	1.05	1.85	< 0.005	< 0.005	—	2.45
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	0.75	0.97	1.72	< 0.005	< 0.005	—	2.27
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.85	0.85	< 0.005	< 0.005	—	0.85
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	0.75	0.97	1.72	< 0.005	< 0.005	—	2.27
Total	—	—	—	—	—	—	—	—	—	—	6.09	8.77	14.9	0.02	0.01	—	19.4

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	—	611
Library	—	—	—	—	—	—	—	—	—	—	7.44	0.00	7.44	0.74	0.00	—	26.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	49.5	0.00	49.5	4.95	0.00	—	173
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	48.1	0.00	48.1	4.81	0.00	—	168
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
City Park	—	—	—	—	—	—	—	—	—	—	0.12	0.00	0.12	0.01	0.00	—	0.41
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Total	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	—	611
Library	—	—	—	—	—	—	—	—	—	—	7.44	0.00	7.44	0.74	0.00	—	26.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	49.5	0.00	49.5	4.95	0.00	—	173
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	48.1	0.00	48.1	4.81	0.00	—	168
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7

City Park	—	—	—	—	—	—	—	—	—	—	0.12	0.00	0.12	0.01	0.00	—	0.41
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Total	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Library	—	—	—	—	—	—	—	—	—	—	1.23	0.00	1.23	0.12	0.00	—	4.31
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.20	0.00	8.20	0.82	0.00	—	28.7
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	7.96	0.00	7.96	0.80	0.00	—	27.9
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	3.96	0.00	3.96	0.40	0.00	—	13.9
City Park	—	—	—	—	—	—	—	—	—	—	0.02	0.00	0.02	< 0.005	0.00	—	0.07
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	3.96	0.00	3.96	0.40	0.00	—	13.9
Total	—	—	—	—	—	—	—	—	—	—	54.2	0.00	54.2	5.42	0.00	—	190

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	—	611
Library	—	—	—	—	—	—	—	—	—	—	7.44	0.00	7.44	0.74	0.00	—	26.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	49.5	0.00	49.5	4.95	0.00	—	173
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	48.1	0.00	48.1	4.81	0.00	—	168
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
City Park	—	—	—	—	—	—	—	—	—	—	0.12	0.00	0.12	0.01	0.00	—	0.41
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Total	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	175	0.00	175	17.5	0.00	—	611
Library	—	—	—	—	—	—	—	—	—	—	7.44	0.00	7.44	0.74	0.00	—	26.0
Strip Mall	—	—	—	—	—	—	—	—	—	—	49.5	0.00	49.5	4.95	0.00	—	173

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	48.1	0.00	48.1	4.81	0.00	—	168
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
City Park	—	—	—	—	—	—	—	—	—	—	0.12	0.00	0.12	0.01	0.00	—	0.41
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	23.9	0.00	23.9	2.39	0.00	—	83.7
Total	—	—	—	—	—	—	—	—	—	—	328	0.00	328	32.7	0.00	—	1,146
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	28.9	0.00	28.9	2.89	0.00	—	101
Library	—	—	—	—	—	—	—	—	—	—	1.23	0.00	1.23	0.12	0.00	—	4.31
Strip Mall	—	—	—	—	—	—	—	—	—	—	8.20	0.00	8.20	0.82	0.00	—	28.7
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	7.96	0.00	7.96	0.80	0.00	—	27.9
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	3.96	0.00	3.96	0.40	0.00	—	13.9
City Park	—	—	—	—	—	—	—	—	—	—	0.02	0.00	0.02	< 0.005	0.00	—	0.07
Unenclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Apartments	—	—	—	—	—	—	—	—	—	—	3.96	0.00	3.96	0.40	0.00	—	13.9
Total	—	—	—	—	—	—	—	—	—	—	54.2	0.00	54.2	5.42	0.00	—	190

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.77	0.77
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.77	0.77
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.94	1.94
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.31	2.31

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.77	0.77
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.77	0.77
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.54	0.54

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.46	0.46
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.41	0.41
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.0	14.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.94	1.94
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.31	2.31

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/2/2024	5/20/2024	5.00	100	—
Site Preparation	Site Preparation	5/21/2024	10/7/2024	5.00	100	—
Grading	Grading	10/8/2024	2/24/2025	5.00	100	—
Building Construction	Building Construction	2/25/2025	12/25/2028	5.00	1,000	—
Paving	Paving	2/25/2025	12/25/2028	5.00	1,000	—
Architectural Coating	Architectural Coating	2/25/2025	12/25/2028	5.00	1,000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	14.3	LDA,LDT1,LDT2
Demolition	Vendor	—	8.80	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT

Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	188	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	57.1	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	37.6	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	14.3	LDA,LDT1,LDT2
Demolition	Vendor	—	8.80	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	188	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	57.1	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	37.6	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	245,430	81,810	212,293	70,255	3,058

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	1.17

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Medical Office Building	0.00	0%

Library	0.00	0%
Strip Mall	0.00	0%
Strip Mall	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Condo/Townhouse	—	0%
City Park	0.00	0%
Unenclosed Parking with Elevator	1.17	100%
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	375	0.01	< 0.005
2025	0.00	375	0.01	< 0.005
2026	0.00	375	0.01	< 0.005
2027	0.00	375	0.01	< 0.005
2028	0.00	375	0.01	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Medical Office Building	99.0	99.0	99.0	36,135	1,138	1,138	1,138	415,335
Library	49.9	49.9	49.9	18,232	574	574	574	209,555
Strip Mall	116	116	116	42,285	1,332	1,332	1,332	486,025
Strip Mall	458	458	458	167,097	5,262	5,262	5,262	1,920,608

High Turnover (Sit Down Restaurant)	3,059	3,059	3,059	1,116,517	13,304	35,159	35,159	7,135,201
Condo/Townhouse	343	343	343	125,268	4,181	4,181	4,181	1,526,145
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	229	229	229	83,658	2,792	2,792	2,792	1,019,209

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Medical Office Building	84.2	84.2	84.2	30,738	968	968	968	353,305
Library	42.5	42.5	42.5	15,509	488	488	488	178,258
Strip Mall	98.5	98.5	98.5	35,970	1,133	1,133	1,133	413,438
Strip Mall	389	389	389	142,141	4,476	4,476	4,476	1,633,766
High Turnover (Sit Down Restaurant)	2,602	2,602	2,602	949,766	11,317	29,908	29,908	6,069,564
Condo/Townhouse	292	292	292	106,559	3,557	3,557	3,557	1,298,216
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	139	139	139	50,811	1,696	1,696	1,696	619,031

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)

Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	60
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	60
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0

Electric Fireplaces	0
No Fireplaces	60
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	60
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
245430	81,810	212,293	70,255	3,058

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Medical Office Building	752,082	375	0.0129	0.0017	0.00
Library	165,539	375	0.0129	0.0017	0.00
Strip Mall	399,221	375	0.0129	0.0017	0.00
Strip Mall	598,832	375	0.0129	0.0017	0.00
High Turnover (Sit Down Restaurant)	308,299	375	0.0129	0.0017	0.00
Condo/Townhouse	559,693	375	0.0129	0.0017	0.00
City Park	0.00	375	0.0129	0.0017	0.00
Unenclosed Parking with Elevator	366,340	375	0.0129	0.0017	0.00
Apartments Mid Rise	416,315	375	0.0129	0.0017	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Medical Office Building	752,082	375	0.0129	0.0017	0.00
Library	165,539	375	0.0129	0.0017	0.00

Strip Mall	399,221	375	0.0129	0.0017	0.00
Strip Mall	598,832	375	0.0129	0.0017	0.00
High Turnover (Sit Down Restaurant)	308,299	375	0.0129	0.0017	0.00
Condo/Townhouse	559,693	375	0.0129	0.0017	0.00
City Park	0.00	375	0.0129	0.0017	0.00
Unenclosed Parking with Elevator	366,340	375	0.0129	0.0017	0.00
Apartments Mid Rise	416,315	375	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Medical Office Building	3,764,416	0.00
Library	469,334	0.00
Strip Mall	2,592,538	0.00
Strip Mall	3,888,807	0.00
High Turnover (Sit Down Restaurant)	2,276,503	0.00
Condo/Townhouse	2,115,540	0.00
City Park	0.00	3,103,632
Unenclosed Parking with Elevator	0.00	0.00
Apartments Mid Rise	2,115,540	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Medical Office Building	3,764,416	0.00
Library	469,334	0.00

Strip Mall	2,592,538	0.00
Strip Mall	3,888,807	0.00
High Turnover (Sit Down Restaurant)	2,276,503	0.00
Condo/Townhouse	2,115,540	0.00
City Park	0.00	3,103,632
Unenclosed Parking with Elevator	0.00	0.00
Apartments Mid Rise	2,115,540	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Medical Office Building	324	—
Library	13.8	—
Strip Mall	36.8	—
Strip Mall	55.1	—
High Turnover (Sit Down Restaurant)	89.2	—
Condo/Townhouse	44.4	—
City Park	0.21	—
Unenclosed Parking with Elevator	0.00	—
Apartments Mid Rise	44.4	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Medical Office Building	324	—
Library	13.8	—
Strip Mall	36.8	—

Strip Mall	55.1	—
High Turnover (Sit Down Restaurant)	89.2	—
Condo/Townhouse	44.4	—
City Park	0.21	—
Unenclosed Parking with Elevator	0.00	—
Apartments Mid Rise	44.4	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Library	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Library	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Library	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Library	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00

Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Library	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Library	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Library	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Library	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.1	annual days of extreme heat
Extreme Precipitation	5.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A

Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	1	1	3
Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	59.7
AQ-PM	36.3
AQ-DPM	68.6
Drinking Water	98.5
Lead Risk Housing	91.7
Pesticides	2.52
Toxic Releases	18.4
Traffic	12.1
Effect Indicators	—
CleanUp Sites	79.7
Groundwater	59.6
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	51.2
Solid Waste	0.00
Sensitive Population	—
Asthma	78.2
Cardio-vascular	81.5
Low Birth Weights	74.9
Socioeconomic Factor Indicators	—
Education	45.2
Housing	30.2
Linguistic	30.0
Poverty	74.5

Unemployment	51.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	36.86641858
Employed	45.74618247
Median HI	40.57487489
Education	—
Bachelor's or higher	47.15770563
High school enrollment	6.377518286
Preschool enrollment	42.38419094
Transportation	—
Auto Access	51.48209932
Active commuting	63.67252663
Social	—
2-parent households	25.85653792
Voting	59.43795714
Neighborhood	—
Alcohol availability	57.35916848
Park access	81.35506224
Retail density	53.20159117
Supermarket access	5.82574105
Tree canopy	92.68574362
Housing	—
Homeownership	50.21172847

Housing habitability	50.07057616
Low-inc homeowner severe housing cost burden	68.95932247
Low-inc renter severe housing cost burden	18.9272424
Uncrowded housing	40.60053895
Health Outcomes	—
Insured adults	24.03438984
Arthritis	0.0
Asthma ER Admissions	27.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	11.1
Cognitively Disabled	58.3
Physically Disabled	22.7
Heart Attack ER Admissions	18.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	94.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0

No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	40.5
Elderly	55.7
English Speaking	48.0
Foreign-born	38.7
Outdoor Workers	13.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	60.9
Traffic Density	38.8
Traffic Access	57.1
Other Indices	—
Hardship	62.7
Other Decision Support	—
2016 Voting	34.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	69.0
Healthy Places Index Score for Project Location (b)	36.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Square footage, acreage, and land uses depicted in the Project Description were adapted to CalEEMod. The designations are shown below: Medical Office Building = Health and Wellness Clinic Library = Events and Meeting Space Strip Mall = Arts Center Strip Mall = Community Commercial Building High Turnover Restaurant = Commercial Retail Condo/Townhouse = Townhome Housing Apartments Mid Rise = Affordable Multifamily housing City Park = Public Open Space Unenclosed Parking with Elevator = Parking Structure
Construction: Construction Phases	Construction occurs from 2024-2029 per the PD
Construction: Dust From Material Movement	no information per the PD
Construction: Demolition	no information per the PD
Operations: Vehicle Data	Trip Rates adjusted from Nelson/Nygaard 2023 to reflect higher square footage of buildings
Operations: Energy Use	No natural gas per SMAQMD BMP 1

Appendices

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Appendix 5.2-1 Biological Resource Assessment

Biological Resources Assessment for the Mills Crossing Project

Sacramento County, California

Prepared For:

PlaceWorks, Inc.

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

March 16, 2023

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
BCC	Birds of Conservation Concern
BRA	Biological Resources Assessment
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct Population Segment
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
MBTA	Migratory Bird Treaty Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
Project	Mills Crossing Project
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Application
SSC	Species of Special Concern
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group

1.0 INTRODUCTION

At the request of PlaceWorks, Inc., ECORP Consulting, Inc. conducted a Biological Resources Assessment (BRA) for the proposed Mills Crossing Project (Project) located in Sacramento County, California. The purpose of the assessment was to collect information on the biological resources present or with the potential to occur in the Study Area and to assess any potential biological constraints related to Project activities.

1.1 Project Area Location

The approximately 9.77-acre Study Area is located in the city of Rancho Cordova, Sacramento County, California. The Study Area corresponds to a portion of the unsectioned Rancho de los Americanos land grant within the "Carmichael, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1961, photorevised 1980; Figure 1). The approximate center of the Project Area is located at latitude 38.585407° and longitude -121.312575° within the Lower American River Watershed (Hydrologic Unit Code #18020111; Natural Resources Conservation Service, et al. 2016).

1.2 Project Description

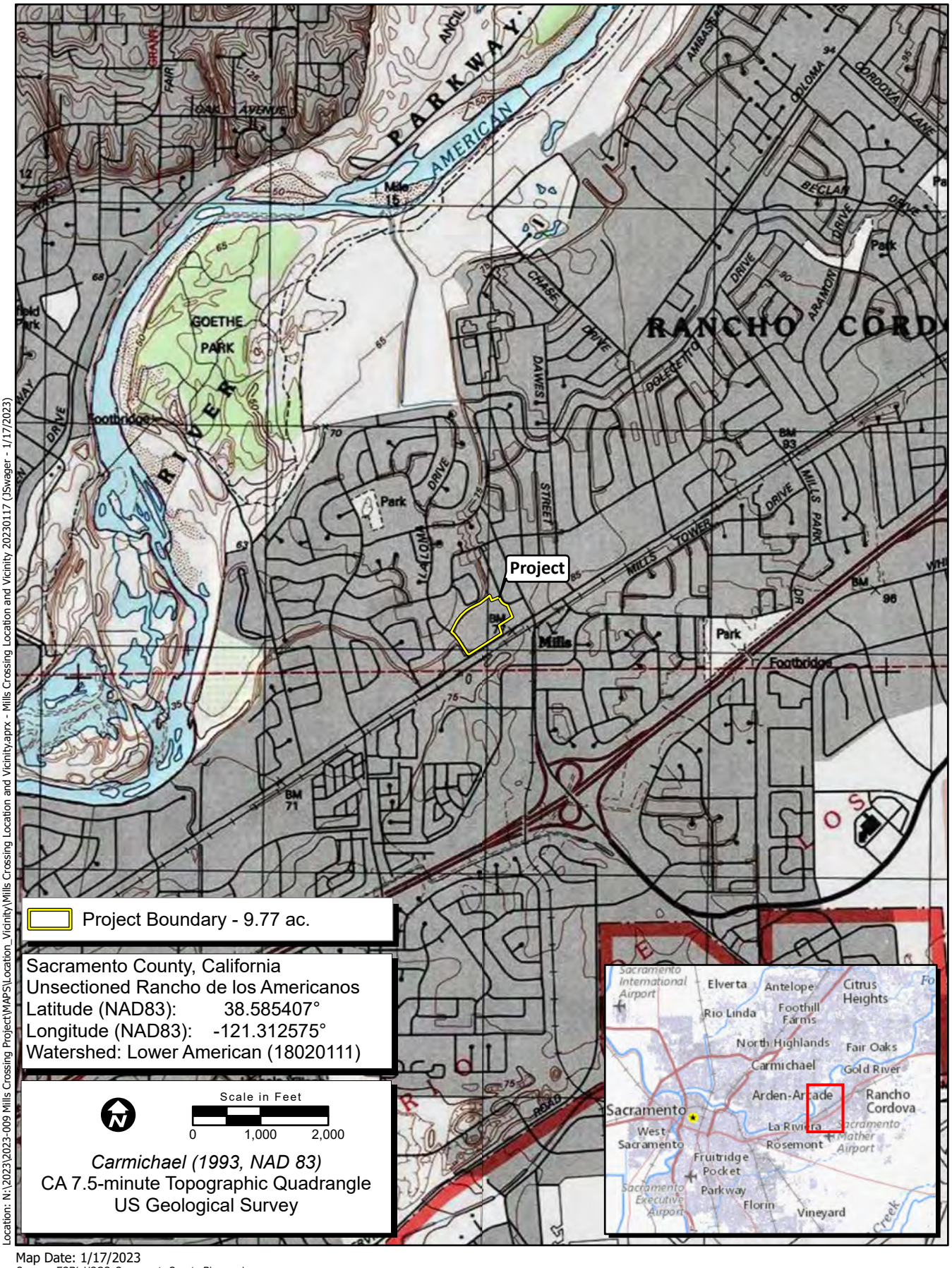
The proposed Project entails the construction of a community center with a health and wellness center, parking structure, muti-family housing, single family housing, arts center and theater, and community events and meeting center.

1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species or their habitats, and sensitive biological resources such as wetlands within the Study Area. This assessment does not include determinate presence-absence field surveys for special-status species or an Aquatic Resources Delineation meeting U.S. Army Corps of Engineers (USACE) standards. The conclusions and recommendations presented in this report are based upon a review of the available literature and the field assessment.

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the California Environmental Quality Act (CEQA) Guidelines;
- are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW);



Location: N:\2023\2023-009 Mills Crossing Project\MAPS\Location_Vicinity\Mills Crossing Location and Vicinity.aprx - Mills Crossing Location and Vicinity 20230117 (JSwager - 1/17/2023)

Map Date: 1/17/2023
Sources: ESRI, USGS, Sacramento County, Placeworks

Figure 1. Study Area Location and Vicinity

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2023-009 Mills Crossing Project

- are included on the CDFW Watch List (WL);
- are birds identified as Birds of Conservation Concern (BCC) by the U.S. Fish and Wildlife Service (USFWS 2022);
- are plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1 and 2), plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA; California Fish and Game Code, Section 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, Sections 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above-listed groups were considered for this assessment. Other species without special status that are sometimes found in database or literature searches were not included in this analysis.

2.0 REGULATORY SETTING

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by the USFWS and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits the taking of listed wildlife, where take is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan is developed.

2.1.2 Critical Habitat

Critical Habitat is defined in Section 3 of the ESA as (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied

by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features that are essential to the conservation of the species. Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary physical and biological features). Primary physical and biological features are features essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

- Space for individual and population growth and for normal behavior;
- Food, water, air, light, minerals, or other nutritional or physiological requirements;
- Cover or shelter;
- Sites for breeding, reproduction, or rearing (or development) of offspring; or
- Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.4 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the U.S." without a permit from the USACE. The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b).

Substantial impacts to wetlands (over 0.5 acre of impact) may require an individual permit. Projects that only minimally affect wetlands (less than 0.5 acre of impact) may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is

required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

2.2 State and Local Regulations

2.2.1 California Fish and Game Code

2.2.1.1 California Endangered Species Act

The California ESA (California Fish and Game Code Sections 2050-2116) generally parallels the main provisions of the ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called *candidates* by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened or candidate species or result in destruction or adverse modification of essential habitat.

2.2.1.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code Sections 4700 for mammals, 3511 for birds, 5050 for reptiles and amphibians, and 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFW prohibits any state agency from issuing incidental take permits for fully protected species. The CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.1.3 Native Plant Protection Act

The NPPA of 1977 was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW and provided in California Fish and Game Code Sections 1900-1913. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.1.4 Protected Birds

Sections 3800, 3513, and 3503 of the California Fish and Game Code specifically protect birds. Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the commission or a mitigation plan approved by CDFW for mining operations. Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Additionally, Subsection 3503.5 prohibits the take, possession, or destruction of any birds and their nests in the orders Strigiformes (owls) or Falconiformes (hawks and eagles). These provisions, along with the federal MBTA, serve to protect nesting native birds.

2.2.1.5 California Lake or Streambed Alteration Notification/Agreement

Section 1602 of the California Fish and Game Code requires that a Streambed Alteration Application (SAA) be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits proposed measures to protect affected fish and wildlife resources to the applicant. The SAA is the final proposal mutually agreed upon by CDFW and the Applicant. Projects that require an SAA often also require a permit from the USACE under Section 404 of the CWA.

2.2.2 Species of Special Concern

The CDFW defines SSC as a species, subspecies, or distinct population of an animal native to California that are not legally protected under ESA, the California ESA or the California Fish and Game Code, but currently satisfy one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role;
- The species is listed as federally (but not state) threatened or endangered, or meets the state definition of threatened or endangered but has not formally been listed;
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status;
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with habitats that are threatened. Project-related impacts to SSC or their habitats may be considered "significant" under CEQA.

2.2.3 Watch List Species

The CDFW maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Depending on the policy of the lead agency, projects that result in substantial impacts to species on the WL may be considered significant under CEQA.

2.2.4 California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2023), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, nongovernmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (more than 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Factors such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or

different protection (CNPS 2023a). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2 are typically considered significant under CEQA Guidelines Section 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

2.2.5 Sensitive Natural Communities

The CDFW maintains the California Natural Community List (CDFW 2023a), which provides a list of vegetation alliances, associations, and special stands as defined in *A Manual of California Vegetation Online* (CNPS 2022) along with their respective state and global rarity ranks. Natural communities with a state rarity rank of S1, S2, or S3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

2.2.6 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Stormwater Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB also regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" [Water Code 13260(a)]. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

2.2.7 California Environmental Quality Act

In accordance with CEQA Guidelines Section 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria include definitions similar to definitions used in the federal ESA, California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on a species that has not been listed under the federal ESA, California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW, and plants identified by the CNPS as rare, threatened, or endangered, may meet the CEQA definition of rare or endangered.

2.2.7.1 California Environmental Quality Act Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant. Assessment of "impact significance" to populations of nonlisted species (e.g., SSC) usually considers the

proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant under CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

2.2.8 Rancho Cordova General Plan

The Natural Resources Element of the Rancho Cordova General Plan (City of Rancho Cordova 2006) includes goals and policies for protection of natural resources. The following goals are relevant to biological resources:

- Goal NR.1: Protect and preserve diverse wildlife and plant habitats, including habitat for special status species.
- Goal NR.2: Preserve the City's rich and diverse natural wetlands.
- Goal NR.3: Preserve and maintain creek corridors and wetland preserves.
- Goal NR.4: Encourage the planting a preservation of high-quality trees throughout the City.

2.2.9 Rancho Cordova - Preservation and Protection of Private Trees (Chapter 19.12)

It is the intent of this chapter within the Rancho Cordova Municipal Code (2022) to establish regulations for the protection, removal, and preservation of landmark trees and protected trees, as defined herein, within the city in order to retain as many trees as possible consistent with the purpose hereof and the reasonable economic enjoyment of all property in the city. For the purpose of this chapter, "protected tree" means the following:

- Native oak – Quercus lobata, valley oak; Quercus wislizenii, interior live oak; Quercus douglasii, blue oak; or Quercus morehus, oracle oak – having a trunk diameter of at least six inches or greater; or
- Any tree species other than a native oak having a trunk diameter of at least 12 inches or greater on nonresidential property; or

- Any tree species other than a native oak having a trunk diameter of at least 24 inches or greater on residential property; or
- Any tree planted as a requirement tree for site development, tree permit condition, landscape plan removal replacement, or other designated condition by the public works director or planning director.
- "Protected tree" does not include any trees for sale within the city sold by a nursery.

3.0 METHODS

3.1 Literature Review

The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Study Area (Appendix A).

- The CDFW CNDDB for the "Carmichael, California" 7.5-minute USGS quadrangle and the eight surrounding USGS quadrangles (CDFW 2023b);
- The USFWS Information, Planning, and Consultation System Resource Report List for the Study Area (USFWS 2023);
- The CNPS Rare Plant Inventory for the "Carmichael, California" 7.5-minute USGS quadrangle and the eight surrounding quadrangles (CNPS 2023a); and
- The NMFS species list for the "Carmichael, California" 7.5-minute quadrangle.

Aerial imagery and site or species-specific background information, as cited throughout this document, were reviewed to determine the potential for occurrence of sensitive biological resources in the Study Area.

3.2 Site Surveys

3.2.1 Reconnaissance Site Survey

ECORP biologist Rachel Bennett and Keith Kwan conducted a reconnaissance-level field survey for the Study Area on February 7, 2023. The Study Area was surveyed on foot using a georeferenced digital map and aerial imagery to ensure total site coverage. Special attention was given to identifying areas with the potential to support special-status species, aquatic resources, or sensitive habitats. The following biological resource information was collected:

- Location and extent of potential aquatic resources;
- Vegetation communities and their distribution within the Study Area;
- Plant and wildlife species directly observed onsite;
- Burrows or other special habitat features; and

- Representative photographs (Appendix B).

3.3 EVALUATION OF SPECIAL-STATUS SPECIES

Each of the special-status species identified during the literature review (Appendix A) was evaluated for its potential to occur in the Study Area. Species were assessed based on the following criteria:

- **Present** – Species was observed during field surveys or is known to occur within the Study Area based on documented occurrences within the CNDDB or other literature.
- **Potential to Occur** – Habitat (including soil and elevation requirements) for the species occurs within the Study Area based on field assessment and literature research, and the species is known to occur in the vicinity of the Study Area.
- **Low Potential to Occur** – Marginal or limited amounts of habitat occur, or the species is not known to occur in the vicinity of the Study Area based on CNDDB records and other available documentation.
- **Absent** – No suitable habitat (including soils and elevation requirements) or the species is not known to occur in the vicinity of the Study Area based on CNDDB records and other documentation.

4.0 RESULTS

4.1 Site Characteristics and Land Use

The Study Area is located on leveled flat terrain with elevations ranging from 77 to 82 feet above mean sea level. Historically, the site was developed and had several structures and associated parking lots until 2019. The largest structure, which occupied a majority of the site was demolished between 2007-2009. The Study Area currently includes the previously developed area and surrounding ruderal grassland. There are currently no buildings onsite, but the building foundations and paved areas remain. A few scattered trees are found in weedy patches around the perimeter of the Study Area.

4.2 Soils

According to the Web Soil Survey (Natural Resources Conservation Service 2023), two map unit, or soil type, has been mapped within the Study Area (Figure 2):

- 102 – Americanos-Urban Land complex, 0 to 2 percent slopes
- 227 - Urban Land



Map Features

Approximate Project Boundary - 9.77 ac.

NRCS Soil Types

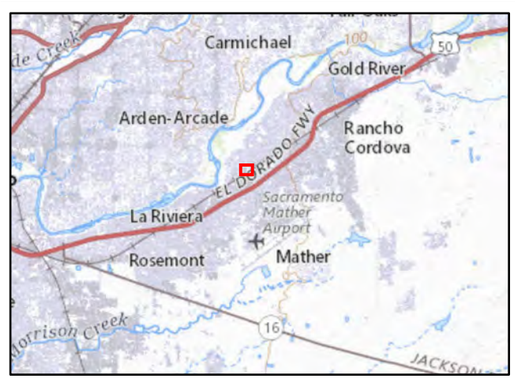
Series Number - Series Name

102 - Americanos-Urban land complex, 0 to 2 percent slopes

227 - Urban land

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Sacramento County, CA

Sources: Esri Imagery, Vivid Advanced, MAXAR (4/26/2022)



Location: N:\2023\2023-009 Mills Crossing Project\MAPS\Soils_and_Geology\Mills Crossing Soils aprx - Mills Crossing Soils 20230126 (kturnquist - 1/26/2023)

Map Date: 1/26/2023

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Scale in Feet
0 150

Figure 2. Natural Resources Conservation Service Soil Types
2023-009 Mills Crossing

4.3 Land Cover Types and Vegetation Communities

Land cover types and vegetation communities found within the Study Area include developed/disturbed, and ruderal grassland. These are described in further detail below.

4.3.1 Developed/Disturbed

The developed/disturbed areas make up a significant portion of the Study Area. These areas have the concrete foundations and asphalt parking areas and road with small patches of weedy vegetation, which were probably the landscaped areas.

4.3.2 Ruderal Grassland

The ruderal grassland is found within the disturbed areas, and along the eastern portion of the Study Area. These weedy areas include wild oats (*Avena* sp.), mustard (*Brassica* sp.), radish (*Raphanus* sp.), filaree (E*rodium* spp.), *yellow star-thistle* (*Centaurea solstitialis*), prickly lettuce (*Lactuca serriola*), vetch (Vicia sp.), cheeseweed (*Malva parvifolia*), cranesbill (*Geranium dissectum*, clover (*Trifolium* sp.), and groundsel (*Senecio vulgare)*. The eastern portion of the Study Area appears to have been mass graded but does not appear to have been developed, based on Google Earth aerial photographs.

4.4 Aquatic Resource Assessment

A preliminary aquatic resources assessment was conducted to identify potential Waters of the U.S./State within the Study Area concurrent with the reconnaissance-level field assessment. No aquatic resources were identified onsite and therefore there are no potential Waters of the U.S./State. Evaluation of Species Identified in the Literature Search

A list of the special-status plant and wildlife species identified in the literature search as potentially occurring within the Study Area is provided in Table 1. This table includes the listing status for each species, a brief habitat description, and a determination on the potential to occur in or near the Study Area. Following the table is a brief description of each species with potential to occur.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Plants						
Valley brodiaea (*Brodiaea rosea* ssp. *vallicola*)	–	–	4.2	Occurs in old alluvial terraces and silt, sandy, or gravelly soils in vernal pools and swales within valley and foothill grassland (35'–1,100').	April–May	Absent. No suitable habitat within the Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*)	–	–	4.2	Alkaline, vernally mesic areas, and seeps in valley and foothill grassland and vernal pools, sometimes found on roadsides (0'–330').	May–October	Absent. No suitable habitat within the Study Area.
Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*)	–	–	4.2	Chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts (245'–3,000').	May–July	Absent. No suitable habitat within the Study Area.
Peruvian dodder *(Cuscuta obtusiflora* var. *glandulosa*)	–	–	2B.2	Freshwater marshes and swamps (50'–920').	July–October	Absent. No suitable habitat within the Study Area.
Dwarf downingia (*Downingia pusilla*)	–	–	2B.2	Mesic areas in valley and foothill grassland, and vernal pools. Species has also been found in disturbed areas such as tire ruts and scraped depressions (CDFW 2023) (5'–1,460').	March–May	Absent. No suitable habitat within the Study Area.
Stinkbells (*Fritillaria agrestis*)	–	–	4.2	Clay and sometimes serpentinite soils in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland (35'–5,100').	March–June	Absent. No suitable habitat within the Study Area.
Boggs Lake hedge-hyssop (*Gratiola heterosepala*)	–	CE	1B.2	Marshes, swamps, lake margins, and vernal pools (35'–7,790').	April–August	Absent. No suitable habitat within the Study Area.
Hogwallow starfish (*Hesperevax caulescens*)	–	–	4.2	Sometimes alkaline in mesic areas with clay soil within valley and foothill grassland and	March–June	Absent. No suitable habitat within the Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				shallow vernal pools (0'–1,655').		
Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*)	–	–	1B.2	Marshes and freshwater swamps. Often in riprap on sides of levees (0'–395').	June–September	Absent. No suitable habitat within the Study Area.
Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*)	–	–	1B.2	Mesic areas in valley and foothill grassland. Species has an affinity for slight disturbance such as farmed fields (USFWS 2005) (100'–750').	March–May	Absent. No suitable habitat within the Study Area.
Alkali-sink goldfields (*Lasthenia chrysantha*)	–	–	1B.1	Alkaline vernal pools (0'–655').	February–April	Absent. No suitable habitat within the Study Area.
Legenere (*Legenere limosa*)	–	–	1B.1	Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (USFWS 2005) (5'–2,885').	April–June	Absent. No suitable habitat within the Study Area.
Heckard's pepper-grass (*Lepidium latipes* var. *heckardii)*	–	–	1B.2	Alkaline flats within valley and foothill grasslands (5'–655').	March–May	Absent. No suitable habitat within the Study Area.
Hoary navarretia (*Navarretia eriocephala*)	–	––	4.3	Vernally mesic areas in cismontane woodland and valley and foothill grassland (345'–1,310').	May–June	Absent. No suitable habitat within the Study Area.
Pincushion navarretia (*Navarretia myersii* ssp. *myersii*)	–	–	1B.1	Often acidic soils in vernal pools (65'–1,085').	April–May	Absent. No suitable habitat within the Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Slender Orcutt grass (*Orcuttia tenuis*)	FT	CE	1B.1	Vernal pools, often gravelly (115'–5,775').	May–September	Absent. No suitable habitat within the Study Area.
Sacramento Orcutt grass (*Orcuttia viscida*)	FE	CE	1B.1	Vernal pools (100'–330').	April–July	Absent. No suitable habitat within the Study Area.
Sanford's arrowhead (*Sagittaria sanfordii)*	–	–	1B.2	Shallow marshes and freshwater swamps (0'–2,135').	May–October	Absent. No suitable habitat within the Study Area.
Saline clover (*Trifolium hydrophilum*)	–	–	1B.2	Marshes and swamps, mesic and alkaline areas in valley and foothill grassland, and vernal pools (0'–985').	April–June	Absent. No suitable habitat within the Study Area.
Invertebrates						
Conservancy fairy shrimp (*Branchinecta lynchi*)	FE	–	–	Vernal pools/wetlands.	November-April	Absent. No suitable habitat within Study Area.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	–	–	Vernal pools/wetlands.	November-April	Absent. No suitable habitat within Study Area.
Crotch bumble bee *(Bombus crotchii)*	–	CC	–	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico.	March - September	Absent. No suitable habitat within Study Area.
Monarch butterfly *(Danaus plexippus)*	FC	–	–	Adult monarchs west of the Rocky Mountains typically overwinter in sheltered wooded groves of Monterey pine, Monterey cypress, and gum eucalyptus along coastal California, then disperse in spring throughout	Any season	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area						
Common Name (*Scientific Name*)	**Status**			**Habitat Description**	**Observation Period**	**Potential to Occur On-Site**
	ESA	**CESA**	**Other**			
				California, Nevada, Arizona, and parts of Oregon and Washington. Adults require milkweed and additional nectar sources during the breeding season. Larval caterpillars feed exclusively on milkweed.		
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	–	–	Elderberry shrubs.	Any season	Absent. No suitable habitat (Elderberry shrubs) within Study Area.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	–	–	Vernal pools/wetlands.	November-April	Absent. No suitable habitat within Study Area.
Fish						
Green sturgeon (Distinct Population Segment, [DPS]) (*Acipenser medirostris* pop. 1)	FT	–	SSC	Anadromous; undammed cold-water rivers having relatively deep pools with large substrates.	N/A	Absent. No suitable habitat within Study Area.
Delta smelt (*Hypomesus transpacificus*)	FT	CE	–	Sacramento-San Joaquin Delta.	N/A	Absent. No suitable habitat within Study Area.
River lamprey (*Lampetra ayresii*)	–	–	SSC	Spawning adults in clear gravel riffles of streams; feeding adults in estuaries and ocean. Ammocoetes in sandy and muddy pools of spawning streams.	N/A	Absent. No suitable habitat within Study Area.
Pacific lamprey (*Lampetra tridentata*)	–	–	SSC	Anadromous; undammed streams rivers, streams, and	N/A	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				creeks with gravel spawning substrates.		
Hardhead (*Mylopharodon conocephalus*)	–	–	SSC	Relatively undisturbed streams at low to mid elevations in the Sacramento-San Joaquin and Russian River drainages. In the San Joaquin River, scattered populations found in tributary streams, but only rarely in the valley reaches of the San Joaquin River.	N/A	Absent. No suitable habitat within Study Area.
Steelhead (CA Central Valley Evolutionarily Significant Unit [ESU]) (*Oncorhynchus mykiss*)	FT	–	–	Undammed rivers, streams, creeks	N/A	Absent. No suitable habitat within Study Area.
Chinook salmon (Central Valley fall/late fall-run ESU) (*Oncorhynchus tshawytscha*)	–	–	SSC	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems.	N/A	Absent. No suitable habitat within Study Area.
Chinook salmon (Central Valley spring-run ESU) (*Oncorhynchus tshawytscha*)	FT	CT	–	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems.	N/A	Absent. No suitable habitat within Study Area.
Chinook salmon (Sacramento River winter-run ESU) *(Oncorhynchus tshawytscha)*	FE	CE	–	Undammed reaches of the mainstem and tributaries to the Sacramento River downstream of Shasta Reservoir.	N/A	Absent. No suitable habitat within Study Area.
Sacramento splittail (*Pogonichthys macrolepidotus*)	–	–	SSC	San Francisco Bay estuary and Central Valley lakes and rivers. Spawns in upstream floodplains	N/A	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				and backwater sloughs.		
Longfin smelt (*Spirinchus thaleichthys*)	FC	CT	SSC	Freshwater and coastal estuaries.	N/A	Absent. No suitable habitat within Study Area.
Amphibians						
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	FT	CT	WL	Vernal pools, wetlands (breeding) and adjacent grassland or oak woodland; needs underground refuge (e.g., ground squirrel and/or gopher burrows). Largely terrestrial as adults.	March-May	Absent. No suitable habitat within Study Area.
Western spadefoot (*Spea hammondii*)	–	–	SSC	California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley.	March-May	Absent. No suitable habitat within Study Area.
Reptiles						
Northwestern pond turtle (*Actinemys marmorata*)	–	–	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April-September	Absent. No suitable habitat within Study Area.
Blainville's (Coast) horned lizard (*Phrynosoma blainvillii*)	–	–	SSC	Formerly a wide-spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Requires open areas	April-October	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				for basking, but with bushes or grass clumps for cover, patches of loamy soil or sand for burrowing and an abundance of ants (Stebbins and McGinnis 2012). In the northern Sacramento area, this species appears restricted to the foothills between 1000 to 3000 feet from Cameron Park (El Dorado County) north and west to Grass Valley and Nevada City.		
Giant garter snake (*Thamnophis gigas*)	FT	CT	–	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range.	April-October	Absent. No suitable habitat within Study Area.
Birds						
Western grebe *(Aechmophorus occidentalis)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Nests on freshwater lakes and marshes with open water bordered by emergent vegetation.	Nesting: June-August	Absent. No suitable habitat within Study Area.
Clark's grebe *(Aechmophorus clarkii)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large	Nesting: June-August	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				stretches of open water fringed with emergent vegetation.		
Yellow-billed cuckoo (*Coccyzus americanus*)	FT	CE	–	Breeds in California, Arizona, Utah, Colorado, and Wyoming. In California, they nest along the upper Sacramento River and the South Fork Kern River from Isabella Reservoir to Canebrake Ecological Reserve. Other known nesting locations include Feather River (Butte, Yuba, Sutter counties), Prado Flood Control Basin (San Bernardino and Riverside counties), Amargosa River and Owens Valley (Inyo County), Santa Clara River (Los Angeles County), Mojave River and Colorado River (San Bernardino County). Nests in riparian woodland. Winters in South America.	June 15-August 15	Absent. No suitable habitat within Study Area.
Black swift *(Cypseloides niger)*	–	–	BCC, SSC	In California, nests from Cascade-Sierra Nevada region south to Tulare and Mono counties; coastal ranges (Santa Cruz south to San Luis Obispo counties), San Gabriel, San Bernardino, and San Jacinto Mountains. Nests on ledges or shallow caves on steep rock faces,	Nesting: May-September	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				usually behind waterfalls. Winter range, unknown, but thought to be northern and western South America, and West Indies.		
Vaux's swift *(Chaetura vauxi)*	–	–	BCC, SSC	In California, breeds along the coastal zone from Del Norte County south to Santa Cruz County; Yosemite National Park, possibly Warner and Whites Mountains and Sequoia National Park Nest in late stage coniferous forests and deciduous forests mixed with coniferous. Winters from central Mexico to South America.	May-August	Absent. No suitable nesting habitat within Study Area.
Greater sandhill crane *(Antigone canadensis tabida)*	–	CT	CFP	Breeds in NE California, Nevada, Oregon, Washington, and BC, Canada; winters from CA to Florida. In winter, they forage in burned grasslands, pastures, and feed on waste grain in a variety of agricultural settings (i.e., corn, wheat, milo, rice, oats, and barley), tilled fields, recently planted fields, alfalfa fields, row crops and burned rice fields.	March-August (breeding); September-March (wintering)	Absent. No suitable habitat within Study Area.
Marbled godwit (*Limosa fedoa*)	–	–	BCC	Nests in Montana, North and South Dakota, Minnesota,	Migrant/ Wintering CA: August-April	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				into Canada. Winter range along Pacific Coast from British Columbia south to Central America, with small numbers wintering in interior California. Wintering habitat includes coastal mudflats, meadows, estuaries, sandy beaches, sandflats, and salt ponds.		
Short-billed Dowitcher *(Limnodromus griseus)*	–	–	BCC	Nests in Canada, southern Alaska; winters in coastal California south to South America; wintering habitat includes coastal mudflats and brackish lagoons.	Migrant/ Wintering: late-August-May	Absent. No suitable habitat within Study Area.
California gull (nesting colony) *(Larus californicus)*	–	–	BCC, CDFW WL	Nesting occurs in the Great Basin, Great Plains, Mono Lake, and south San Francisco Bay. Winters along Pacific Coast from southern British Columbia south to Baja California and Mexico. In California, winters along coast and inland (Central Valley, Salton Sea).	Nesting: April-August	Absent. No suitable habitat within Study Area.
Black tern *(Chlidonias niger)*	–	–	BCC, SSC	Breeding range includes northeastern California, Central Valley, Great Plains of U.S. and Canada; winters in Central and South America; nesting habitat includes shallow	Nesting: May-August	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				freshwater marsh with emergent vegetation, prairie sloughs, lake margins, river islands, and cultivated rice fields.		
California least tern *(Sternula antillarum browni)*	FE	CE	CFP	Nests along Pacific Coast from San Francisco Bay south the Mexico; nests colonially, on sand or dried mudflats, sand or shell islands, and gravel and sand pits and rarely in agricultural fields, parking lots, airports, and flat/graveled rooftops.	April-August	Absent. No suitable habitat within Study Area.
Double-crested cormorant *(Nannopterum auritum)*	–	–	CDFW WL	Nests near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines and typically forages in shallow water. Non-nesters are found in many coastal and inland waters.	April-August	Absent. No suitable habitat within Study Area.
Least bittern *(Ixobrychus exilis)*	–	–	SSC	Freshwater and brackish marshes with dense, tall aquatic and semiaquatic vegetation intersperse with clumps of woody vegetation and open water, and rarely salt marshes and mangrove swamps.	April-July	Absent. No suitable habitat within Study Area.
Osprey (nesting) (*Pandion haliaetus*)	–	–	CDFW WL	Nesting habitat requires close proximity to	March-September	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				accessible fish, open nest site free of mammalian predators, and extended ice-free season. The nest in large trees, snags, cliffs, transmission/communication towers, artificial nest platforms, channel markers/buoys.		
White-tailed kite (nesting) (*Elanus leucurus*)	–	–	CFP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats.	March-August	Potential to Occur. Trees onsite and adjacent to the Study Area provide suitable nesting habitat.
Golden eagle (nesting and wintering) (*Aquila chrysaetos*)	–	–	BCC, CFP	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/savannah, and chaparral. Nesting occurs on cliff ledges, river banks, trees, and human-made structures (e.g., windmills, platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during winter.	Nest: (February-August); winter CV (October-February)	Absent. No suitable habitat within Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Northern harrier (*Circus hudsonius*)	–	–	SSC	Nests on the ground in open wetlands, marshy meadows, wet/lightly grazed pastures, (rarely) freshwater/brackish marshes, tundra, grasslands, prairies, croplands, desert, shrub-steppe, and (rarely) riparian woodland communities.	April-September	Absent. No suitable habitat within Study Area.
Cooper's hawk (nesting) (*Accipiter cooperii*)	–	–	CDFW WL	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes	March-July	Potential to Occur. Trees onsite and adjacent to the Study Area provide suitable nesting habitat.
Bald eagle (nesting and wintering) (*Haliaeetus leucocephalus)*	Delisted	CE	CFP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands.	February – September (nesting); October-March (wintering)	Absent. No suitable habitat within Study Area
Swainson's hawk (nesting) (*Buteo swainsoni*)	–	CT	BCC	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures	March-August	Absent. There is no suitable nesting or foraging habitat present.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Ferruginous hawk (wintering) (*Buteo regalis*)	–	–	BCC, CDFW WL	Rarely breeds in California (Lassen County); winter range includes grassland and shrubsteppe habitats from Northern California (except northeast and northwest corners) south to Mexica and east to Oklahoma, Nebraska, and Texas.	September-March	Absent. No suitable habitat within Study Area
Burrowing owl (burrow sites) (*Athene cunicularia*)	–	–	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	February-August	Potential to Occur. Suitable habitat present within the Study Area.
Short-eared owl (*Asio flammeus*)	–	–	BCC, SSC	Nests in large expanses of prairie, coastal grasslands, heathlands, shrub-steppe, tundra, and agricultural areas.	March-July (breeding); August-March (wintering in Central Valley)	Absent. No suitable habitat within Study Area
Nuttall's woodpecker *(Dryobates nuttallii)*	–	–	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	Nesting: April – July.	Potential to Occur. Oak trees onsite represent suitable nesting habitat.
Merlin *(Falco columbarius)*	–	–	CDFW WL	Breeds in Oregon, Washington north into Canada. Winters in southern Canada	September-April (wintering in the Central Valley);	Absent. No suitable habitat within Study Area

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				to South America, including California. Breeds near forest openings, fragmented woodlots, and riparian areas. Wintering habitat includes wide variety, open forests, grasslands, tidal flats, plains, and urban settings.	does not breed in California	
American peregrine falcon *(Falco peregrinus anatum)*	Delisted	Delisted	BCC, CFP	In California, breeds in coastal region, northern California, and Sierra Nevada. Nesting habitat includes cliff ledges and human-made ledges on towers and buildings. Wintering habitat includes areas where there are large concentrations of shorebirds, waterfowl, pigeons or doves.	CA Residents nest in February-June	Absent. No suitable habitat within Study Area
Prairie falcon (*Falco mexicanus*)	–	–	BCC, CDFW WL	Found in open habitat at all elevations up to 3,350 meters (Steenhof 2013). Nests on cliffs and bluffs in arid plains and steppes; In California, nesting throughout state except northwest corner, along immediate coast, and the Central Valley floor. Winters throughout California, in open habitats, such as grasslands in Central Valley.	March-July (breeding); September-February (wintering in Central Valley)	Absent. No suitable habitat within Study Area

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Olive-sided flycatcher *(Contopus cooperi)*	–	–	SSC, BCC	Nests in montane and northern coniferous forests, in forest openings, forest edges, semiopen forest stands. In California, nests in coastal forests, Cascade and Sierra Nevada region. Winters in Central to South America.	Nesting: May - August	Absent. No suitable habitat within Study Area
Loggerhead shrike (*Lanius ludovicianus*)	–	–	BCC, SSC	Found throughout California in open country with short vegetation, pastures, old orchards, grasslands, agricultural areas, open woodlands. Not found in heavily forested habitats.	March-July	Absent. No suitable habitat within Study Area
Yellow-billed magpie (nesting) (*Pica nuttalli*)	–	–	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April-June	Potential to Occur. Trees onsite provide suitable nesting habitat.
Oak titmouse (*Baeolophus inornatus*)	–	–	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (e.g., gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	Nesting: March - July	Potential to Occur. Oak trees onsite represent suitable nesting habitat.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Bank swallow (nesting) (*Riparia riparia*)	–	CT	–	Nests colonially along coasts, rivers, streams, lakes, reservoirs, and wetlands in vertical banks, cliffs, and bluffs in alluvial, friable soils. May also nest in sand, gravel quarries and road cuts. In California, breeding range includes northern and central California.	May-July	Absent. No suitable habitat within Study Area
Purple martin (nesting) (*Progne subis*)	–	–	SSC	In California, breeds along coast range, Cascade-northern Sierra Nevada region and isolated population in Sacramento. Nesting habitat includes montane forests, Pacific lowlands with dead snags; the isolated Sacramento population nests in weep holes under elevated highways/bridges. Winters in South America.	May-Aug	Absent. No suitable habitat within Study Area
Wrentit (*Chamaea fasciata*)	–	–	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens. Nesting: March-August	March – August (Nesting)	Absent. No suitable habitat within Study Area

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Song sparrow "Modesto" (*Melospiza melodia heermanni*)	–	–	BCC, SSC	Resident in central and southwest California, including Central Valley; nests in marsh, scrub habitat	April-June	Absent. No suitable habitat within Study Area
Yellow-breasted chat (*Icteria virens*)	–	–	SSC	In California, breeds in Klamath Mountains, inner Northern Coast Range south to San Francisco Bay, locally distributed from Santa Clara County south to San Diego County Sacramento and San Joaquin valleys, along west slope of Sierra Nevada from the Feather River to Kern River, Mono and Inyo counties. In the west, nesting habitat includes dense riparian and shrubby.	May-August	Absent. No suitable habitat within Study Area
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	–	–	SSC	In California, breeds in the Great Basin region, along Colorado River south to Baja California, Salton Sea, Kern, Ventura, Riverside, San Diego and possibly Orange, Lake counties and locally in the Central Valley, Nests are constructed over deep water in emergent vegetation of prairie wetlands, quaking aspen parklands, mountain meadows, forest edges, large lakes.	April-July	Absent. No suitable habitat within Study Area

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
Tricolored blackbird (nesting colony) (*Agelaius tricolor*)	–	–	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego Counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen Counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March-August	Absent. No suitable habitat within Study Area
Bullock's oriole (*Icterus bullockii*)	–	–	BCC	Breeding habitat includes riparian and oak woodlands.	Nesting: March-July	Potential to Occur. Oak trees onsite represent suitable nesting habitat.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	–	–	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego County.	Nesting: March-July	Absent. No suitable habitat within Study Area
Yellow warbler (*Setophaga petechia*)	–	–	SSC, BCC	Breeding range includes most of California, except Central Valley (isolated breeding locales on Valley floor, Stanislaus, Colusa, and Butte	May-August	Absent. No suitable habitat within Study Area

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				counties), Sierra Nevada range above tree line, and southeastern deserts. Nesting habitat includes riparian vegetation near streams and meadows. Winters in Mexico south to South America.		
Lawrence's goldfinch (*Spinus lawrencei*)	–	–	BCC	Breeds in Sierra Nevada and inner Coast Range foothills surrounding the Central Valley and the southern Coast Range to Santa Barbara County east through southern California to the Mojave Desert and Colorado Desert into the Peninsular Range. Nests in arid and open woodlands with chaparral or other brushy areas, tall annual weed fields, and a water source (e.g., small stream, pond, lake), and to a lesser extent riparian woodland, coastal scrub, evergreen forests, pinyon-juniper woodland, planted conifers, and ranches or rural residences near weedy fields and water.	Nesting: March-September	Absent. No suitable nesting habitat within the Study Area.
Grasshopper sparrow (*Ammodramus savannarum*)	–	–	SSC	In California, breeding range includes most coastal counties south to Baja California;	May-August	Absent. No suitable nesting habitat within the Study Area.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				western Sacramento Valley and western edge of Sierra Nevada region. Nests in moderately open grasslands and prairies with patchy bare ground. Avoids grasslands with extensive shrub cover; more likely to occupy large tracts of habitat than small fragments; removal of grass cover by grazing often detrimental.		
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	–	CE	BCC	Resident coastally from Point Conception south into Baja California; coastal salt marsh.	Year-round resident; nests March-August	Absent. No suitable nesting habitat within the Study Area.
Mammals						
American badger *(Taxidea taxus)*	–	–	SSC	Drier open stages of most shrub, forest, and herbaceous habitats with friable soils.	Year round resident (breeds summer-early fall).	Absent. No suitable habitat within Study Area.
Pallid bat (*Antrozous pallidus*)	–	–	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (Western	April-September	Potential to Occur. Trees onsite provide potential roosting habitat.

Table 1. Evaluation of Special-Status Plant and Wildlife Species for the Project Area

Common Name (*Scientific Name*)	Status			Habitat Description	Observation Period	Potential to Occur On-Site
	ESA	CESA	Other			
				Bat Working Group [WBWG] 2023).		
Western red bat *(Lasiurus blossevillii)*	–	–	SSC	Roosts in foliage of trees or shrubs; Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2023).	April-September	Low Potential to Occur. Trees onsite provide marginal roosting habitat.

Status Codes:

FESA Federal Endangered Species Act
CESA California Endangered Species Act
FE FESA listed, Endangered.
FT FESA listed, Threatened.
BCC USFWS Bird of Conservation Concern (USFWS 2002).
CR CESA- or NPPA-listed, Rare.
CT CESA- or NPPA-listed, Threatened.
CC Candidate for CESA listing as Endangered or Threatened.
CE CESA or NPPA listed, Endangered.
CFP California Fish and Game Code Fully Protected Species (Sections 3511-birds, 4700-mammals, 5050-reptiles/amphibians).
CDFW WL CDFW Watch List
SSC CDFW Species of Special Concern (CDFW, updated July 2017).
1B CRPR/Rare or Endangered in California and elsewhere.
2B Plants rare, threatened, or endangered in California but more common elsewhere.
3 CRPR/Plants About Which More Information is Needed – A Review List.
4 CRPR/Plants of Limited Distribution – A Watch List.
0.1 Threat Rank/Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 Threat Rank/Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
0.3 Threat Rank/Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)
Delisted Formally Delisted (delisted species are monitored for 5 years).

4.4.1 Plants

A total of 10 special-status plant species were identified as having the potential to occur within the Study Area based on the literature review (Table 3). Upon further analysis and after the reconnaissance site visit, all 10 species were determined to be absent due to the lack of suitable habitat or the Study Area was

outside the known range for the species. No further discussion of these species is provided in this analysis.

4.4.2 Invertebrates

A total of six special-status invertebrate species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, all six species were determined to be absent due to the lack of suitable habitat within the Study Area. No further discussion of these species is provided in this analysis.

4.4.3 Fish

Eleven special-status fish species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, all 11 species were determined to be absent due to the lack of suitable habitat within the Study Area. No further discussion of these species is provided in this analysis.

4.4.4 Amphibians

Two special-status amphibian species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, both species were determined to be absent due to the lack of suitable habitat within the Study Area. No further discussion of these species is provided in this analysis.

4.4.5 Reptiles

Three special-status reptile species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, all three species were determined to be absent due to the lack of suitable habitat within the Study Area. No further discussion of these species is provided in this analysis.

4.4.6 Birds

A total of 44 special-status bird species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, 37 species were determined to be absent due to lack of suitable habitat. No further discussion of these species is provided in this analysis. Brief descriptions of the remaining seven species that have the potential to occur within the Study Areas are presented below.

4.4.6.1 White-Tailed Kite

White-tailed kite is not listed pursuant to either the California or federal ESAs; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. This species is a common resident in the Central Valley and the entire length of the California coast, and all areas up to the Sierra Nevada foothills and southeastern deserts (Dunk 2020). In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March through June. Nesting

occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 2020).

There are eight CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The trees onsite and adjacent provide suitable nesting habitat. White-tailed kite has potential to occur.

4.4.6.2 Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*) is not listed pursuant to either the California or federal Endangered Species Acts. However, it is a CDFW watch list species. Typical nesting and foraging habitats include riparian woodland, dense oak woodland, and other woodlands near water. Cooper's hawk nest throughout California from Siskiyou County to San Diego County and includes the Central Valley (Rosenfield et al. 2020). Breeding occurs during March through July, with a peak from May through July.

There is one CNDDB occurrence of this species within five miles of the Study Area (CDFW 2023b). The trees onsite and adjacent provide suitable nesting habitat. Cooper's hawk has potential to occur.

4.4.6.3 Burrowing Owl

The burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a bird of conservation concern by the USFWS and a species of special concern by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2020). This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel (*Spermophilus beecheyi*) but may also use man-made structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement (California Department of Fish and Game [CDFG] 2012). The breeding season typically occurs between February 1 and August 31 (California Burrowing Owl Consortium 1993; CDFG 2012).

There are eight CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). No California ground squirrel burrows were found during the site reconnaissance, but several cracks in the old foundations and pavement onsite were observed. While no evidence of burrowing owl presence was found, the site reconnaissance did not constitute a protocol level survey or burrowing owl habitat assessment. The Study Area provides suitable habitat. Burrowing owl has potential to occur.

4.4.6.4 Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther et al. 2020). Breeding occurs during April through July.

There are no CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The oak trees on site provide suitable nesting habitat. Nuttall's woodpecker has potential to occur.

4.4.6.5 Yellow-billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal Endangered Species Acts but is considered a USFWS bird of conservation concern. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late-January to mid-February, which may take up to 6-8 weeks to complete, with eggs laid during April-May, and fledging during May-June (Koenig and Reynolds 2020). The young leave the nest about 30 days after hatching (Koenig and Reynolds 2020). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2020).

There are no CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The trees onsite and adjacent provide suitable nesting habitat. Yellow-billed magpie has potential to occur.

4.4.6.6 Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either state or federal Endangered Species Acts but are considered a USFWS bird of conservation concern. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2020). They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands (Cicero et al. 2020). Nesting occurs during March through July.

There are no CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The trees onsite provide suitable nesting habitat. Oak titmouse has potential to occur.

4.4.6.7 Bullock's Oriole

The Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal Endangered Species Acts but is currently a species of bird of conservation concern according to the USFWS. In California, Bullock's orioles are found throughout the state except the higher elevations of mountain ranges and the eastern deserts (Small 1994). They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees (Flood et al 2020). Nesting occurs from March through July.

There are no CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The trees onsite provide suitable nesting habitat. Bullock's oriole has potential to occur.

4.4.7 Mammals

One special-status mammal, American badger, was identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, American badger was determined to be absent due to the lack of suitable habitat. No further discussion of this species is provided in this analysis.

4.4.8 Bats

Two special-status bat species were identified as having the potential to occur within the Study Area based on the literature review (Table 1). Upon further analysis and after the reconnaissance site visit, both species were determined to have some potential to occur. Brief descriptions of these species are provided below.

4.4.8.1 Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the federal or California ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 feet). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges, and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, often they use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2023).

There are no CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The trees onsite provide potential roosting habitat. Pallid bat has potential to occur.

4.4.8.2 Western Red Bat

The western red bat (*Lasiurus blossevillii*) is not listed pursuant to either the California or federal Endangered Species Acts; however, this species is considered a species of special concern by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending from southern British Columbia in Canada through Argentina and Chile in South America, and including much of the western United States. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage one to two hours after

sunset. This species is considered highly migratory, however the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood (WBWG 2023).

There are no CNDDB occurrences of this species within five miles of the Study Area (CDFW 2023b). The trees onsite and adjacent provide marginal roosting habitat. Western red bat has low potential to occur.

4.5 Critical Habitat and Essential Fish Habitat

There is no designated Critical Habitat mapped within the Study Area (USFWS 2023).

4.6 Protected Trees

There are several trees within the Study Area that may be protected by the City of Rancho Cordova Tree Protection Plan. An initial site reconnaissance for trees has been completed. Identified trees within the Study Area included Valley Oak (*Quercus lobata*), walnut (*Juglans hindsii*) and potentially Chinese pistache (*Pistache chinensis*), and Fremont's cottonwood (*Populus fremontii*).

4.7 Riparian Habitats and Sensitive Natural Communities

Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, Northern Volcanic Mud Flow Vernal Pool, Valley Needlegrass Grassland, Elderberry Savanna, and Great Valley Valley Oak Riparian Forest are sensitive natural communities that were identified during the literature review as occurring in the vicinity of the Study Area (CDFW 2023b; Appendix A). However, no sensitive natural communities or riparian habitats were observed within the Study Area during the field assessment. Therefore, those biological resources will not be discussed further in this analysis.

4.8 Wildlife Movement/Corridors and Nursery Sites

The Study Area does not contain habitat areas or corridors with significant potential for wildlife movement. The ruderal grassland in the Study Area is a relatively small and fragmented and in close proximity to residential developments, the light rail station and subject to regular human presence.

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. This data is available through CDFW's Biogeographic Information and Observation System database or as occurrence records in the CNDDB and is supplemented with the results of the field reconnaissance. No nursery sites have been documented within the Study Area (CDFW 2022) and none were observed during the site reconnaissance.

4.9 Wildlife Observations

The Study Area supports a variety of common wildlife species. A detailed list of wildlife species observed in the vicinity of the Study Area during the site visit is included as Appendix C.

5.0 IMPACT ANALYSIS

This section specifically addresses the questions raised by the CEQA - Appendix G Environmental Checklist Form, IV. Biological Resources. This section also identifies the appropriate recommendations to reduce potential impacts of the actions to less than significant. The recommendations are described in detail in Section 7.0.

5.1 Special-Status Species

Would the Project result in effects, either directly or through habitat modifications, to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Project could result in impacts to suitable habitat for special-status species within the Study Area. No special-status species are known to occur within the Project Area; however, focused surveys have not been conducted. Impacts by taxon group are presented below.

5.1.1 Impacts to Special-Status Plants

No special-status plants have potential to occur within the Study Area. Therefore, Project activities would not impact special status plants.

5.1.2 Impacts to Special-Status Invertebrates

No special-status invertebrates have potential to occur within the Study Area. Therefore, Project activities would not impact special status invertebrates.

5.1.3 Impacts to Special-Status Fish

No special-status fish have potential to occur within the Study Area. Therefore, Project activities would not impact special status fish.

5.1.4 Impacts to Special-Status Amphibians

No special-status amphibians have potential to occur within the Study Area. Therefore, Project activities would not impact special status amphibians.

5.1.5 Impacts to Special-Status Reptiles

No special-status reptiles have potential to occur within the Study Area. Therefore, Project activities would not impact special status reptiles.

5.1.6 Impacts to Special-Status Birds

There are four special-status bird species with potential to occur in the Study Area. Additionally, the Study Area supports potential nesting habitat for a variety of common birds protected by the MBTA and Fish and Game Code. Removal or disturbance of active nests may have a significant impact under CEQA. Noise from construction activities have potential to impact nesting birds if present within or adjacent to the

construction activities. Implementation of recommendations outlined below would minimize potential effects to special-status birds.

5.1.7 Impacts to Special-Status Bats

There are two special-status bats with a potential to occur in the Study Area. Removal of trees found within the Study Area could result in impacts to roosting bats, if present. Implementation of recommendations outlined below would minimize the potential for effects to special-status bats.

5.2 Riparian Habitat and Sensitive Natural Communities

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

No sensitive natural communities or riparian habitats were observed within the Study Area during the field assessment. Therefore, the Project is not expected to have a substantial adverse effect on riparian habitat or sensitive natural communities.

5.3 Aquatic Resources, Including Waters of the U.S./State

Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There were no aquatic resources identified or observed during the field assessment. Therefore, the Project is not expected to have adverse effects on aquatic resources, including Waters of the U.S./State.

5.4 Wildlife Movement/Corridors

Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Study Area is a previously disturbed/developed site that is surrounded by development. It does not support signification wildlife use or movement corridors.

As discussed in Section 5.7, the Study Area does not include a known nursery sites and no evidence of a wildlife nursery site was observed during the field reconnaissance. Therefore, the Project is not expected to impact wildlife nursery sites. Potential impacts to individual nesting birds would be reduced by implementation of recommendations described in Section 7.0.

5.5 Local Policies, Ordinances, and Other Plans

Does the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Project is required to comply with Ch 19.12 of the Rancho Cordova Municipal Code for the preservation and protection of private trees once a certain size is reached. Implementation of recommendations below will reduce potential significant impacts associated with removal of protected trees.

Does the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Study Area is covered by the Rancho Cordova General Plan. The Natural Resources Element of the General Plan includes goals and policies for protection of natural resources. The Project will not conflict with the City's General Plan.

6.0 RECOMMENDATIONS

The following measures are recommended to avoid or minimize potential impacts to biological resources from the Proposed Project.

6.1 General Recommendations

The following general measure is recommended:

The Project will implement erosion control measures and best management practices to reduce the potential for sediment or pollutant dispersal. Measures may include:

- Fiber rolls used for erosion control will be certified by the California Department of Food and Agriculture as weed free.
- Seed mixtures applied for erosion control will not contain California Invasive Plant Council designated invasive species (http://cal-ipc.org/) and will be composed of native species appropriate for the site.
- Trash generated onsite will be promptly and properly removed from the site.

6.2 Special-Status Species

Recommendations to minimize impacts to special-status species or habitats are summarized below by species group.

6.2.1 Special-Status Birds and Migratory Bird Treaty Act-Protected Birds (Including Nesting Raptors)

The following measures are recommended to minimize potential impacts to nesting birds:

To protect nesting birds, no Project activity shall begin from February 1 through August 31 unless a qualified wildlife biologist completes the following surveys. Separate surveys and avoidance requirements are listed below for nesting birds and raptors.

- If Project construction begins between February 1 through August 31, a qualified biologist will perform a preconstruction nesting bird survey within 7 days prior to construction (or less if recommended by CDFW), within the Project work area for all birds protected under the MBTA, including raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established by a qualified biologist in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest, or that the nest is otherwise no longer active.

6.2.2 Special-Status Bats

The following measure is recommended to minimize potential impacts to roosting bats:

- A qualified biologist will conduct a survey for suitable bat roosting habitat within 14 days of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat is identified and proposed for removal, a qualified biologist will conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities may be required. If bats are not found during the preconstruction surveys, no further measures are necessary.

6.2.3 Protected Trees

The Project site may support protected trees. The following measures are recommended:

- Certified Arborist Survey;
- A Tree Removal Permit shall be obtained from the City of Rancho Cordova if impacts to protected trees are anticipated.

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LIST OF APPENDICES

Appendix A – Database Query Results

Appendix B – Representative Site Photos

Appendix C – Observed Species List

APPENDIX A

Database Query Results

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Folsom (3812162) OR Citrus Heights (3812163) OR Carmichael (3812153) OR Elk Grove (3812143) OR Sloughhouse (3812142) OR Buffalo Creek (3812152) OR Rio Linda (3812164) OR Florin (3812144) OR Sacramento East (3812154))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAA01181	***Ambystoma californiense pop. 1*** California tiger salamander - central California DPS	Threatened	Threatened	G2G3T3	S3	WL
AAABF02020	***Spea hammondii*** western spadefoot	None	None	G2G3	S3S4	SSC
ABNFD01020	***Nannopterum auritum*** double-crested cormorant	None	None	G5	S4	WL
ABNGA04010	***Ardea herodias*** great blue heron	None	None	G5	S4	
ABNGA04040	***Ardea alba*** great egret	None	None	G5	S4	
ABNGA11010	***Nycticorax nycticorax*** black-crowned night heron	None	None	G5	S4	
ABNKC06010	***Elanus leucurus*** white-tailed kite	None	None	G5	S3S4	FP
ABNKC12040	***Accipiter cooperii*** Cooper's hawk	None	None	G5	S4	WL
ABNKC19070	***Buteo swainsoni*** Swainson's hawk	None	Threatened	G5	S3	
ABNKC19120	***Buteo regalis*** ferruginous hawk	None	None	G4	S3S4	WL
ABNKC22010	***Aquila chrysaetos*** golden eagle	None	None	G5	S3	FP
ABNKD06030	***Falco columbarius*** merlin	None	None	G5	S3S4	WL
ABNRB02022	***Coccyzus americanus occidentalis*** western yellow-billed cuckoo	Threatened	Endangered	G5T2T3	S1	
ABNSB10010	***Athene cunicularia*** burrowing owl	None	None	G4	S3	SSC
ABPAU01010	***Progne subis*** purple martin	None	None	G5	S3	SSC
ABPAU08010	***Riparia riparia*** bank swallow	None	Threatened	G5	S2	
ABPBXA3013	***Melospiza melodia pop. 1*** song sparrow ("Modesto" population)	None	None	G5T3?Q	S3?	SSC
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S1S2	SSC
ABPBXB3010	***Xanthocephalus xanthocephalus*** yellow-headed blackbird	None	None	G5	S3	SSC

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AFCAA01031	***Acipenser medirostris pop. 1*** green sturgeon - southern DPS	Threatened	None	G2T1	S1	
AFCHA0209K	***Oncorhynchus mykiss irideus pop. 11*** steelhead - Central Valley DPS	Threatened	None	G5T2Q	S2	
AFCHB03010	***Spirinchus thaleichthys*** longfin smelt	Candidate	Threatened	G5	S1	
AFCJB34020	***Pogonichthys macrolepidotus*** Sacramento splittail	None	None	G3	S3	SSC
AMACC02010	***Lasionycteris noctivagans*** silver-haired bat	None	None	G3G4	S3S4	
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMAJF04010	***Taxidea taxus*** American badger	None	None	G5	S3	SSC
ARAAD02030	***Emys marmorata*** western pond turtle	None	None	G3G4	S3	SSC
ARADB36150	***Thamnophis gigas*** giant gartersnake	Threatened	Threatened	G2	S2	
CTT42110CA	***Valley Needlegrass Grassland*** Valley Needlegrass Grassland	None	None	G3	S3.1	
CTT44110CA	***Northern Hardpan Vernal Pool*** Northern Hardpan Vernal Pool	None	None	G3	S3.1	
CTT44120CA	***Northern Claypan Vernal Pool*** Northern Claypan Vernal Pool	None	None	G1	S1.1	
CTT44132CA	***Northern Volcanic Mud Flow Vernal Pool*** Northern Volcanic Mud Flow Vernal Pool	None	None	G1	S1.1	
CTT61430CA	***Great Valley Valley Oak Riparian Forest*** Great Valley Valley Oak Riparian Forest	None	None	G1	S1.1	
CTT63440CA	***Elderberry Savanna*** Elderberry Savanna	None	None	G2	S2.1	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	
ICBRA03150	***Branchinecta mesovallensis*** midvalley fairy shrimp	None	None	G2	S2S3	
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	
ICBRA10010	***Lepidurus packardi*** vernal pool tadpole shrimp	Endangered	None	G4	S3	
ICBRA23010	***Dumontia oregonensis*** hairy water flea	None	None	G1G3	S1	
IICOL48011	***Desmocerus californicus dimorphus*** valley elderberry longhorn beetle	Threatened	None	G3T2T3	S3	

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IICOL5V010	***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle	None	None	G2?	S2?	
IIHYM24480	***Bombus crotchii*** Crotch bumble bee	None	Candidate Endangered	G2	S2	
IIHYM35030	***Andrena blennospermatis*** Blennosperma vernal pool andrenid bee	None	None	G2	S2	
IIHYM35210	***Andrena subapasta*** An andrenid bee	None	None	G1G2	S1S2	
IMBIV19010	***Gonidea angulata*** western ridged mussel	None	None	G3	S1S2	
PDAST5L030	***Lasthenia chrysantha*** alkali-sink goldfields	None	None	G2	S2	1B.1
PDBRA1M0K1	***Lepidium latipes var. heckardii*** Heckard's pepper-grass	None	None	G4T1	S1	1B.2
PDCAM060C0	***Downingia pusilla*** dwarf downingia	None	None	GU	S2	2B.2
PDCAM0C010	***Legenere limosa*** legenere	None	None	G2	S2	1B.1
PDCUS01111	***Cuscuta obtusiflora var. glandulosa*** Peruvian dodder	None	None	G5T4?	SH	2B.2
PDFAB400R5	***Trifolium hydrophilum*** saline clover	None	None	G2	S2	1B.2
PDMAL0H0R3	***Hibiscus lasiocarpos var. occidentalis*** woolly rose-mallow	None	None	G5T3	S3	1B.2
PDONA05053	***Clarkia biloba ssp. brandegeeae*** Brandegee's clarkia	None	None	G4G5T4	S4	4.2
PDPLM0C0X1	***Navarretia myersii ssp. myersii*** pincushion navarretia	None	None	G2T2	S2	1B.1
PDSCR0R060	***Gratiola heterosepala*** Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2
PMALI040Q0	***Sagittaria sanfordii*** Sanford's arrowhead	None	None	G3	S3	1B.2
PMJUN011L1	***Juncus leiospermus var. ahartii*** Ahart's dwarf rush	None	None	G2T1	S1	1B.2
PMLIL0V010	***Fritillaria agrestis*** stinkbells	None	None	G3	S3	4.2
PMPOA4G050	***Orcuttia tenuis*** slender Orcutt grass	Threatened	Endangered	G2	S2	1B.1
PMPOA4G070	***Orcuttia viscida*** Sacramento Orcutt grass	Endangered	Endangered	G1	S1	1B.1

Record Count: 60

ITEM 11.1.

ATTACHMENT 3

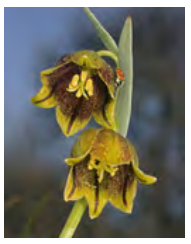
CNPS Rare Plant Inventory

CALIFORNIA NATIVE PLANT SOCIETY

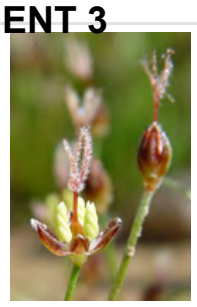
Search Results

19 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812162:3812163:3812153:3812143:3812142:3812152:3812164:3812144:3812154**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Brodiaea rosea ssp. *vallicola*	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	None	None	G5T3	S3	4.2	Yes	2019-01-07	 © 2011 Steven Perry
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	Yes	2007-05-22	No Photo Available
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	Onagraceae	annual herb	(Mar)May-Jul	None	None	G4G5T4	S4	4.2	Yes	2001-01-01	No Photo Available
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	G5T4?	SH	2B.2		2011-08-24	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2		1980-01-01	No Photo Available
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01	 © 2016 Aaron Schusteff
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2		1974-01-01	 ©2004 Carol W. Witham
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2017 John Doyen
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	G5T3	S3	1B.2	Yes	1974-01-01	 © 2020 Steven Perry

Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	Yes	1984-01-01
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Yes	1974-01-01
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	None	None	G4T1	S1	1B.2	Yes	1994-01-01
Navarretia eriocephala	hoary navarretia	Polemoniaceae	annual herb	May-Jun	None	None	G4?	S4?	4.3	Yes	1974-01-01
Navarretia myersii ssp. *myersii*	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	Yes	1994-01-01
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	Yes	1974-01-01
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	Yes	1974-01-01
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01


© 2004 Carol W. Witham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©2000 John Game

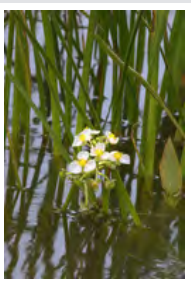

2018 Jennifer Buck


© 2018 Leigh Johnson


© 2020 Leigh Johnson


© 2013 Justy Leppert

No Photo Available


©2013 Debra L. Cook

Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available

Showing 1 to 19 of 19 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 25 January 2023].

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Sacramento County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

ITEM 11.1.b

ATTACHMENT 3

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS

NOT FOR CONSULTATION

NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Sacramento Orcutt Grass Orcuttia viscida Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5507	Endangered
Slender Orcutt Grass Orcuttia tenuis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1063	Threatened

NOT FOR CONSULTATION

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

NOT FOR CONSULTATION

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Belding's Savannah Sparrow Passerculus sandwichensis beldingi — Breeds Apr 1 to Aug 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8

Black Swift Cypseloides niger — Breeds Jun 15 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8878

Black Tern Chlidonias niger — Breeds May 15 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3093

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

NOT FOR CONSULTATION

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

NOT FOR CONSULTATION

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

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3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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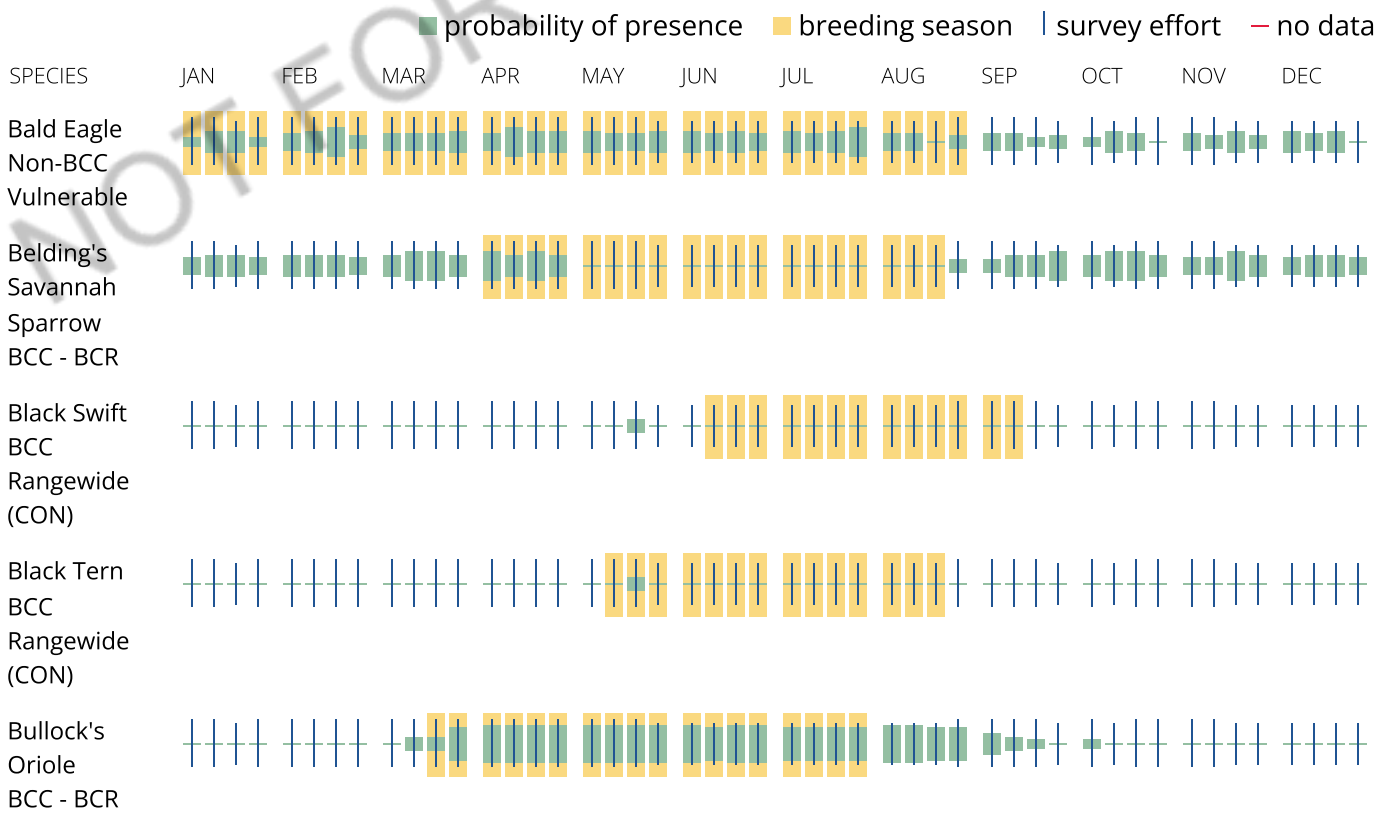

ITEM 11.1.

ATTACHMENT 3



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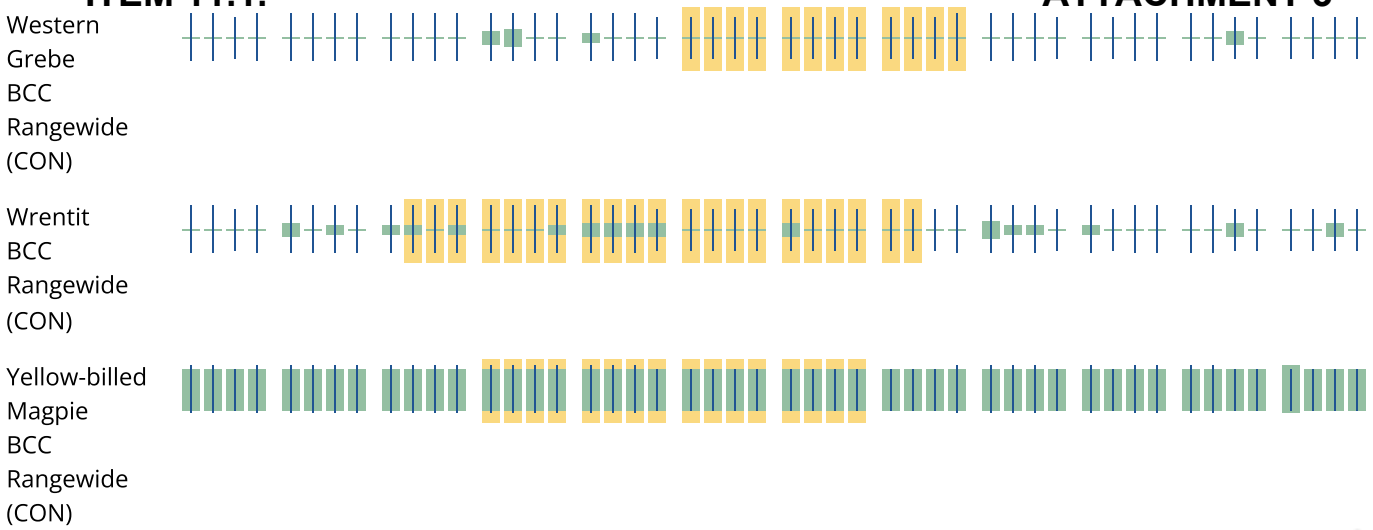
ITEM 11.1. ATTACHMENT 3



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

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Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

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ITEM 11.1. ATTACHMENT 3

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory

(NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas

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should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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National Marine Fisheries Service – West Coast Region – California
November 2016

Intersection of USGS 7.5" Topographic Quadrangles with NOAA Fisheries ESA Listed Species, Critical Habitat, Essential Fish Habitat, and MMRP Species Data within California.

An yellow-highlighted "X" following a listed species indicates in may be present.

Quad Name **Carmichael**
Quad Number **38121-E3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

APPENDIX B

Representative Site Photos



Photo 1: South side of lot facing east. February 7, 2023.



Photo 2: Northwest corner of lot facing south. February 7, 2023.



Photo 3: Northwest corner of lot facing east. February 7, 2023.



Photo 4: Northeast corner of lot facing west. February 7, 2023.



Photo 5: South side of lot facing east. February 7, 2023.



Photo 6: South side of lot facing north. February 7, 2023.



Photo 7: Ruderal grassland on east side of lot . Facing east. February 7, 2023.



Photo 8: Large oak tree onsite. Facing northwest. February 7, 2023.

APPENDIX C

Observed Species List

Common Name	Scientific Name
Birds	
Killdeer	*Charadrius vociferus*
Eurasian Collared-dove	*Streptopelia decaocto*
Mourning Dove	*Zenaida macroura*
Anna's Hummingbird	*Calypte anna*
Nuttall's Woodpecker	*Dryobates nuttallii*
Northern Flicker	*Colaptes auratus*
California Scrub-Jay	*Aphelocoma californica*
American Pipit	*Anthus rubescens*
European Starling	*Sturnus vulgaris*
Lesser Goldfinch	*Spinus psaltria*
Western Meadowlark	*Sturnella neglecta*
Yellow-Rumped Warbler	*Setophaga coronata*

Appendices

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Appendix 5.3-1 Archeological Resources Inventory Report

*This document contains contains sensitive and confidential information concerning archaeological sites. This appendix is on file at the City of Rancho Cordova.

Appendices

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Appendix 5.4-1 Energy Calculations for Mills Crossing

Construction-Related Fuel/Energy Usage

CONSTRUCTION WORKER COMMUTE

Year	Gas		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh
2024	52,733	2,027	110	3	1,998	732
2025	1,126,507	70,474	2,130	115	36,703	14,660
2026	1,296,938	112,959	2,383	140	47,666	19,269
2027	1,291,936	102,572	2,287	48	52,763	29,650
2028	1,262,338	75,657	2,171	107	56,673	31,181
Total	**5,030,453**	**363,690**	**9,081**	**413**	**195,803**	**95,492**

CONSTRUCTION VENDOR TRIPS

Year	Gas		Diesel	
	VMT	Gallons	VMT	Gallons
2024	0	0	0	0
2025	6,819	1,468	96,832	14,182
2026	7,577	1,616	113,979	16,465
2027	7,185	1,517	114,140	16,260
2028	6,551	1,370	112,535	15,870
Total	**28,131**	**5,971**	**437,485**	**62,777**

CONSTRUCTION OFF-ROAD EQUIPMENT

Year	Gasoline gallons	Diesel gallons
2024	0	41,839
2025	0	53,178
2026	0	53,411
2027	0	53,281
2028	0	54,055
Total	**0**	**95,017**

CONSTRUCTION TOTAL

Year	Gas		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh
2024	52,733	2,027	110	41,842	1,998	732
2025	1,133,326	71,943	98,962	67,475	36,703	14,660
2026	1,304,514	114,575	116,361	70,015	47,666	19,269
2027	1,299,121	104,090	116,427	69,589	52,763	29,650
2028	1,268,890	77,027	114,707	70,032	56,673	31,181
Total	**5,058,584**	**369,661**	**446,567**	**318,953**	**195,803**	**95,492**

Operation-Related Vehicle Fuel/Energy Usage

PROJECT LAND USE COMMUTE

Vehicle Type	Gas		Diesel		CNG		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Proposed Passenger Vehicles	9,392,909	356,219	468,617	47,045	14,531	2,329	689,740	240,718
Total	**9,392,909**	**356,219**	**468,617**	**47,045**	**14,531**	**2,329**	**689,740**	**240,718**

Construction Worker Trips Fuel Usage Worksheet

Note: Per CalEEMod methodology, worker vehicles are "LD_Mix", which is 50% LDA, 25% LDT1, and 25% LDT2

Activity[1]	Daily trips[1,2]	Trip miles[2]	Trip days[1]	Annual VMT
2024				
Demolition	15	14.3	100	21,450
Site Preparation	17.5	14.3	100	25,025
Grading	15	14.3	39	8,366
2025				
Grading	15	14.3	61	13,085
Building Construction	188	14.3	222	596,825
Paving	15	14.3	222	47,619
Architectural Coating	37.6	14.3	222	119,365
2026				
Building Construction	188	14.3	261	701,672
Paving	15	14.3	261	55,985
Architectural Coating	37.6	14.3	261	140,334
2027				
Building Construction	188	14.3	261	701,672
Paving	15	14.3	261	55,985
Architectural Coating	37.6	14.3	261	140,334
2028				
Building Construction	188	14.3	256	688,230
Paving	15	14.3	256	54,912
Architectural Coating	37.6	14.3	256	137,646

[1] *Based on information provided.*

[2] *Based on CalEEMod defaults.*

Year	Gasoline[1]									Diesel[1]					Electricity[1]				
	LDA VMT	LDT1 VMT	LDT2 VMT	LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA mpg	LDA gallons	LDT1 mpg	LDT1 gallons	LDT2 mpg	LDT2 gallons	LDA m/kWh	LDA kWh	LDT1 m/kWh	LDT1 kWh	LDT2 m/kWh	LDT2 kWh
2024	27,420	13,710	13,710	28.85	885	24.19	564	23.44	578	42.86	1	23.74	0	32.41	1	2.72	670	2.71	21	2.90	42
2025	388,447	388,447	388,447	24.59	14,531	24.01	16,091	9.60	39,853	23.78	34	33.12	1	16.01	80	2.73	11,086	2.89	706	1.54	2,868
2026	448,996	448,996	448,996	24.58	16,660	9.73	45,828	8.75	50,471	33.81	25	16.05	3	13.36	112	2.87	13,436	1.54	1,915	1.56	3,918
2027	448,996	448,996	448,996	9.85	41,231	8.83	50,420	40.32	10,921	16.09	47	13.43	1	0.00	0	1.54	27,298	1.56	2,351	0.00	0
2028	440,394	440,394	440,394	8.91	44,375	40.54	10,754	20.99	20,529	13.50	49	0.00	0	25.72	58	1.56	28,265	0.00	0	2.77	2,916

Gasoline		Diesel		Electricity	
VMT	Gallons	VMT	Gallons	VMT	kWh
52,733	2,027	110	3	1,998	732
1,126,507	70,474	2,130	115	36,703	14,660
1,296,938	112,959	2,383	140	47,666	19,269
1,291,936	102,572	2,287	48	52,763	29,650
1,262,338	75,657	2,171	107	56,673	31,181
1,179,240	**363,690**	**9,081**	**413**	**195,803**	**95,492**

[1] *EMFAC2021 v1.0.2.*

Year	VMT from gasoline			VMT from diesel			VMT from electricity		
	LDA	LDT1	LDT2	LDA	LDT1	LDT2	LDA	LDT1	LDT2
2024	93.13%	99.58%	98.79%	0.23%	0.01%	0.32%	6.64%	0.40%	0.89%
2025	92.00%	99.46%	98.54%	0.21%	0.01%	0.33%	7.79%	0.52%	1.13%
2026	91.21%	99.34%	98.30%	0.19%	0.01%	0.33%	8.60%	0.66%	1.36%
2027	90.49%	99.18%	98.07%	0.17%	0.00%	0.34%	9.34%	0.82%	1.60%
2028	89.83%	98.99%	97.83%	0.15%	0.00%	0.34%	10.02%	1.01%	1.84%

Vendor Trips Fuel Usage Worksheet

Note: Based on CalEEMod methodology, vendor vehicles are 50% HHDT (T7) and 50% MHDT (T6).

Activity[1]	Daily trips[1,2]	Trip miles[2]	Trip days[1]	Annual VMT
2024				
Demolition	0	8.8	100	0
Site Preparation	0	8.8	100	0
Grading	0	8.8	39	0
2025				
Grading	0	8.8	61	0
Building Construction	57.1	8.8	222	111,551
Paving	0	8.8	222	0
Architectural Coating	0	8.8	222	0
2026				
Building Construction	57.1	8.8	261	131,147
Paving	0	8.8	261	0
Architectural Coating	0	8.8	261	
2027				
Building Construction	57.1	8.8	261	131,147
Paving	0	8.8	261	
Architectural Coating	0	8.8	261	
2028				
Building Construction	57.1	8.8	256	128,635
Paving	0	8.8	256	0
Architectural Coating	0	8.8	256	0

[1] *Based on information provided.*

[2] *Based on CalEEMod defaults.*

Year	HHDT (T7) VMT	MHDT (T6) VMT	Gasoline[1]				Diesel[1]			
			HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons	HHDT (T7) mpg	HHDT (T7) gallons	MHDT (T6) mpg	MHDT (T6) gallons
2024	0	0	3.29	0	4.60	0	5.70	0	8.36	0
2025	55,775	55,775	3.42	3	4.65	1,465	5.80	8,631	8.42	5,551
2026	65,574	65,574	3.62	3	4.69	1,613	5.90	9,955	8.49	6,511
2027	65,574	65,574	3.74	3	4.74	1,514	6.00	9,764	8.55	6,496
2028	64,317	64,317	3.86	3	4.78	1,368	6.11	9,650	8.61	6,221

[1] *EMFAC2021 v1.0.1.*

Year	VMT from gasoline		VMT from diesel	
	HHDT (T7)	MHDT (T6)	HHDT (T7)	MHDT (T6)
2024	0.02%	13.12%	94.48%	84.64%
2025	0.02%	12.21%	89.78%	83.83%
2026	0.02%	11.54%	89.55%	84.27%
2027	0.02%	10.94%	89.39%	84.67%
2028	0.02%	10.17%	91.72%	83.25%

VENDOR

Gasoline		Diesel	
VMT	Gallons	VMT	Gallons
0.00	0.00	0	0
6,818.67	1,468.30	96,832	14,182
7,576.50	1,615.66	113,979	16,465
7,184.62	1,517.22	114,140	16,260
6,551	1,370	112,535	15,870
28,131.23	**5,971.43**	**437,485**	**62,777**

Off-Road Construction Equipment Fuel Usage Worksheet

Year	Total Gasoline	Total Diesel Gallons	Total Natural Gas
2024	0	41,839	0
2025	0	53,178	0
2026	0	53,411	0
2027	0	53,281	0
2028	0	54,055	0
Total	**0**	**255,763**	**0**

Equipment Type[1]	Number of Equipment[1]	Horsepower	OFFROAD2017 Horsepower Category	Fuel Type	Working days[1]	Hours Per Day	Total Hours of Operation	Gasoline Gal/Hr[2]	Total Gasoline gallons	Diesel Gal/Hr[2]	Total Diesel gallons	Natural Gas Gal/Hr[2]	Total Natural Gas gallons
2024													
Demolition													
Rubber Tired Dozers	2	367	*600*	*Diesel*	100	8	1,600	0.00	0	6.99	11,176	0.00	0
Excavators	3	36	*50*	*Diesel*	100	8	2,400	0.00	0	0.76	1,816	0.00	0
Concrete/Industrial Saws	1	33	*50*	*Diesel*	100	8	800	0.00	0	1.38	1,102	0.00	0
Site Preparation													
Rubber Tired Dozers	3	367	*600*	*Diesel*	100	8	2,400	0.00	0	6.99	16,764	0.00	0
Tractors/Loaders/Backhoes	4	84	*100*	*Diesel*	100	8	3,200	0.00	0	1.83	5,854	0.00	0
Grading													
Graders	1	148	*175*	*Diesel*	39	8	312	0.00	0	3.20	999	0.00	0
Excavators	1	36	*50*	*Diesel*	39	8	312	0.00	0	0.76	236	0.00	0
Tractors/Loaders/Backhoes	3	84	*100*	*Diesel*	39	8	936	0.00	0	1.83	1,712	0.00	0
Rubber Tired Dozers	1	367	*600*	*Diesel*	39	8	312	0.00	0	6.99	2,179	0.00	0
							TOTAL		**0**		**41,839**		**0**
2025													
Grading													
Graders	1	148	*175*	*Diesel*	61	8	488	0.00	0	3.20	1,563	0.00	0
Excavators	1	36	*50*	*Diesel*	61	8	488	0.00	0	0.76	369	0.00	0
Tractors/Loaders/Backhoes	3	84	*100*	*Diesel*	61	8	1,464	0.00	0	1.83	2,678	0.00	0
Rubber Tired Dozers	1	367	*600*	*Diesel*	61	8	488	0.00	0	6.99	3,409	0.00	0
Building Construction													
Forklifts	3	82	*100*	*Diesel*	222	8	5,328	0.00	0	1.33	7,087	0.00	0
Generator Sets	1	14	*25*	*Diesel*	222	8	1,776	0.00	0	0.00	0	0.00	0
Cranes	1	367	*600*	*Diesel*	222	7	1,554	0.00	0	6.24	9,695	0.00	0
Welders	1	46	*50*	*Diesel*	222	8	1,776	0.00	0	1.19	2,110	0.00	0
Tractors/Loaders/Backhoes	3	84	*100*	*Diesel*	222	7	4,662	0.00	0	1.83	8,526	0.00	0
Paving													
Pavers	2	81	*100*	*Diesel*	222	8	3,552	0.00	0	1.99	7,065	0.00	0
Paving Equipment	2	89	*100*	*Diesel*	222	8	3,552	0.00	0	1.85	6,580	0.00	0
Rollers	2	36	*50*	*Diesel*	222	8	3,552	0.00	0	0.77	2,736	0.00	0
Architectural Coating													
Air Compressors	1	37	*50*	*Diesel*	222	6	1,332	0.00	0	1.02	1,360	0.00	0
							TOTAL		**0**		**53,178**		**0**
2026													
Building Construction													
Forklifts	3	82	*100*	*Diesel*	261	8	6,264	0.00	0	1.35	8,448	0.00	0
Generator Sets	1	14	*25*	*Diesel*	261	8	2,088	0.00	0	0.00	0	0.00	0
Cranes	1	367	*600*	*Diesel*	261	7	1,827	0.00	0	6.27	11,463	0.00	0
Welders	1	46	*50*	*Diesel*	261	8	2,088	0.00	0	1.19	2,480	0.00	0
Tractors/Loaders/Backhoes	3	84	*100*	*Diesel*	261	7	5,481	0.00	0	1.85	10,163	0.00	0
Paving													
Pavers	2	81	*100*	*Diesel*	261	8	4,176	0.00	0	1.99	8,306	0.00	0
Paving Equipment	2	89	*100*	*Diesel*	261	8	4,176	0.00	0	1.85	7,736	0.00	0
Rollers	2	36	*50*	*Diesel*	261	8	4,176	0.00	0	0.77	3,217	0.00	0
Architectural Coating													
Air Compressors	1	37	*50*	*Diesel*	261	6	1,566	0.00	0	1.02	1,599	0.00	0
							TOTAL		**0**		**53,411**		**0**
2027													
Building Construction													
Forklifts	3	82	*100*	*Diesel*	261	8	6,264	0.00	0	1.34	8,399	0.00	0
Generator Sets	1	14	*25*	*Diesel*	261	8	2,088	0.00	0	0.00	0	0.00	0
Cranes	1	367	*600*	*Diesel*	261	7	1,827	0.00	0	6.24	11,407	0.00	0
Welders	1	46	*50*	*Diesel*	261	8	2,088	0.00	0	1.19	2,479	0.00	0
Tractors/Loaders/Backhoes	3	84	*100*	*Diesel*	261	7	5,481	0.00	0	1.85	10,140	0.00	0
Paving													
Pavers	2	81	*100*	*Diesel*	261	8	4,176	0.00	0	1.99	8,306	0.00	0
Paving Equipment	2	89	*100*	*Diesel*	261	8	4,176	0.00	0	1.85	7,736	0.00	0
Rollers	2	36	*50*	*Diesel*	261	8	4,176	0.00	0	0.77	3,217	0.00	0
Architectural Coating													
Air Compressors	1	37	*50*	*Diesel*	261	6	1,566	0.00	0	1.02	1,597	0.00	0
							TOTAL		**0**		**53,281**		**0**
2028													
Building Construction													
Forklifts	3	82	*100*	*Diesel*	256	8	6,144	0.00	0	1.34	8,238	0.00	0
Generator Sets	1	14	*25*	*Diesel*	256	8	2,048	0.00	0	0.00	0	0.00	0
Cranes	1	367	*600*	*Diesel*	256	7	1,792	0.00	0	6.24	11,188	0.00	0
Welders	1	46	*50*	*Diesel*	256	8	2,048	0.00	0	1.19	2,432	0.00	0
Tractors/Loaders/Backhoes	3	84	*100*	*Diesel*	256	7	5,376	0.00	0	1.85	9,946	0.00	0
Paving													
Pavers	2	81	*100*	*Diesel*	256	8	4,096	0.00	0	2.09	8,563	0.00	0
Paving Equipment	2	89	*100*	*Diesel*	256	8	4,096	0.00	0	1.99	8,141	0.00	0
Rollers	2	36	*50*	*Diesel*	256	8	4,096	0.00	0	0.97	3,980	0.00	0
Architectural Coating													
Air Compressors	1	37	*50*	*Diesel*	256	6	1,536	0.00	0	1.02	1,567	0.00	0
							TOTAL		**0**		**54,055**		**0**

Land Use

Operational Land Use

Vehicle type	Fleet percent	VMT	
	CalEEMod Default	CalEEMod Default	Total
LDA	49.03%	5,180,497	5,180,497
LDT1	3.96%	418,445	418,445
LDT2	23.30%	2,462,097	2,462,097
MDV	14.45%	1,526,209	1,526,209
LHD1	2.93%	309,596	309,596
LHD2	0.73%	76,696	76,696
MHD	1.64%	173,596	173,596
HHD	1.02%	107,830	107,830
OBUS	0.10%	10,500	10,500
UBUS	0.05%	5,709	5,709
MCY	2.39%	252,767	252,767
SBUS	0.10%	10,916	10,916
MH	0.29%	30,718	30,718
	100.00%	10,565,578	10,565,578

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Medical Office Building	84.2	84.2	84.2	30,738	968	968	968	353,305
Library	42.5	42.5	42.5	15,509	488	488	488	178,258
Strip Mall	98.5	98.5	98.5	35,970	1,133	1,133	1,133	413,438
Strip Mall	389	389	389	142,141	4,476	4,476	4,476	1,633,766
High Turnover (Sit Down Restaurant)	2,602	2,602	2,602	949,766	11,317	29,908	29,908	6,069,564
Condo/Townhouse	292	292	292	106,559	3,557	3,557	3,557	1,298,216
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unenclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apartments Mid Rise	139	139	139	50,811	1,696	1,696	1,696	619,031

Source: ECORP 2023 (See Appendix 5.1-1)

PROPOSED CONDITIONS

Vehicle type	Gas percent	Diesel percent	CNG percent	Electricity percent	
LDA	89.21%	0.13%	0.00%	10.65%	
LDT1	98.76%	0.00%	0.00%	1.24%	
LDT2	97.58%	0.34%	0.00%	2.08%	
MDV	95.53%	1.48%	0.00%	2.99%	
LHD1	57.05%	37.93%	0.00%	5.02%	
LHD2	30.86%	64.28%	0.00%	4.85%	
MHD	9.48%	81.80%	2.24%	6.47%	<< Equal to T6 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
HHD	0.07%	90.54%	5.46%	4.09%	<< Equal to T7 (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
OBUS	28.04%	64.73%	6.13%	1.53%	<< Motor coach, all other buses, and OBUS (https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf)
UBUS	27.74%	0.11%	68.00%	4.15%	
MCY	100.00%	0.00%	0.00%	0.00%	
SBUS	23.86%	70.07%	2.02%	4.05%	
MH	68.19%	31.81%	0.00%	0.00%	

PROPOSED CONDITIONS

Vehicle type	Gasoline			Diesel			CNG			Electricity		
	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	mpg	Gallons	VMT	m/kWh	kWh
LDA	4,621,631	31.84	145,151	6,962	45.48	153	0	0.00	0	551,905	2.70	204,361
LDT1	413,245	26.36	15,679	9	25.13	0	0	0.00	0	5,191	2.77	1,876
LDT2	2,402,418	26.19	91,735	8,422	35.76	235	0	0.00	0	51,257	2.85	18,004
MDV	1,457,936	21.42	68,074	22,647	26.09	868	0	0.00	0	45,626	2.77	16,477
LHD1	176,626	10.08	17,524	117,417	16.16	7,266	0	0.00	0	15,553	1.54	0
LHD2	23,671	8.99	2,632	49,304	13.57	3,633	0	0.00	0	3,722	1.56	0
MHD	16,459	4.83	3,409	142,009	8.67	16,388	3,897	6.90	0	11,231	0.00	0
HHD	76	4.27	18	97,626	6.22	15,690	5,887	5.02	1,174	4,414	0.54	0
OBUS	2,944	4.90	601	6,796	8.05	844	644	7.81	0	161	0.00	0
UBUS	1,583	8.60	184	6	10.18	0	3,882	3.36	1,155	237	0.57	0
MCY	252,767	40.68	6,214	0	0.00	0	0	0.00	0	0	0.00	0
SBUS	2,604	10.28	253	7,649	8.27	925	221	6.12	0	442	0.95	0
MH	20,948	4.42	4,745	9,770	9.38	1,042	0	0.00	0	0	0.00	0
	9,392,909		**356,219**	**468,617**		**47,045**	**14,531**		**2,329**	**689,740**		**240,718**

EMFAC Fuel Usage: Year 2024

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	24,165	2,771	8.72	3,651	491	7.44	0	0	0.00
LDA	18,354,149	636,191	28.85	45,679	1,066	42.86	0	0	0.00	1,308,232	481,427	2.72
LDT1	1,597,038	66,020	24.19	192	8	23.74	0	0	0.00	6,493	2,398	2.71
LDT2	8,749,659	373,333	23.44	28,646	884	32.41	0	0	0.00	78,706	27,100	2.90
LHD1	782,072	82,566	9.47	517,412	32,409	15.96	0	0	0.00	3,425	2,229	1.54
LHD2	109,112	12,738	8.57	204,885	15,525	13.20	0	0	0.00	840	538	1.56
MCY	144,381	3,616	39.93	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,313,917	277,995	19.12	95,417	3,912	24.39	0	0	0.00	65,993	23,563	2.80
MH	25,572	5,796	4.41	9,902	1,053	9.40	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	12,808	2,329	5.50	0	0	0.00	0	0	0.00
OBUS	24,091	5,106	4.72	0	0	0.00	0	0	0.00	63	70	0.90
PTO	0	0	0.00	23,708	4,793	4.95	0	0	0.00	101	210	0.48
SBUS	6,349	631	10.05	21,653	2,675	8.09	500	83	6.06	78	82	0.95
T6	99,033	21,513	4.60	638,747	76,379	8.36	14,205	2,061	6.89	2,679	3,021	0.89
T7	220	67	3.29	880,990	154,435	5.70	48,437	10,251	4.72	2,804	5,242	0.53
UBUS	13,605	2,896	4.70	298	31	9.48	32,907	5,727	5.75	174	303	0.57
Total	**35,219,198**	**1,488,468**	**23.66**	**2,504,502**	**298,272**	**8.40**	**99,699**	**18,613**	**5.36**	**1,469,588**	**546,184**	**2.69**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
Sacramento	2024	All Other Buses	Aggregate	Aggregate	Diesel	448.1720568	24165.24726	24165.24726	0	3988.731306	2.770935613	0
Sacramento	2024	All Other Buses	Aggregate	Aggregate	Natural Gas	59.62575461	3650.50036	3650.50036	0	530.6692161	0.490917707	0
Sacramento	2024	LDA	Aggregate	Aggregate	Gasoline	493200.1993	18074528.65	18074528.65	0	2269233.534	626.231759	0
Sacramento	2024	LDA	Aggregate	Aggregate	Diesel	1664.361034	45679.43808	45679.43808	0	6936.376006	1.065668693	0
Sacramento	2024	LDA	Aggregate	Aggregate	Electricity	21753.2242	1026758.976	0	1026758.976	108519.5839	0	396413.7077
Sacramento	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	12557.71162	561093.5687	279620.4489	281473.1198	51926.13754	9.958909599	85013.27142
Sacramento	2024	LDT1	Aggregate	Aggregate	Gasoline	50226.44621	1595989.731	1595989.731	0	219342.9065	65.98229527	0
Sacramento	2024	LDT1	Aggregate	Aggregate	Diesel	20.20513654	191.8459499	191.8459499	0	58.11177291	0.008081932	0
Sacramento	2024	LDT1	Aggregate	Aggregate	Electricity	137.4326143	5203.342878	0	5203.342878	635.5815194	0	2008.919806
Sacramento	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	46.9445185	2337.598743	1048.190327	1289.408417	194.115584	0.037479867	389.4397724
Sacramento	2024	LDT2	Aggregate	Aggregate	Gasoline	232779.326	8714872.614	8714872.614	0	1079554.899	372.085082	0
Sacramento	2024	LDT2	Aggregate	Aggregate	Diesel	712.1328005	28646.0961	28646.0961	0	3389.855955	0.883864637	0
Sacramento	2024	LDT2	Aggregate	Aggregate	Electricity	1089.567979	39603.20378	0	39603.20378	5565.115779	0	15290.10529
Sacramento	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1547.679179	73888.83588	34786.40406	39102.43182	6399.653404	1.247593019	11810.09985
Sacramento	2024	LHD1	Aggregate	Aggregate	Gasoline	21611.08184	782072.4324	782072.4324	0	321972.9189	82.56582896	0
Sacramento	2024	LHD1	Aggregate	Aggregate	Diesel	14392.00662	517411.5259	517411.5259	0	181033.3382	32.40925702	0
Sacramento	2024	LHD1	Aggregate	Aggregate	Electricity	45.54584243	3425.015859	0	3425.015859	636.2465756	0	2228.534471
Sacramento	2024	LHD2	Aggregate	Aggregate	Gasoline	2981.215087	109111.7968	109111.7968	0	44415.66278	12.73824481	0
Sacramento	2024	LHD2	Aggregate	Aggregate	Diesel	5362.494031	204884.5529	204884.5529	0	67453.4289	15.52524985	0
Sacramento	2024	LHD2	Aggregate	Aggregate	Electricity	11.78868828	839.9350684	0	839.9350684	156.0465244	0	537.602576
Sacramento	2024	MCY	Aggregate	Aggregate	Gasoline	26567.59997	144380.6418	144380.6418	0	53135.19995	3.616159165	0
Sacramento	2024	MDV	Aggregate	Aggregate	Gasoline	152412.2812	5292619.19	5292619.19	0	692679.4423	277.2218986	0
Sacramento	2024	MDV	Aggregate	Aggregate	Diesel	2523.696776	95417.44955	95417.44955	0	11812.79874	3.912332256	0
Sacramento	2024	MDV	Aggregate	Aggregate	Electricity	1189.885707	43207.68137	0	43207.68137	6075.265709	0	16681.73113
Sacramento	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	961.9692463	44082.77056	21297.71976	22785.0508	3977.742834	0.772774336	6881.764444
Sacramento	2024	MH	Aggregate	Aggregate	Gasoline	2852.273737	25572.28773	25572.28773	0	285.3414646	5.796088086	0
Sacramento	2024	MH	Aggregate	Aggregate	Diesel	1091.341957	9901.825212	9901.825212	0	109.1341957	1.053420503	0
Sacramento	2024	Motor Coach	Aggregate	Aggregate	Diesel	91.79863294	12807.90907	12807.90907	0	2109.532585	2.329043151	0
Sacramento	2024	OBUS	Aggregate	Aggregate	Gasoline	546.5666781	24091.16445	24091.16445	0	10935.7061	5.106418298	0
Sacramento	2024	OBUS	Aggregate	Aggregate	Electricity	0.699299808	62.97393419	0	62.97393419	13.99159055	0	69.85598948
Sacramento	2024	PTO	Aggregate	Aggregate	Diesel	0	23707.51155	23707.51155	0	0	4.793431643	0
Sacramento	2024	PTO	Aggregate	Aggregate	Electricity	0	101.4354772	0	101.4354772	0	0	210.1254948
Sacramento	2024	SBUS	Aggregate	Aggregate	Gasoline	120.643206	6349.134667	6349.134667	0	482.5728242	0.631483077	0
Sacramento	2024	SBUS	Aggregate	Aggregate	Diesel	976.1484084	21653.2821	21653.2821	0	14134.62895	2.675330014	0
Sacramento	2024	SBUS	Aggregate	Aggregate	Electricity	2.70021539	77.60995264	0	77.60995264	35.08010252	0	81.75863846
Sacramento	2024	SBUS	Aggregate	Aggregate	Natural Gas	19.01635328	500.1783812	500.1783812	0	275.3567955	0.082539803	0
Sacramento	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	11.21332019	754.8106929	754.8106929	0	257.682098	0.084551705	0
Sacramento	2024	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.06089364	4.530168593	0	4.530168593	1.399335843	0	4.921047503
Sacramento	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	14.94969052	1036.245357	1036.245357	0	343.5438881	0.116063651	0
Sacramento	2024	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.069722463	5.433757683	0	5.433757683	1.602222198	0	5.902601443
Sacramento	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	49.03991651	2699.057894	2699.057894	0	1126.937281	0.297704793	0
Sacramento	2024	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.411106135	22.87943456	0	22.87943456	9.447218983	0	24.8535528
Sacramento	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	82.57736008	17008.38345	17008.38345	0	1897.627735	1.754038637	0
Sacramento	2024	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.333333121	64.98328996	0	64.98328996	7.659995111	0	70.59027722
Sacramento	2024	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	710.4104702	24155.1965	24155.1965	0	10137.55741	2.929113807	0
Sacramento	2024	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	2.388774294	95.36570888	0	95.36570888	34.08780918	0	101.8771916
Sacramento	2024	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	331.462539	11362.04942	11362.04942	0	4729.970431	1.378434661	0
Sacramento	2024	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	0.971017703	38.92728201	0	38.92728201	13.85642262	0	41.58520097
Sacramento	2024	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1378.194578	47255.29546	47255.29546	0	19666.83662	5.721135866	0
Sacramento	2024	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	3.899105106	152.7751146	0	152.7751146	55.64022986	0	163.2064587
Sacramento	2024	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	185.1558813	10197.61408	10197.61408	0	2642.174427	1.208135703	0
Sacramento	2024	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	0.47566588	21.07838791	0	21.07838791	6.787752102	0	22.51760082
Sacramento	2024	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	2.737627426	154.2476047	154.2476047	0	39.06594337	0.022255468	0
Sacramento	2024	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1036.823405	43745.0413	43745.0413	0	11985.67856	5.123493572	0
Sacramento	2024	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	2.712713246	122.7436578	0	122.7436578	31.35896513	0	130.1182301
Sacramento	2024	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	2761.884822	122453.5254	122453.5254	0	31927.38855	14.38882798	0
Sacramento	2024	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	6.465867063	301.0666887	0	301.0666887	74.74542325	0	319.1551025
Sacramento	2024	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	1920.549966	83458.29567	83458.29567	0	22201.5576	9.780791061	0
Sacramento	2024	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	4.701740384	207.3527608	0	207.3527608	54.35211883	0	219.8107399
Sacramento	2024	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	900.305582	42899.23989	42899.23989	0	10407.53253	4.927381973	0
Sacramento	2024	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	1.903709506	126.4592322	0	126.4592322	22.00688189	0	134.0570403
Sacramento	2024	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	10.05928052	506.2100902	506.2100902	0	116.2852828	0.064815966	0
Sacramento	2024	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	9.736421954	499.4906955	499.4906955	0	112.5530378	0.057190928	0
Sacramento	2024	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	605.2056566	38201.96673	38201.96673	0	6996.177391	4.196395201	0
Sacramento	2024	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	0.173525475	12.95713711	0	12.95713711	2.005954488	0	13.73561598
Sacramento	2024	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	7.898863895	514.4905719	514.4905719	0	91.31086663	0.064602002	0
Sacramento	2024	T6 OOS Class 4	Aggregate	Aggregate	Diesel	5.743915948	383.7196247	383.7196247	0	131.9951885	0.042759989	0
Sacramento	2024	T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.623148238	526.3943232	526.3943232	0	175.1799465	0.05869994	0
Sacramento	2024	T6 OOS Class 6	Aggregate	Aggregate	Diesel	25.12143338	1375.483427	1375.483427	0	577.2905391	0.150654067	0
Sacramento	2024	T6 OOS Class 7	Aggregate	Aggregate	Diesel	39.35952796	10001.47491	10001.47491	0	904.4819525	1.023854997	0
Sacramento	2024	T6 Public Class 4	Aggregate	Aggregate	Diesel	496.9049808	17145.90927	17145.90927	0	2549.122552	2.262773847	0
Sacramento	2024	T6 Public Class 4	Aggregate	Aggregate	Electricity	2.429791627	103.7808735	0	103.7808735	12.46483105	0	122.5548913
Sacramento	2024	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	25.16170541	1064.819801	1064.819801	0	129.0795488	0.157998912	0
Sacramento	2024	T6 Public Class 5	Aggregate	Aggregate	Diesel	594.3379864	22128.04877	22128.04877	0	3048.95387	2.844239385	0
Sacramento	2024	T6 Public Class 5	Aggregate	Aggregate	Electricity	2.341200694	99.06825673	0	99.06825673	12.01035956	0	116.9897596
Sacramento	2024	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	54.27812246	2237.090804	2237.090804	0	278.4467682	0.337448414	0
Sacramento	2024	T6 Public Class 6	Aggregate	Aggregate	Diesel	758.1135124	26366.58783	26366.58783	0	3889.122319	3.410080404	0
Sacramento	2024	T6 Public Class 6	Aggregate	Aggregate	Electricity	3.813755475	145.7769266	0	145.7769266	19.56456559	0	172.1480539
Sacramento	2024	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	47.69315068	1993.6913	1993.6913	0	244.665863	0.30037714	0
Sacramento	2024	T6 Public Class 7	Aggregate	Aggregate	Diesel	2577.514338	112706.7305	112706.7305	0	13222.64856	14.35328282	0
Sacramento	2024	T6 Public Class 7	Aggregate	Aggregate	Electricity	12.72618407	794.3218867	0	794.3218867	65.28532426	0	938.0151586
Sacramento	2024	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	138.597003	7723.792198	7723.792198	0	711.0026253	1.112331524	0
Sacramento	2024	T6 Utility Class 5	Aggregate	Aggregate	Diesel	40.42799811	1643.974989	1643.974989	0	517.4783758	0.185725204	0
Sacramento	2024	T6 Utility Class 5	Aggregate	Aggregate	Electricity	0.311559072	13.55443242	0	13.55443242	3.987956126	0	15.1818235
Sacramento	2024	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.179360901	7.005000708	7.005000708	0	2.295819533	0.00096071	0
Sacramento	2024	T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.680252696	310.8228725	310.8228725	0	98.30723451	0.035005213	0
Sacramento	2024	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.058157102	2.530134998	0	2.530134998	0.744410909	0	2.833911578
Sacramento	2024	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.030774988	1.210303586	1.210303586	0	0.393919846	0.000165445	0
Sacramento	2024	T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.709894462	431.3195376	431.3195376	0	111.4866491	0.048286488	0
Sacramento	2024	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.069592439	4.119657681	0	4.119657681	0.890783217	0	4.614277739
Sacramento	2024	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.051369445	2.222861241	2.222861241	0	0.657528902	0.000302938	0

Sacramento	2024 T6TS	Aggregate	Aggregate	Gasoline	2096.631429	99033.02741	99033.02741	0	41949.40162	21.51325118	0
Sacramento	2024 T6TS	Aggregate	Aggregate	Electricity	3.773023934	339.7715234	0	339.7715234	75.49066287	0	396.658421
Sacramento	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	912.3206943	185866.3672	185866.3672	0	20965.12955	30.34467391	0
Sacramento	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	5.909183646	1060.103189	0	1060.103189	135.7930402	0	1935.670057
Sacramento	2024 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	14.25039999	2999.05884	2999.05884	0	327.4741918	0.539370833	0
Sacramento	2024 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	802.5687807	218802.619	218802.619	0	18443.03058	35.10676831	0
Sacramento	2024 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	338.5055363	79558.2466	79558.2466	0	7778.857225	12.97319123	0
Sacramento	2024 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	10.99578496	2023.809182	2023.809182	0	179.8910419	0.340489521	0
Sacramento	2024 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.01909976	4.068164156	0	4.068164156	0.31247207	0	7.40392548
Sacramento	2024 T7 POAK Class 8	Aggregate	Aggregate	Diesel	36.97254827	3667.655654	3667.655654	0	604.8708897	0.62857791	0
Sacramento	2024 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.085755551	6.783633535	0	6.783633535	1.402960815	0	12.34599078
Sacramento	2024 T7 Public Class 8	Aggregate	Aggregate	Diesel	4141.699383	177467.965	177467.965	0	21246.91784	33.98816475	0
Sacramento	2024 T7 Public Class 8	Aggregate	Aggregate	Electricity	14.21626456	868.2531473	0	868.2531473	72.92943719	0	1704.018486
Sacramento	2024 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	62.9230119	3092.151834	3092.151834	0	322.795051	0.665689283	0
Sacramento	2024 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	168.2065563	11844.23482	11844.23482	0	1584.50576	2.006510262	0
Sacramento	2024 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	1.387775496	104.2285934	0	104.2285934	13.07284517	0	190.0247951
Sacramento	2024 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	3.809595177	264.0134835	264.0134835	0	35.88638657	0.045276325	0
Sacramento	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	492.0941688	29375.80393	29375.80393	0	4635.52707	5.086361876	0
Sacramento	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	0.347830007	26.45832766	0	26.45832766	3.276558662	0	48.2376105
Sacramento	2024 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	15.10797722	854.0653983	854.0653983	0	142.3171454	0.163375221	0
Sacramento	2024 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1316.49472	74963.29249	74963.29249	0	12401.38026	12.7645781	0
Sacramento	2024 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	5.749253954	380.1624175	0	380.1624175	54.15797224	0	693.0946982
Sacramento	2024 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	37.94058987	2094.356779	2094.356779	0	357.4003566	0.380215755	0
Sacramento	2024 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	311.6335015	20213.65719	20213.65719	0	1433.514107	8.543290869	0
Sacramento	2024 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	2.555215203	159.4034638	0	159.4034638	11.75398993	0	296.5782269
Sacramento	2024 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	591.2499545	38292.74559	38292.74559	0	2719.749791	8.299163829	0
Sacramento	2024 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	974.1598058	75896.02217	75896.02217	0	14154.54198	12.42667686	0
Sacramento	2024 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	2.472542396	189.6045433	0	189.6045433	35.92604101	0	345.2148501
Sacramento	2024 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	11.41429158	840.9590003	840.9590003	0	165.8496567	0.158308339	0
Sacramento	2024 T7 Utility Class 8	Aggregate	Aggregate	Diesel	28.88733604	1310.342276	1310.342276	0	369.7579013	0.225517194	0
Sacramento	2024 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.063199083	3.994689743	0	3.994689743	0.808948263	0	7.521194991
Sacramento	2024 T7IS	Aggregate	Aggregate	Gasoline	9.560258333	220.2316007	220.2316007	0	191.2816487	0.066933527	0
Sacramento	2024 T7IS	Aggregate	Aggregate	Electricity	0.003543916	1.036190561	0	1.036190561	0.070906662	0	2.082167657
Sacramento	2024 UBUS	Aggregate	Aggregate	Gasoline	179.3370522	13604.69733	13604.69733	0	717.3482087	2.895548815	0
Sacramento	2024 UBUS	Aggregate	Aggregate	Diesel	6.270269616	298.4677101	298.4677101	0	25.08107847	0.031480773	0
Sacramento	2024 UBUS	Aggregate	Aggregate	Electricity	1.665294001	173.9240734	0	173.9240734	6.661176006	0	303.1921181
Sacramento	2024 UBUS	Aggregate	Aggregate	Natural Gas	343.418592	32906.53669	32906.53669	0	1373.674368	5.727295138	0

EMFAC Fuel Usage: Year 2025

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	24,332	2,759	8.82	3,712	494	7.51	0	0	0.00
LDA	18,315,663	622,137	29.44	41,591	960	43.30	0	0	0.00	1,550,775	572,229	2.71
LDT1	1,549,077	62,984	24.59	167	7	23.78	0	0	0.00	8,171	2,993	2.73
LDT2	8,916,174	371,333	24.01	29,746	898	33.12	0	0	0.00	102,634	35,564	2.89
LHD1	760,756	79,208	9.60	504,882	31,541	16.01	0	0	0.00	8,855	5,764	1.54
LHD2	105,560	12,196	8.66	203,025	15,289	13.28	0	0	0.00	2,156	1,380	1.56
MCY	143,679	3,585	40.08	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,325,251	271,947	19.58	93,388	3,782	24.69	0	0	0.00	87,161	31,246	2.79
MH	24,193	5,483	4.41	9,792	1,042	9.40	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	12,872	2,319	5.55	0	0	0.00	0	0	0.00
OBUS	22,264	4,685	4.75	0	0	0.00	0	0	0.00	152	169	0.90
PTO	0	0	0.00	23,919	4,778	5.01	0	0	0.00	275	570	0.48
SBUS	6,368	629	10.13	21,558	2,653	8.13	522	86	6.08	176	185	0.95
T6	93,881	20,204	4.65	644,813	76,546	8.42	15,229	2,207	6.90	7,278	8,116	0.90
T7	194	57	3.42	891,397	153,650	5.80	50,659	10,572	4.79	6,528	12,190	0.54
UBUS	13,976	2,975	4.70	294	31	9.45	33,665	5,817	5.79	347	606	0.57
Total	**35,277,035**	**1,457,422**	**24.21**	**2,501,777**	**296,255**	**8.44**	**103,786**	**19,176**	**5.41**	**1,774,507**	**671,012**	**2.64**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
Sacramento	2025	All Other Buses	Aggregate	Aggregate	Diesel	459.152534	24332.4636	24332.4636	0	4086.457553	2.758850969	0
Sacramento	2025	All Other Buses	Aggregate	Aggregate	Natural Gas	62.31948121	3711.777498	3711.777498	0	554.6433828	0.49413976	0
Sacramento	2025	LDA	Aggregate	Aggregate	Gasoline	491398.2875	18017006.84	18017006.84	0	2259539.787	611.4937225	0
Sacramento	2025	LDA	Aggregate	Aggregate	Diesel	1553.179368	41591.1948	41591.1948	0	6423.396188	0.960487597	0
Sacramento	2025	LDA	Aggregate	Aggregate	Electricity	25544.25516	1235520.352	0	1235520.352	126966.2385	0	477012.8289
Sacramento	2025	LDA	Aggregate	Aggregate	Plug-in Hybrid	13839.58259	613910.6611	298656.1188	315254.5423	57226.67403	10.64327416	95216.26786
Sacramento	2025	LDT1	Aggregate	Aggregate	Gasoline	48785.93501	1547597.8	1547597.8	0	212712.1866	62.93127109	0
Sacramento	2025	LDT1	Aggregate	Aggregate	Diesel	18.32966044	167.489148	167.489148	0	51.70597598	0.007042138	0
Sacramento	2025	LDT1	Aggregate	Aggregate	Electricity	154.133345	6253.331287	0	6253.331287	719.8313558	0	2414.301992
Sacramento	2025	LDT1	Aggregate	Aggregate	Plug-in Hybrid	68.80007272	3397.039343	1479.447127	1917.592216	284.4883007	0.052931048	579.1700025
Sacramento	2025	LDT2	Aggregate	Aggregate	Gasoline	237055.1324	8875175.116	8875175.116	0	1098484.37	369.8615216	0
Sacramento	2025	LDT2	Aggregate	Aggregate	Diesel	742.8591203	29745.88465	29745.88465	0	3530.432508	0.898116959	0
Sacramento	2025	LDT2	Aggregate	Aggregate	Electricity	1513.657547	54317.14583	0	54317.14583	7696.673897	0	20970.90133
Sacramento	2025	LDT2	Aggregate	Aggregate	Plug-in Hybrid	1896.559955	89315.33456	40998.49218	48316.84238	7842.275416	1.471552878	14593.12647
Sacramento	2025	LHD1	Aggregate	Aggregate	Gasoline	21064.70218	760756.2379	760756.2379	0	313832.676	79.20833646	0
Sacramento	2025	LHD1	Aggregate	Aggregate	Diesel	14102.97332	504881.7138	504881.7138	0	177397.6629	31.54107237	0
Sacramento	2025	LHD1	Aggregate	Aggregate	Electricity	126.7678879	8855.051642	0	8855.051642	1773.187603	0	5763.823266
Sacramento	2025	LHD2	Aggregate	Aggregate	Gasoline	2913.052565	105559.7948	105559.7948	0	43400.14277	12.19562128	0
Sacramento	2025	LHD2	Aggregate	Aggregate	Diesel	5366.007996	203025.0058	203025.0058	0	67497.63016	15.2890039	0
Sacramento	2025	LHD2	Aggregate	Aggregate	Electricity	32.46589156	2155.55361	0	2155.55361	430.528586	0	1380.357826
Sacramento	2025	MCY	Aggregate	Aggregate	Gasoline	26621.95836	143679.2199	143679.2199	0	53243.91673	3.585081887	0
Sacramento	2025	MDV	Aggregate	Aggregate	Gasoline	152263.9196	5300161.213	5300161.213	0	691884.2217	271.0357031	0
Sacramento	2025	MDV	Aggregate	Aggregate	Diesel	2523.925631	93387.59733	93387.59733	0	11727.81799	3.782251219	0
Sacramento	2025	MDV	Aggregate	Aggregate	Electricity	1633.501521	58547.73754	0	58547.73754	8302.484428	0	22604.2589
Sacramento	2025	MDV	Aggregate	Aggregate	Plug-in Hybrid	1178.532607	53702.28644	25089.33203	28612.95441	4873.23233	0.911084917	8641.965035
Sacramento	2025	MH	Aggregate	Aggregate	Gasoline	2699.200325	24193.05559	24193.05559	0	270.0280005	5.482646957	0
Sacramento	2025	MH	Aggregate	Aggregate	Diesel	1085.673442	9792.361587	9792.361587	0	108.5673442	1.042222345	0
Sacramento	2025	Motor Coach	Aggregate	Aggregate	Diesel	96.28279742	12872.0525	12872.0525	0	2212.578685	2.318553832	0
Sacramento	2025	OBUS	Aggregate	Aggregate	Gasoline	520.9637171	22263.94795	22263.94795	0	10423.44205	4.68545612	0
Sacramento	2025	OBUS	Aggregate	Aggregate	Electricity	1.719092546	152.0704909	0	152.0704909	34.39560366	0	168.6893911
Sacramento	2025	PTO	Aggregate	Aggregate	Diesel	0	23918.81915	23918.81915	0	0	4.778072245	0
Sacramento	2025	PTO	Aggregate	Aggregate	Electricity	0	275.06994	0	275.06994	0	0	569.8125431
Sacramento	2025	SBUS	Aggregate	Aggregate	Gasoline	120.8436248	6367.611202	6367.611202	0	483.3744993	0.628580268	0
Sacramento	2025	SBUS	Aggregate	Aggregate	Diesel	978.342651	21557.86235	21557.86235	0	14166.40159	2.653029999	0
Sacramento	2025	SBUS	Aggregate	Aggregate	Electricity	5.886108389	175.59329	0	175.59329	76.45501363	0	184.9797329
Sacramento	2025	SBUS	Aggregate	Aggregate	Natural Gas	20.00841731	521.5570373	521.5570373	0	289.7218826	0.085823336	0
Sacramento	2025	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	11.41002127	763.5020513	763.5020513	0	262.2022888	0.084798049	0
Sacramento	2025	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.144873461	11.73872732	0	11.73872732	3.329192138	0	12.75158608
Sacramento	2025	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	15.0985278	1049.125503	1049.125503	0	346.9641689	0.116591761	0
Sacramento	2025	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.167641629	14.36543807	0	14.36543807	3.852404629	0	15.60493868
Sacramento	2025	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	51.17526518	2722.846701	2722.846701	0	1176.007594	0.297918742	0
Sacramento	2025	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	0.943885701	56.08555556	0	56.08555556	21.6904934	0	60.92481493
Sacramento	2025	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	84.43563631	17260.19755	17260.19755	0	1940.330922	1.755639203	0
Sacramento	2025	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	0.802145966	170.6701922	0	170.6701922	18.4333143	0	185.3962178
Sacramento	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	725.8938074	24498.64338	24498.64338	0	10358.50463	2.953430969	0
Sacramento	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	6.324130106	259.7038635	0	259.7038635	90.24533661	0	277.4362041
Sacramento	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	339.2340572	11524.52822	11524.52822	0	4840.869997	1.390113288	0
Sacramento	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	2.803653203	115.1747131	0	115.1747131	40.00813121	0	123.0387365
Sacramento	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1412.245218	47939.6232	47939.6232	0	20152.73926	5.773484538	0
Sacramento	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	11.37462883	461.129876	0	461.129876	162.3159533	0	492.6153992
Sacramento	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	190.6821779	10385.81643	10385.81643	0	2721.034678	1.227068772	0
Sacramento	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	1.00482483	48.85449849	0	48.85449849	14.33885032	0	52.19023866
Sacramento	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	2.784563125	155.4692144	155.4692144	0	39.73571579	0.022420053	0
Sacramento	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1058.85061	44347.1474	44347.1474	0	12240.31306	5.168753629	0
Sacramento	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	9.348057667	439.1896648	0	439.1896648	108.0635466	0	465.5766571
Sacramento	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	2846.929218	124278.0056	124278.0056	0	32910.50176	14.53871436	0
Sacramento	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	21.90228562	1046.957603	0	1046.957603	253.1904217	0	1109.859953
Sacramento	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	1972.008328	84684.75635	84684.75635	0	22796.41627	9.880080014	0
Sacramento	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	15.83942233	732.7757785	0	732.7757785	183.1037221	0	776.8017435
Sacramento	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	942.5376664	43501.75888	43501.75888	0	10895.73542	4.970850924	0
Sacramento	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	6.353798204	435.5737255	0	435.5737255	73.44990723	0	461.7434682
Sacramento	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	10.44153817	506.0957733	506.0957733	0	120.7041813	0.064834567	0
Sacramento	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.06622194	506.5755359	506.5755359	0	116.3655257	0.057786825	0
Sacramento	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.058587939	3.374047033	0	3.374047033	0.677276578	0	3.576763445
Sacramento	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	635.2249478	38853.86419	38853.86419	0	7343.200396	4.231837422	0
Sacramento	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	2.285590191	172.62307	0	172.62307	26.42142261	0	182.9944516
Sacramento	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	8.17204668	513.8864093	513.8864093	0	94.46885963	0.064469642	0
Sacramento	2025	T6 OOS Class 4	Aggregate	Aggregate	Diesel	5.892479901	391.7543697	391.7543697	0	135.4091881	0.04298832	0
Sacramento	2025	T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.759283562	537.4165485	537.4165485	0	178.3083363	0.059086971	0
Sacramento	2025	T6 OOS Class 6	Aggregate	Aggregate	Diesel	26.49165136	1404.284817	1404.284817	0	608.7781482	0.151254449	0
Sacramento	2025	T6 OOS Class 7	Aggregate	Aggregate	Diesel	40.0977785	10210.89683	10210.89683	0	921.44695	1.029599414	0
Sacramento	2025	T6 Public Class 4	Aggregate	Aggregate	Diesel	492.1321089	17067.01632	17067.01632	0	2524.637719	2.230971988	0
Sacramento	2025	T6 Public Class 4	Aggregate	Aggregate	Electricity	5.170035013	222.5380095	0	222.5380095	26.52227962	0	262.7952594
Sacramento	2025	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	27.94720846	1175.400824	1175.400824	0	143.3691794	0.173992132	0
Sacramento	2025	T6 Public Class 5	Aggregate	Aggregate	Diesel	598.8456627	22112.54069	22112.54069	0	3072.07825	2.828622053	0
Sacramento	2025	T6 Public Class 5	Aggregate	Aggregate	Electricity	5.274159955	225.7817752	0	225.7817752	27.05644057	0	266.6258241
Sacramento	2025	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	57.08673903	2326.847504	2326.847504	0	292.8549712	0.350613578	0
Sacramento	2025	T6 Public Class 6	Aggregate	Aggregate	Diesel	747.4338203	26258.29451	26258.29451	0	3834.335498	3.364693384	0
Sacramento	2025	T6 Public Class 6	Aggregate	Aggregate	Electricity	8.02405992	326.2549957	0	326.2549957	41.16342739	0	385.2747062
Sacramento	2025	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	51.89601011	2155.670604	2155.670604	0	266.2265318	0.323794201	0
Sacramento	2025	T6 Public Class 7	Aggregate	Aggregate	Diesel	2532.865641	112133.723	112133.723	0	12993.60074	14.12448171	0
Sacramento	2025	T6 Public Class 7	Aggregate	Aggregate	Electricity	26.72164277	1701.269571	0	1701.269571	137.0820274	0	2009.030185
Sacramento	2025	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	154.0273054	8385.657923	8385.657923	0	790.1600767	1.20553463	0
Sacramento	2025	T6 Utility Class 5	Aggregate	Aggregate	Diesel	40.5011472	1640.772024	1640.772024	0	518.4146842	0.184466368	0
Sacramento	2025	T6 Utility Class 5	Aggregate	Aggregate	Electricity	0.712282058	30.95343363	0	30.95343363	9.117210336	0	34.66980774
Sacramento	2025	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.167620252	6.48234389	6.48234389	0	2.14553923	0.000883784	0
Sacramento	2025	T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.68805271	310.1219568	310.1219568	0	98.40707469	0.03475861	0
Sacramento	2025	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.135516996	5.889246614	0	5.889246614	1.734617552	0	6.596329515
Sacramento	2025	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.029126658	1.136099652	1.136099652	0	0.372821224	0.00015431	0

Sacramento	2025	T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.677258539	429.7833513	429.7833513	0	111.0689093	0.047829264	0
Sacramento	2025	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.153258936	9.454383755	0	9.454383755	1.961714382	0	10.5895091
Sacramento	2025	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.046846746	2.019512634	2.019512634	0	0.599638347	0.000273574	0
Sacramento	2025	T6TS	Aggregate	Aggregate	Gasoline	1996.700173	93880.67563	93880.67563	0	39949.97706	20.20420805	0
Sacramento	2025	T6TS	Aggregate	Aggregate	Electricity	8.896966213	787.6722534	0	787.6722534	178.0105	0	919.5497881
Sacramento	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	929.9492681	188597.9573	188597.9573	0	21370.23418	30.36721291	0
Sacramento	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	11.82674452	2320.043881	0	2320.043881	271.7785891	0	4236.228621
Sacramento	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	15.27831945	3139.490853	3139.490853	0	351.095781	0.563593614	0
Sacramento	2025	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	819.5219214	223562.8231	223562.8231	0	18832.61375	34.98741774	0
Sacramento	2025	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	347.6814299	81289.09194	81289.09194	0	7989.719259	13.02898585	0
Sacramento	2025	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	11.26841234	2092.187564	2092.187564	0	184.3512259	0.349865997	0
Sacramento	2025	T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.046176682	11.00369862	0	11.00369862	0.755450524	0	20.02637098
Sacramento	2025	T7 POAK Class 8	Aggregate	Aggregate	Diesel	37.31874938	3714.977129	3714.977129	0	610.5347399	0.633795723	0
Sacramento	2025	T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.197388746	17.20334678	0	17.20334678	3.229279889	0	31.30952751
Sacramento	2025	T7 Public Class 8	Aggregate	Aggregate	Diesel	4147.788818	177768.3924	177768.3924	0	21278.15663	33.7475674	0
Sacramento	2025	T7 Public Class 8	Aggregate	Aggregate	Electricity	30.54290932	1920.846142	0	1920.846142	156.6851248	0	3769.819143
Sacramento	2025	T7 Public Class 8	Aggregate	Aggregate	Natural Gas	66.69849379	3229.481469	3229.481469	0	342.1632731	0.690878182	0
Sacramento	2025	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	169.2620944	11773.93114	11773.93114	0	1594.44893	1.973618473	0
Sacramento	2025	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	2.941756653	237.8176967	0	237.8176967	27.71134767	0	433.5783263
Sacramento	2025	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	3.942874337	273.749451	273.749451	0	37.14187625	0.046276055	0
Sacramento	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	507.6723916	29349.35271	29349.35271	0	4782.273929	5.062686282	0
Sacramento	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	3.194839192	248.227561	0	248.227561	30.09538519	0	452.5571138
Sacramento	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	15.39772288	839.657381	839.657381	0	145.0465495	0.159353786	0
Sacramento	2025	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1377.58441	76100.92254	76100.92254	0	12976.84515	12.89753649	0
Sacramento	2025	T7 Single Other Class 8	Aggregate	Aggregate	Electricity	12.81556466	899.2619419	0	899.2619419	120.7226191	0	1639.493163
Sacramento	2025	T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	39.5557971	2122.340998	2122.340998	0	372.6156087	0.382371372	0
Sacramento	2025	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	285.4256111	18514.44658	18514.44658	0	1312.957811	7.807676579	0
Sacramento	2025	T7 SWCV Class 8	Aggregate	Aggregate	Electricity	6.356077938	404.2011392	0	404.2011392	29.23795851	0	752.0367145
Sacramento	2025	T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	621.1305573	40229.07095	40229.07095	0	2857.200564	8.574311159	0
Sacramento	2025	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	1028.071352	77318.93006	77318.93006	0	14937.87675	12.56836859	0
Sacramento	2025	T7 Tractor Class 8	Aggregate	Aggregate	Electricity	5.562729235	455.6908194	0	455.6908194	80.82645579	0	829.6807406
Sacramento	2025	T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	11.60201643	825.5565499	825.5565499	0	168.5772987	0.154744223	0
Sacramento	2025	T7 Utility Class 8	Aggregate	Aggregate	Diesel	29.57643703	1313.928913	1313.928913	0	378.5783939	0.22505736	0
Sacramento	2025	T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.175164933	11.20472178	0	11.20472178	2.242111142	0	21.09623094
Sacramento	2025	T7IS	Aggregate	Aggregate	Gasoline	7.621423831	193.643833	193.643833	0	152.489448	0.05660207	0
Sacramento	2025	T7IS	Aggregate	Aggregate	Electricity	0.007986364	2.259484279	0	2.259484279	0.159791181	0	4.540308767
Sacramento	2025	UBUS	Aggregate	Aggregate	Gasoline	184.232421	13976.26109	13976.26109	0	736.929684	2.974664125	0
Sacramento	2025	UBUS	Aggregate	Aggregate	Diesel	6.215216529	294.3637228	294.3637228	0	24.86086612	0.03113556	0
Sacramento	2025	UBUS	Aggregate	Aggregate	Electricity	3.32547593	347.4670622	0	347.4670622	13.30190372	0	605.7199128
Sacramento	2025	UBUS	Aggregate	Aggregate	Natural Gas	351.5947808	33664.90337	33664.90337	0	1406.379123	5.817158816	0

EMFAC Fuel Usage: Year 2026

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	24,539	2,750	8.92	3,723	491	7.59	0	0	0.00
LDA	18,278,791	608,242	30.05	37,722	862	43.77	0	0	0.00	1,723,059	636,434	2.71
LDT1	1,502,449	60,056	25.02	143	6	23.84	0	0	0.00	9,911	3,610	2.75
LDT2	9,056,381	368,414	24.58	30,675	907	33.81	0	0	0.00	125,535	43,689	2.87
LHD1	740,600	76,098	9.73	491,992	30,658	16.05	0	0	0.00	16,292	10,606	1.54
LHD2	102,173	11,683	8.75	200,748	15,028	13.36	0	0	0.00	3,950	2,530	1.56
MCY	143,067	3,557	40.22	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,333,629	265,978	20.05	91,089	3,643	25.01	0	0	0.00	107,199	38,536	2.78
MH	22,993	5,210	4.41	9,690	1,032	9.39	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	12,949	2,309	5.61	0	0	0.00	0	0	0.00
OBUS	20,609	4,304	4.79	0	0	0.00	0	0	0.00	251	279	0.90
PTO	0	0	0.00	24,093	4,755	5.07	0	0	0.00	482	998	0.48
SBUS	6,562	645	10.17	21,443	2,628	8.16	543	89	6.09	298	314	0.95
T6	88,998	18,970	4.69	650,010	76,587	8.49	16,187	2,344	6.91	13,006	14,442	0.90
T7	168	46	3.62	901,374	152,799	5.90	52,497	10,814	4.85	11,222	20,931	0.54
UBUS	14,348	3,054	4.70	294	31	9.45	34,419	5,784	5.95	521	908	0.57
Total	**35,310,767**	**1,426,257**	**24.76**	**2,496,762**	**293,995**	**8.49**	**107,369**	**19,522**	**5.50**	**2,011,726**	**773,277**	**2.60**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
Sacramento	2026	All Other Buses	Aggregate	Aggregate	Diesel	469.187762	24539.43255	24539.43255	0	4175.771082	2.749873598	0
Sacramento	2026	All Other Buses	Aggregate	Aggregate	Natural Gas	63.96416593	3722.56086	3722.56086	0	569.2810768	0.49056013	0
Sacramento	2026	LDA	Aggregate	Aggregate	Gasoline	490520.664	17966701.5	17966701.5	0	2254615.988	597.1123465	0
Sacramento	2026	LDA	Aggregate	Aggregate	Diesel	1430.745301	37721.50272	37721.50272	0	5893.808305	0.861822099	0
Sacramento	2026	LDA	Aggregate	Aggregate	Electricity	28982.42278	1380306.326	0	1380306.326	143407.6929	0	532912.1647
Sacramento	2026	LDA	Aggregate	Aggregate	Plug-in Hybrid	14977.6109	654841.653	312089.4567	342752.1963	61932.42107	11.13015328	103521.3789
Sacramento	2026	LDT1	Aggregate	Aggregate	Gasoline	47430.07468	1500520.957	1500520.957	0	206539.2245	59.98660688	0
Sacramento	2026	LDT1	Aggregate	Aggregate	Diesel	16.20559695	143.3004056	143.3004056	0	44.90788683	0.00601102	0
Sacramento	2026	LDT1	Aggregate	Aggregate	Electricity	175.1803744	7332.135322	0	7332.135322	826.2935804	0	2830.809388
Sacramento	2026	LDT1	Aggregate	Aggregate	Plug-in Hybrid	92.6274366	4507.170864	1927.974638	2579.196226	383.0144504	0.069015042	778.9941326
Sacramento	2026	LDT2	Aggregate	Aggregate	Gasoline	241263.535	9009804.273	9009804.273	0	1117072.271	366.7405478	0
Sacramento	2026	LDT2	Aggregate	Aggregate	Diesel	773.0221254	30675.15942	30675.15942	0	3663.465023	0.907272115	0
Sacramento	2026	LDT2	Aggregate	Aggregate	Electricity	1942.902522	68690.07787	0	68690.07787	9829.02384	0	26520.03936
Sacramento	2026	LDT2	Aggregate	Aggregate	Plug-in Hybrid	2236.214513	103421.9192	46576.65582	56845.26342	9246.747013	1.673089612	17168.96381
Sacramento	2026	LHD1	Aggregate	Aggregate	Gasoline	20553.00978	740600.0124	740600.0124	0	306209.2217	76.09755447	0
Sacramento	2026	LHD1	Aggregate	Aggregate	Diesel	13789.3624	491992.1781	491992.1781	0	173452.8319	30.6578936	0
Sacramento	2026	LHD1	Aggregate	Aggregate	Electricity	243.7058975	16291.82349	0	16291.82349	3410.850772	0	10606.20227
Sacramento	2026	LHD2	Aggregate	Aggregate	Gasoline	2842.835824	102173.044	102173.044	0	42354.01795	11.68314156	0
Sacramento	2026	LHD2	Aggregate	Aggregate	Diesel	5354.107557	200747.7344	200747.7344	0	67347.9376	15.02769638	0
Sacramento	2026	LHD2	Aggregate	Aggregate	Electricity	62.04140345	3950.499601	0	3950.499601	823.0006996	0	2530.032898
Sacramento	2026	MCY	Aggregate	Aggregate	Gasoline	26668.73903	143066.9299	143066.9299	0	53337.47807	3.556738291	0
Sacramento	2026	MDV	Aggregate	Aggregate	Gasoline	152420.7174	5305204.632	5305204.632	0	692362.459	264.9451429	0
Sacramento	2026	MDV	Aggregate	Aggregate	Diesel	2517.863077	91089.26373	91089.26373	0	11617.91905	3.642691122	0
Sacramento	2026	MDV	Aggregate	Aggregate	Electricity	2074.444415	73273.89269	0	73273.89269	10492.0296	0	28289.7702
Sacramento	2026	MDV	Aggregate	Aggregate	Plug-in Hybrid	1385.855033	62349.05819	28424.07977	33924.97841	5730.510562	1.033107141	10246.35461
Sacramento	2026	MH	Aggregate	Aggregate	Gasoline	2559.574889	22993.19608	22993.19608	0	256.0598719	5.210088179	0
Sacramento	2026	MH	Aggregate	Aggregate	Diesel	1079.195807	9690.490905	9690.490905	0	107.9195807	1.031832885	0
Sacramento	2026	Motor Coach	Aggregate	Aggregate	Diesel	100.32814	12949.10452	12949.10452	0	2305.540658	2.309416706	0
Sacramento	2026	OBUS	Aggregate	Aggregate	Gasoline	495.2475434	20608.72061	20608.72061	0	9908.912848	4.303585972	0
Sacramento	2026	OBUS	Aggregate	Aggregate	Electricity	2.88628539	251.4188919	0	251.4188919	57.74879808	0	278.8950014
Sacramento	2026	PTO	Aggregate	Aggregate	Diesel	0	24092.85203	24092.85203	0	0	4.755018899	0
Sacramento	2026	PTO	Aggregate	Aggregate	Electricity	0	481.9543973	0	481.9543973	0	0	998.3775794
Sacramento	2026	SBUS	Aggregate	Aggregate	Gasoline	124.4030436	6562.066813	6562.066813	0	497.6121745	0.644930373	0
Sacramento	2026	SBUS	Aggregate	Aggregate	Diesel	978.5761745	21442.65244	21442.65244	0	14169.78301	2.627989581	0
Sacramento	2026	SBUS	Aggregate	Aggregate	Electricity	10.02998753	298.0278886	0	298.0278886	130.771368	0	313.9591453
Sacramento	2026	SBUS	Aggregate	Aggregate	Natural Gas	21.01785741	543.0029585	543.0029585	0	304.3385753	0.089122738	0
Sacramento	2026	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	11.53654035	770.5365913	770.5365913	0	265.1096972	0.084893312	0
Sacramento	2026	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.258023853	20.93703371	0	20.93703371	5.929388132	0	22.74355476
Sacramento	2026	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	15.17628056	1059.715761	1059.715761	0	348.7509273	0.116919443	0
Sacramento	2026	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.301010556	26.04372671	0	26.04372671	6.917222583	0	28.29087122
Sacramento	2026	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	52.90560817	2741.744118	2741.744118	0	1215.770876	0.297784874	0
Sacramento	2026	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	1.642325766	95.37648707	0	95.37648707	37.74064611	0	103.6059065
Sacramento	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	86.00951747	17475.87079	17475.87079	0	1976.498711	1.754150003	0
Sacramento	2026	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	1.487381231	319.9836782	0	319.9836782	34.18002069	0	347.5929975
Sacramento	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	738.7540335	24807.22862	24807.22862	0	10542.02006	2.972390085	0
Sacramento	2026	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	11.54193318	469.5362016	0	469.5362016	164.7033865	0	501.5957009
Sacramento	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	345.7366219	11671.34723	11671.34723	0	4933.661594	1.399329265	0
Sacramento	2026	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	5.201569318	212.0806353	0	212.0806353	74.22639416	0	226.5613057
Sacramento	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1440.20104	48553.432	48553.432	0	20551.66885	5.814238436	0
Sacramento	2026	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	21.3376055	860.7894293	0	860.7894293	304.4876304	0	919.5633387
Sacramento	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	196.9239843	10570.88137	10570.88137	0	2810.105256	1.245761526	0
Sacramento	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	1.721676702	84.45301997	0	84.45301997	24.56832654	0	90.21939439
Sacramento	2026	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	2.840340379	156.5537799	156.5537799	0	40.53165721	0.022567988	0
Sacramento	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1078.20391	44875.58238	44875.58238	0	12464.0372	5.201351748	0
Sacramento	2026	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	17.85644542	848.5404023	0	848.5404023	206.420509	0	899.5216317
Sacramento	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	2924.535726	125880.977	125880.977	0	33807.63299	14.64913388	0
Sacramento	2026	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	43.05612931	2068.178499	0	2068.178499	497.7288548	0	2192.43691
Sacramento	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	2017.72226	85746.39927	85746.39927	0	23324.86933	9.951230003	0
Sacramento	2026	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	31.16196318	1459.699349	0	1459.699349	360.2322943	0	1547.399672
Sacramento	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	984.4662083	44110.94381	44110.94381	0	11380.42937	5.019894149	0
Sacramento	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	11.03034231	756.4048426	0	756.4048426	127.5107571	0	801.8504675
Sacramento	2026	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	10.83297705	506.6852403	506.6852403	0	125.2292147	0.064965321	0
Sacramento	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.39495506	511.6347408	511.6347408	0	120.1656805	0.058078893	0
Sacramento	2026	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.150177964	8.992728914	0	8.992728914	1.736057268	0	9.533021838
Sacramento	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	662.3900016	39472.96229	39472.96229	0	7657.228418	4.266242973	0
Sacramento	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	4.787124627	382.1740199	0	382.1740199	55.33916069	0	405.1354503
Sacramento	2026	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	8.425873141	513.1773162	513.1773162	0	97.40309351	0.064317522	0
Sacramento	2026	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.019706179	399.9573548	399.9573548	0	138.332848	0.043226443	0
Sacramento	2026	T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.877770512	548.669569	548.669569	0	181.0311664	0.059482846	0
Sacramento	2026	T6 OOS Class 6	Aggregate	Aggregate	Diesel	27.73877292	1433.689281	1433.689281	0	637.4370018	0.152024796	0
Sacramento	2026	T6 OOS Class 7	Aggregate	Aggregate	Diesel	40.80334327	10424.70385	10424.70385	0	937.6608284	1.035209095	0
Sacramento	2026	T6 Public Class 4	Aggregate	Aggregate	Diesel	486.5608301	16982.15471	16982.15471	0	2496.057058	2.199563208	0
Sacramento	2026	T6 Public Class 4	Aggregate	Aggregate	Electricity	8.195221319	352.4256641	0	352.4256641	42.04148537	0	416.1796631
Sacramento	2026	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	30.50305876	1273.747769	1273.747769	0	156.4806915	0.188257425	0
Sacramento	2026	T6 Public Class 5	Aggregate	Aggregate	Diesel	602.3571272	22063.47624	22063.47624	0	3090.092063	2.807981654	0
Sacramento	2026	T6 Public Class 5	Aggregate	Aggregate	Electricity	8.935806123	382.1845171	0	382.1845171	45.84068541	0	451.3219093
Sacramento	2026	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	59.85121147	2411.02439	2411.02439	0	307.0367148	0.362987931	0
Sacramento	2026	T6 Public Class 6	Aggregate	Aggregate	Diesel	736.6914939	26120.07715	26120.07715	0	3779.227363	3.316558404	0
Sacramento	2026	T6 Public Class 6	Aggregate	Aggregate	Electricity	13.19272134	538.3773915	0	538.3773915	67.67866048	0	635.7701616
Sacramento	2026	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	55.88732603	2304.921876	2304.921876	0	286.7019825	0.345420638	0
Sacramento	2026	T6 Public Class 7	Aggregate	Aggregate	Diesel	2488.69813	111417.7113	111417.7113	0	12767.02141	13.87751845	0
Sacramento	2026	T6 Public Class 7	Aggregate	Aggregate	Electricity	43.90988549	2739.942351	0	2739.942351	225.2577126	0	3235.599449
Sacramento	2026	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	169.2696121	9011.991262	9011.991262	0	868.3531101	1.294325975	0
Sacramento	2026	T6 Utility Class 5	Aggregate	Aggregate	Diesel	40.46037903	1634.151976	1634.151976	0	517.8928516	0.182794116	0
Sacramento	2026	T6 Utility Class 5	Aggregate	Aggregate	Electricity	1.177113807	51.07351736	0	51.07351736	15.06705673	0	57.20557688
Sacramento	2026	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.156707263	6.012920114	6.012920114	0	2.005852967	0.000814519	0
Sacramento	2026	T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.673893828	308.7895437	308.7895437	0	98.22584099	0.034438154	0
Sacramento	2026	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.224747526	9.751819201	0	9.751819201	2.876768335	0	10.92265565
Sacramento	2026	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.027568337	1.06846204	1.06846204	0	0.35287471	0.000144152	0
Sacramento	2026	T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.609692081	427.2498949	427.2498949	0	110.2040586	0.047274104	0
Sacramento	2026	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.256846595	15.59016177	0	15.59016177	3.287636411	0	17.46196941
Sacramento	2026	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.042625222	1.84337695	1.84337695	0	0.545602845	0.000248034	0
Sacramento	2026	T6TS	Aggregate	Aggregate	Gasoline	1903.640767	88998.34196	88998.34196	0	38088.04447	18.97044875	0
Sacramento	2026	T6TS	Aggregate	Aggregate	Electricity	14.9545781	1303.3502	0	1303.3502	299.2111987	0	1521.566102
Sacramento	2026	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	944.067804	190960.7055	190960.7055	0	21694.67814	30.29237639	0
Sacramento	2026	T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	20.48343024	4095.007002	0	4095.007002	470.709227	0	7477.180067

Sacramento	2026 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	16.00862633	3223.636003	3223.636003	0	367.878233	0.57725741	0
Sacramento	2026 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	835.5760283	228426.5886	228426.5886	0	19201.53713	34.89437454	0
Sacramento	2026 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	356.6723128	83057.59299	83057.59299	0	8196.329747	13.065692	0
Sacramento	2026 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	11.32242384	2158.385136	2158.385136	0	185.234854	0.357830914	0
Sacramento	2026 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.088238037	22.31218564	0	22.31218564	1.443574288	0	40.60744686
Sacramento	2026 T7 POAK Class 8	Aggregate	Aggregate	Diesel	37.29725649	3757.618958	3757.618958	0	610.1831162	0.637245925	0
Sacramento	2026 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.357840542	32.30270691	0	32.30270691	5.854271264	0	58.78986825
Sacramento	2026 T7 Public Class 8	Aggregate	Aggregate	Diesel	4151.305876	177856.5839	177856.5839	0	21296.19914	33.47375916	0
Sacramento	2026 T7 Public Class 8	Aggregate	Aggregate	Electricity	50.6323713	3125.597222	0	3125.597222	259.7440648	0	6134.242605
Sacramento	2026 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	70.34116703	3356.829565	3356.829565	0	360.8501869	0.714223454	0
Sacramento	2026 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	169.3382325	11665.57125	11665.57125	0	1595.16615	1.93486183	0
Sacramento	2026 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	4.91193035	394.1731069	0	394.1731069	46.2703839	0	718.638345
Sacramento	2026 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	4.057382854	282.4068018	282.4068018	0	38.22054649	0.047158408	0
Sacramento	2026 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	517.6797551	29239.32883	29239.32883	0	4876.543293	5.018022419	0
Sacramento	2026 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	6.285306338	508.9431522	0	508.9431522	59.20758571	0	927.8818321
Sacramento	2026 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	15.59579878	829.3227783	829.3227783	0	146.9124245	0.155930575	0
Sacramento	2026 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1436.034329	77162.18368	77162.18368	0	13527.44338	13.00972387	0
Sacramento	2026 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	22.00663242	1524.102421	0	1524.102421	207.3024774	0	2778.67369
Sacramento	2026 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	41.24089581	2157.605255	2157.605255	0	388.4892385	0.385954917	0
Sacramento	2026 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	263.6072934	17098.16549	17098.16549	0	1212.59355	7.201061966	0
Sacramento	2026 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	10.62555179	677.9183088	0	677.9183088	48.87753825	0	1261.301387
Sacramento	2026 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	645.7133562	41830.89324	41830.89324	0	2970.281438	8.781393495	0
Sacramento	2026 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	1078.537414	78676.08575	78676.08575	0	15671.14863	12.68992142	0
Sacramento	2026 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	10.00988609	817.7187616	0	817.7187616	145.4436448	0	1488.828563
Sacramento	2026 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	11.80534026	816.3747502	816.3747502	0	171.5315939	0.15223753	0
Sacramento	2026 T7 Utility Class 8	Aggregate	Aggregate	Diesel	30.09060645	1315.587052	1315.587052	0	385.1597625	0.224192357	0
Sacramento	2026 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.315515578	19.83571504	0	19.83571504	4.038599395	0	37.34665022
Sacramento	2026 T7IS	Aggregate	Aggregate	Gasoline	5.564040018	167.8007511	167.8007511	0	111.3253127	0.046390148	0
Sacramento	2026 T7IS	Aggregate	Aggregate	Electricity	0.013175005	3.616381296	0	3.616381296	0.263605508	0	7.266918323
Sacramento	2026 UBUS	Aggregate	Aggregate	Gasoline	189.1264912	14347.73029	14347.73029	0	756.5059648	3.053781283	0
Sacramento	2026 UBUS	Aggregate	Aggregate	Diesel	6.215216529	294.3637228	294.3637228	0	24.86086612	0.03113556	0
Sacramento	2026 UBUS	Aggregate	Aggregate	Electricity	4.985657859	521.0100511	0	521.0100511	19.94263144	0	908.2477075
Sacramento	2026 UBUS	Aggregate	Aggregate	Natural Gas	359.717215	34419.26063	34419.26063	0	1438.86886	5.783625779	0

EMFAC Fuel Usage: Year 2027

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	24,759	2,742	9.03	3,719	485	7.67	0	0	0.00
LDA	18,288,698	597,248	30.62	34,097	772	44.19	0	0	0.00	1,887,317	697,707	2.71
LDT1	1,461,611	57,495	25.42	62	3	24.48	0	0	0.00	12,051	4,372	2.76
LDT2	9,202,452	366,569	25.10	31,582	918	34.41	0	0	0.00	149,691	52,275	2.86
LHD1	719,961	73,059	9.85	478,641	29,753	16.09	0	0	0.00	27,203	17,711	1.54
LHD2	98,746	11,181	8.83	198,032	14,741	13.43	0	0	0.00	6,589	4,220	1.56
MCY	142,503	3,534	40.32	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,354,704	261,305	20.49	88,763	3,509	25.30	0	0	0.00	127,510	45,923	2.78
MH	21,938	4,970	4.41	9,585	1,021	9.39	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	13,023	2,298	5.67	0	0	0.00	0	0	0.00
OBUS	19,096	3,956	4.83	0	0	0.00	0	0	0.00	397	440	0.90
PTO	0	0	0.00	24,171	4,713	5.13	0	0	0.00	784	1,625	0.48
SBUS	6,752	661	10.21	21,273	2,596	8.19	564	92	6.11	492	518	0.95
T6	84,400	17,816	4.74	653,189	76,418	8.55	16,922	2,450	6.91	21,420	23,723	0.90
T7	162	43	3.74	909,916	151,568	6.00	53,914	10,973	4.91	18,031	33,618	0.54
UBUS	14,584	3,104	4.70	288	31	9.41	34,886	5,840	5.97	1,123	1,958	0.57
Total	**35,415,607**	**1,400,943**	**25.28**	**2,487,381**	**291,082**	**8.55**	**110,005**	**19,841**	**5.54**	**2,252,607**	**884,090**	**2.55**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumptio	Energy Consumpt
Sacramento	2027	All Other Buses	Aggregate	Aggregate	Diesel	478.4414247	24758.66413	24758.66413	0	4258.12868	2.741857105	0
Sacramento	2027	All Other Buses	Aggregate	Aggregate	Natural Gas	65.42990411	3719.471276	3719.471276	0	582.3261466	0.485181645	0
Sacramento	2027	LDA	Aggregate	Aggregate	Gasoline	490113.3762	17964906.32	17964906.32	0	2251991.096	585.645815	0
Sacramento	2027	LDA	Aggregate	Aggregate	Diesel	1299.90312	34097.40069	34097.40069	0	5352.033944	0.771590005	0
Sacramento	2027	LDA	Aggregate	Aggregate	Electricity	32316.4729	1519061.339	0	1519061.339	159179.1981	0	586483.0517
Sacramento	2027	LDA	Aggregate	Aggregate	Plug-in Hybrid	16022.74193	692047.5349	323791.898	368255.637	66254.03787	11.60205289	111224.1781
Sacramento	2027	LDT1	Aggregate	Aggregate	Gasoline	46145.10231	1459168.518	1459168.518	0	200762.7979	57.40706667	0
Sacramento	2027	LDT1	Aggregate	Aggregate	Diesel	6.268628847	61.79429294	61.79429294	0	17.92706284	0.002524205	0
Sacramento	2027	LDT1	Aggregate	Aggregate	Electricity	202.2708605	8711.05897	0	8711.05897	962.646497	0	3363.187725
Sacramento	2027	LDT1	Aggregate	Aggregate	Plug-in Hybrid	120.128406	5782.182312	2442.627133	3339.555178	496.7309588	0.087825142	1008.645199
Sacramento	2027	LDT2	Aggregate	Aggregate	Gasoline	245296.243	9150148.358	9150148.358	0	1134720.736	364.6814504	0
Sacramento	2027	LDT2	Aggregate	Aggregate	Diesel	799.5773891	31582.05861	31582.05861	0	3783.397321	0.917728314	0
Sacramento	2027	LDT2	Aggregate	Aggregate	Electricity	2411.405287	84039.70777	0	84039.70777	12140.33424	0	32446.26337
Sacramento	2027	LDT2	Aggregate	Aggregate	Plug-in Hybrid	2588.179649	117954.0499	52303.17478	65650.87516	10702.12285	1.887605195	19828.52101
Sacramento	2027	LHD1	Aggregate	Aggregate	Gasoline	20039.95657	719961.2624	719961.2624	0	298565.4933	73.05940747	0
Sacramento	2027	LHD1	Aggregate	Aggregate	Diesel	13469.47691	478640.8065	478640.8065	0	169429.0749	29.7530763	0
Sacramento	2027	LHD1	Aggregate	Aggregate	Electricity	418.2481119	27203.08537	0	27203.08537	5855.149711	0	17710.7643
Sacramento	2027	LHD2	Aggregate	Aggregate	Gasoline	2770.494879	98745.53544	98745.53544	0	41276.24566	11.18060951	0
Sacramento	2027	LHD2	Aggregate	Aggregate	Diesel	5332.863506	198031.6886	198031.6886	0	67080.71416	14.7412574	0
Sacramento	2027	LHD2	Aggregate	Aggregate	Electricity	106.2251064	6589.205189	0	6589.205189	1409.037048	0	4219.904754
Sacramento	2027	MCY	Aggregate	Aggregate	Gasoline	26693.55782	142502.9561	142502.9561	0	53387.11564	3.534408988	0
Sacramento	2027	MDV	Aggregate	Aggregate	Gasoline	152705.4861	5322875.849	5322875.849	0	693436.3268	260.1428386	0
Sacramento	2027	MDV	Aggregate	Aggregate	Diesel	2489.599289	88763.47568	88763.47568	0	11442.91861	3.508757168	0
Sacramento	2027	MDV	Aggregate	Aggregate	Electricity	2534.271112	88174.35435	0	88174.35435	12752.75719	0	34042.5782
Sacramento	2027	MDV	Aggregate	Aggregate	Plug-in Hybrid	1599.454787	71163.77003	31828.1652	39335.60483	6613.745546	1.162359069	11880.52505
Sacramento	2027	MH	Aggregate	Aggregate	Gasoline	2431.975047	21937.92587	21937.92587	0	243.2947837	4.970328521	0
Sacramento	2027	MH	Aggregate	Aggregate	Diesel	1070.832729	9584.895986	9584.895986	0	107.0832729	1.021007531	0
Sacramento	2027	Motor Coach	Aggregate	Aggregate	Diesel	104.1822901	13023.14037	13023.14037	0	2394.109027	2.297776106	0
Sacramento	2027	OBUS	Aggregate	Aggregate	Gasoline	472.1950121	19096.46064	19096.46064	0	9447.677803	3.956378022	0
Sacramento	2027	OBUS	Aggregate	Aggregate	Electricity	4.603332875	396.9139267	0	396.9139267	92.10348416	0	440.2903431
Sacramento	2027	PTO	Aggregate	Aggregate	Diesel	0	24170.5234	24170.5234	0	0	4.713423328	0
Sacramento	2027	PTO	Aggregate	Aggregate	Electricity	0	784.4722138	0	784.4722138	0	0	1625.048914
Sacramento	2027	SBUS	Aggregate	Aggregate	Gasoline	127.9229301	6752.181628	6752.181628	0	511.6917204	0.661111711	0
Sacramento	2027	SBUS	Aggregate	Aggregate	Diesel	975.8236826	21273.33967	21273.33967	0	14129.92692	2.596005663	0
Sacramento	2027	SBUS	Aggregate	Aggregate	Electricity	16.59068017	491.5494659	0	491.5494659	216.87335	0	517.8255327
Sacramento	2027	SBUS	Aggregate	Aggregate	Natural Gas	22.01513656	563.6516628	563.6516628	0	318.7791774	0.092308027	0
Sacramento	2027	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	11.59049194	773.8555564	773.8555564	0	266.3495047	0.084644207	0
Sacramento	2027	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.421624084	34.19081733	0	34.19081733	9.688921451	0	37.14092154
Sacramento	2027	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	15.15289025	1065.317224	1065.317224	0	348.2134179	0.11676671	0
Sacramento	2027	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.4956113	43.17709443	0	43.17709443	11.38914767	0	46.90256628
Sacramento	2027	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	54.25847738	2747.25303	2747.25303	0	1246.85981	0.296466367	0
Sacramento	2027	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	2.625867042	149.274339	0	149.274339	60.34242462	0	162.154255
Sacramento	2027	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	87.30279873	17636.83474	17636.83474	0	2006.218315	1.747319113	0
Sacramento	2027	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	2.449659515	531.648981	0	531.648981	56.29317566	0	577.5215286
Sacramento	2027	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	748.2780093	25027.97569	25027.97569	0	10677.92719	2.9806045	0
Sacramento	2027	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	19.26309021	778.061949	0	778.061949	274.8842973	0	831.1873023
Sacramento	2027	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	350.7164624	11777.25495	11777.25495	0	5004.723919	1.403535369	0
Sacramento	2027	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	8.769872782	355.0012568	0	355.0012568	125.1460846	0	379.2404156
Sacramento	2027	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1461.344302	48997.05659	48997.05659	0	20853.38319	5.833549006	0
Sacramento	2027	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	36.21074248	1451.85437	0	1451.85437	516.7272951	0	1550.98565
Sacramento	2027	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	203.5749356	10745.31085	10745.31085	0	2905.014331	1.264619519	0
Sacramento	2027	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	2.682636051	133.3460188	0	133.3460188	38.28121645	0	142.4507622
Sacramento	2027	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	2.942382054	159.6225548	159.6225548	0	41.98779191	0.02301435	0
Sacramento	2027	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1094.473718	45221.68833	45221.68833	0	12652.11618	5.211230052	0
Sacramento	2027	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	30.70402199	1459.856626	0	1459.856626	354.9384942	0	1547.566399
Sacramento	2027	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	2990.929025	126972.5142	126972.5142	0	34575.13953	14.69145968	0
Sacramento	2027	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	76.07643272	3655.782031	0	3655.782031	879.4435623	0	3875.425388
Sacramento	2027	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	2056.653645	86472.91717	86472.91717	0	23774.91614	9.978598339	0
Sacramento	2027	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	54.48336106	2559.199033	0	2559.199033	629.8276539	0	2712.958492
Sacramento	2027	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	1025.143522	44581.92512	44581.92512	0	11850.65911	5.058259261	0
Sacramento	2027	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	18.14590369	1230.465689	0	1230.465689	209.7666466	0	1304.393405
Sacramento	2027	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	11.35861252	511.734709	511.734709	0	131.3055608	0.065715876	0
Sacramento	2027	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.62958581	514.9926202	514.9926202	0	122.878012	0.058150268	0
Sacramento	2027	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.269624595	16.53632241	0	16.53632241	3.116860322	0	17.52984263
Sacramento	2027	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	690.4889516	40033.60738	40033.60738	0	7982.052281	4.300245644	0
Sacramento	2027	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	8.198770471	662.3248177	0	662.3248177	94.77778664	0	702.1180124
Sacramento	2027	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	8.792338655	517.6577534	517.6577534	0	101.6394349	0.064876662	0
Sacramento	2027	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.130155965	408.3321035	408.3321035	0	140.8709841	0.043449348	0
Sacramento	2027	T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.96392539	560.1582182	560.1582182	0	183.0110055	0.059850133	0
Sacramento	2027	T6 OOS Class 6	Aggregate	Aggregate	Diesel	28.9196759	1463.70945	1463.70945	0	664.5741521	0.152795792	0
Sacramento	2027	T6 OOS Class 7	Aggregate	Aggregate	Diesel	41.47874038	10642.98781	10642.98781	0	953.181454	1.038659893	0
Sacramento	2027	T6 Public Class 4	Aggregate	Aggregate	Diesel	478.782902	16873.1549	16873.1549	0	2456.156287	2.167152744	0
Sacramento	2027	T6 Public Class 4	Aggregate	Aggregate	Electricity	12.32427833	529.4994283	0	529.4994283	63.22354783	0	625.28617
Sacramento	2027	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	32.55331116	1347.986536	1347.986536	0	166.9984863	0.199075962	0
Sacramento	2027	T6 Public Class 5	Aggregate	Aggregate	Diesel	603.4860489	21952.73426	21952.73426	0	3095.883431	2.779653571	0
Sacramento	2027	T6 Public Class 5	Aggregate	Aggregate	Electricity	14.6159784	624.8191876	0	624.8191876	74.97996918	0	737.8493268
Sacramento	2027	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	62.07212996	2469.230585	2469.230585	0	318.4300267	0.371564553	0
Sacramento	2027	T6 Public Class 6	Aggregate	Aggregate	Diesel	725.6529676	25927.167	25927.167	0	3722.599724	3.26491627	0
Sacramento	2027	T6 Public Class 6	Aggregate	Aggregate	Electricity	20.36856721	833.896843	0	833.896843	104.4907498	0	984.7492466
Sacramento	2027	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	59.25094465	2423.818602	2423.818602	0	303.9573461	0.362675572	0
Sacramento	2027	T6 Public Class 7	Aggregate	Aggregate	Diesel	2454.710704	110447.3791	110447.3791	0	12592.66591	13.62550507	0
Sacramento	2027	T6 Public Class 7	Aggregate	Aggregate	Electricity	67.79091281	4180.465124	0	4180.465124	347.7673827	0	4936.713594
Sacramento	2027	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	182.3856177	9483.777226	9483.777226	0	935.6382188	1.362221012	0
Sacramento	2027	T6 Utility Class 5	Aggregate	Aggregate	Diesel	40.14460426	1617.043269	1617.043269	0	513.8509345	0.179913833	0

Sacramento	2027 T6 Utility Class 5	Aggregate	Aggregate	Electricity	1.882260243	81.55081367	0	81.55081367	24.09293111	0	91.34208064
Sacramento	2027 T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.146246915	5.578579338	5.578579338	0	1.871960517	0.000750687	0
Sacramento	2027 T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.607480608	305.4818125	305.4818125	0	97.37575178	0.033892113	0
Sacramento	2027 T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.359319596	15.56827598	0	15.56827598	4.599290823	0	17.43745594
Sacramento	2027 T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.026029402	1.00404765	1.00404765	0	0.333176346	0.000134559	0
Sacramento	2027 T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.492488309	421.9675703	421.9675703	0	108.7038504	0.046427468	0
Sacramento	2027 T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.406880614	24.43027243	0	24.43027243	5.208071859	0	27.36345371
Sacramento	2027 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.038687767	1.686439636	1.686439636	0	0.495203414	0.000225323	0
Sacramento	2027 T6TS	Aggregate	Aggregate	Gasoline	1815.700992	84399.82455	84399.82455	0	36328.54545	17.81635012	0
Sacramento	2027 T6TS	Aggregate	Aggregate	Electricity	23.98409155	2068.797371	0	2068.797371	479.8737038	0	2415.169731
Sacramento	2027 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	955.9471897	192857.9256	192857.9256	0	21967.66642	30.0920036	0
Sacramento	2027 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	32.29681461	6593.043215	0	6593.043215	742.1807997	0	12038.40953
Sacramento	2027 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	15.85361764	3142.085652	3142.085652	0	364.3161333	0.559446315	0
Sacramento	2027 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	851.208872	233396.1688	233396.1688	0	19560.77988	34.77879797	0
Sacramento	2027 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	365.6070299	84864.56901	84864.56901	0	8401.649547	13.05800623	0
Sacramento	2027 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	11.19118177	2219.313989	2219.313989	0	183.0877338	0.363556861	0
Sacramento	2027 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.152468425	41.12038298	0	41.12038298	2.494383427	0	74.8377498
Sacramento	2027 T7 POAK Class 8	Aggregate	Aggregate	Diesel	36.98521494	3792.734625	3792.734625	0	605.0781164	0.637479003	0
Sacramento	2027 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.58612276	54.92822857	0	54.92822857	9.58896835	0	99.96757638
Sacramento	2027 T7 Public Class 8	Aggregate	Aggregate	Diesel	4146.165274	177352.3216	177352.3216	0	21269.82786	33.10121688	0
Sacramento	2027 T7 Public Class 8	Aggregate	Aggregate	Electricity	80.80330116	4930.927581	0	4930.927581	414.5209349	0	9677.352487
Sacramento	2027 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	73.71457901	3465.548862	3465.548862	0	378.1557903	0.734041557	0
Sacramento	2027 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	168.0993166	11481.92582	11481.92582	0	1583.495563	1.884583501	0
Sacramento	2027 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	7.728412442	616.6368467	0	616.6368467	72.8016452	0	1124.224041
Sacramento	2027 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	4.138408391	288.4177324	288.4177324	0	38.98380704	0.047685192	0
Sacramento	2027 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	525.9906557	28977.97166	28977.97166	0	4954.831976	4.9446283	0
Sacramento	2027 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	11.05801107	891.8516307	0	891.8516307	104.1664642	0	1625.983023
Sacramento	2027 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	15.79685595	818.8355898	818.8355898	0	148.806383	0.152585055	0
Sacramento	2027 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1490.04057	77969.69081	77969.69081	0	14036.18217	13.07286017	0
Sacramento	2027 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	35.64481546	2442.270394	0	2442.270394	335.7741616	0	4452.635463
Sacramento	2027 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	42.88888167	2190.745553	2190.745553	0	404.0132653	0.389393648	0
Sacramento	2027 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	243.2836749	15780.19571	15780.19571	0	1119.104904	6.637752982	0
Sacramento	2027 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	16.98896644	1084.367274	0	1084.367274	78.14924561	0	2017.520296
Sacramento	2027 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	666.7247543	43198.27614	43198.27614	0	3066.93387	8.939945111	0
Sacramento	2027 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	1125.059595	79910.70976	79910.70976	0	16347.11592	12.77488159	0
Sacramento	2027 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	16.38350024	1336.693145	0	1336.693145	238.0522584	0	2433.730308
Sacramento	2027 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	11.9961797	809.9804752	809.9804752	0	174.3044911	0.150107829	0
Sacramento	2027 T7 Utility Class 8	Aggregate	Aggregate	Diesel	30.37372447	1312.592644	1312.592644	0	388.7836732	0.222485585	0
Sacramento	2027 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.532725252	33.04316562	0	33.04316562	6.818883222	0	62.2136155
Sacramento	2027 T7IS	Aggregate	Aggregate	Gasoline	4.758586347	161.9885347	161.9885347	0	95.20979563	0.043331032	0
Sacramento	2027 T7IS	Aggregate	Aggregate	Electricity	0.021334042	5.736909772	0	5.736909772	0.426851513	0	11.52800309
Sacramento	2027 UBUS	Aggregate	Aggregate	Gasoline	192.1981157	14584.17599	14584.17599	0	768.7924627	3.104148484	0
Sacramento	2027 UBUS	Aggregate	Aggregate	Diesel	6.132636899	288.2077419	288.2077419	0	24.5305476	0.030617741	0
Sacramento	2027 UBUS	Aggregate	Aggregate	Electricity	11.83112454	1123.033409	0	1123.033409	47.32449816	0	1957.721386
Sacramento	2027 UBUS	Aggregate	Aggregate	Natural Gas	364.5593899	34886.317	34886.317	0	1458.23756	5.840348245	0

EMFAC Fuel Usage: Year 2028

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	25,000	2,737	9.13	3,684	476	7.74	0	0	0.00
LDA	18,300,547	585,143	31.28	30,714	684	44.88	0	0	0.00	2,041,733	755,414	2.70
LDT1	1,423,430	54,928	25.91	41	2	25.09	0	0	0.00	14,545	5,263	2.76
LDT2	9,334,569	363,397	25.69	32,392	922	35.15	0	0	0.00	175,143	61,350	2.85
LHD1	699,123	70,133	9.97	464,412	28,802	16.12	0	0	0.00	41,720	27,164	1.54
LHD2	95,187	10,677	8.91	194,724	14,419	13.50	0	0	0.00	10,097	6,467	1.56
MCY	141,939	3,501	40.54	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,374,303	256,091	20.99	86,281	3,354	25.72	0	0	0.00	148,103	53,420	2.77
MH	20,965	4,749	4.41	9,474	1,010	9.38	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	13,094	2,285	5.73	0	0	0.00	0	0	0.00
OBUS	17,710	3,641	4.86	0	0	0.00	0	0	0.00	617	684	0.90
PTO	0	0	0.00	24,116	4,648	5.19	0	0	0.00	1,236	2,560	0.48
SBUS	6,912	675	10.25	21,023	2,554	8.23	582	95	6.12	791	833	0.95
T6	79,749	16,673	4.78	652,770	75,838	8.61	17,469	2,530	6.90	34,139	37,741	0.90
T7	157	41	3.86	916,344	149,891	6.11	54,913	11,056	4.97	27,644	51,558	0.54
UBUS	14,818	3,154	4.70	282	30	9.37	34,602	5,718	6.05	2,479	4,321	0.57
Total	**35,509,411**	**1,372,804**	**25.87**	**2,470,667**	**287,176**	**8.60**	**111,250**	**19,876**	**5.60**	**2,498,247**	**1,006,775**	**2.48**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumptio	Energy Consumption
Sacramento	2028	All Other Buses	Aggregate	Aggregate	Diesel	485.9239591	24999.68837	24999.68837	0	4324.723236	2.73742375	0
Sacramento	2028	All Other Buses	Aggregate	Aggregate	Natural Gas	66.33561041	3684.00209	3684.00209	0	590.3869326	0.475888753	0
Sacramento	2028	LDA	Aggregate	Aggregate	Gasoline	490168.1273	17967218.11	17967218.11	0	2251477.259	573.1594577	0
Sacramento	2028	LDA	Aggregate	Aggregate	Diesel	1162.295927	30714.13158	30714.13158	0	4805.610233	0.684434188	0
Sacramento	2028	LDA	Aggregate	Aggregate	Electricity	35590.57632	1650745.235	0	1650745.235	174533.4954	0	637323.904
Sacramento	2028	LDA	Aggregate	Aggregate	Plug-in Hybrid	16982.23317	724317.04	333329.335	390987.705	70221.53415	11.98378432	118089.9402
Sacramento	2028	LDT1	Aggregate	Aggregate	Gasoline	44959.46674	1420412.946	1420412.946	0	195437.0041	54.81920372	0
Sacramento	2028	LDT1	Aggregate	Aggregate	Diesel	3.807815528	40.57065225	40.57065225	0	11.08988502	0.001617004	0
Sacramento	2028	LDT1	Aggregate	Aggregate	Electricity	235.0154543	10355.86673	0	10355.86673	1127.056413	0	3998.219275
Sacramento	2028	LDT1	Aggregate	Aggregate	Plug-in Hybrid	151.378797	7206.231233	3017.076299	4189.154934	625.9513255	0.108811369	1265.249647
Sacramento	2028	LDT2	Aggregate	Aggregate	Gasoline	249195.6027	9276498.938	9276498.938	0	1151664.488	361.2943631	0
Sacramento	2028	LDT2	Aggregate	Aggregate	Diesel	825.6901458	32391.9091	32391.9091	0	3897.084261	0.921554144	0
Sacramento	2028	LDT2	Aggregate	Aggregate	Electricity	2925.657584	100546.4886	0	100546.4886	14663.64178	0	38819.24316
Sacramento	2028	LDT2	Aggregate	Aggregate	Plug-in Hybrid	2954.136825	132666.4236	58070.14325	74596.28034	12215.35577	2.102745487	22530.29999
Sacramento	2028	LHD1	Aggregate	Aggregate	Gasoline	19547.60282	699123.4566	699123.4566	0	291230.1561	70.13270056	0
Sacramento	2028	LHD1	Aggregate	Aggregate	Diesel	13131.43325	464412.1145	464412.1145	0	165176.911	28.8019549	0
Sacramento	2028	LHD1	Aggregate	Aggregate	Electricity	657.9551004	41720.02544	0	41720.02544	9213.043674	0	27163.9573
Sacramento	2028	LHD2	Aggregate	Aggregate	Gasoline	2693.110936	95186.85863	95186.85863	0	40123.34022	10.67727854	0
Sacramento	2028	LHD2	Aggregate	Aggregate	Diesel	5299.078818	194724.1605	194724.1605	0	66655.74529	14.41896929	0
Sacramento	2028	LHD2	Aggregate	Aggregate	Electricity	166.8014207	10097.38721	0	10097.38721	2212.46656	0	6466.633524
Sacramento	2028	MCY	Aggregate	Aggregate	Gasoline	26721.97771	141939.4496	141939.4496	0	53443.95543	3.501410947	0
Sacramento	2028	MDV	Aggregate	Aggregate	Gasoline	153063.5365	5339114.491	5339114.491	0	694864.838	254.8014848	0
Sacramento	2028	MDV	Aggregate	Aggregate	Diesel	2458.378389	86281.17396	86281.17396	0	11246.8921	3.35401234	0
Sacramento	2028	MDV	Aggregate	Aggregate	Electricity	3016.288678	103368.7003	0	103368.7003	15104.35675	0	39908.84981
Sacramento	2028	MDV	Aggregate	Aggregate	Plug-in Hybrid	1817.684865	79923.34036	35189.00164	44734.33872	7516.126916	1.289484756	13511.10359
Sacramento	2028	MH	Aggregate	Aggregate	Gasoline	2312.09966	20964.58295	20964.58295	0	231.30245	4.749203177	0
Sacramento	2028	MH	Aggregate	Aggregate	Diesel	1061.491178	9474.313914	9474.313914	0	106.1491178	1.009658833	0
Sacramento	2028	Motor Coach	Aggregate	Aggregate	Diesel	107.5842684	13094.37912	13094.37912	0	2472.286487	2.284884309	0
Sacramento	2028	OBUS	Aggregate	Aggregate	Gasoline	451.3776517	17710.34129	17710.34129	0	9031.164054	3.641351285	0
Sacramento	2028	OBUS	Aggregate	Aggregate	Electricity	7.206726834	616.6580894	0	616.6580894	144.1921905	0	684.0490682
Sacramento	2028	PTO	Aggregate	Aggregate	Diesel	0	24115.6873	24115.6873	0	0	4.647982671	0
Sacramento	2028	PTO	Aggregate	Aggregate	Electricity	0	1235.739831	0	1235.739831	0	0	2559.858252
Sacramento	2028	SBUS	Aggregate	Aggregate	Gasoline	130.9634768	6912.292085	6912.292085	0	523.8539073	0.67455706	0
Sacramento	2028	SBUS	Aggregate	Aggregate	Diesel	969.1504564	21023.26263	21023.26263	0	14033.29861	2.554280652	0
Sacramento	2028	SBUS	Aggregate	Aggregate	Electricity	26.6408739	790.9174439	0	790.9174439	348.9593057	0	833.1964027
Sacramento	2028	SBUS	Aggregate	Aggregate	Natural Gas	22.94964781	582.0462679	582.0462679	0	332.3109003	0.095159324	0
Sacramento	2028	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	11.51500994	770.9571017	770.9571017	0	264.6149285	0.083796627	0
Sacramento	2028	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.661326541	54.00903845	0	54.00903845	15.19728392	0	58.66912861
Sacramento	2028	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	14.96223006	1062.471803	1062.471803	0	343.8320469	0.11575564	0
Sacramento	2028	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	0.783294561	69.23339298	0	69.23339298	18.00010902	0	75.2070941
Sacramento	2028	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	55.07918154	2729.460383	2729.460383	0	1265.719592	0.292948747	0
Sacramento	2028	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	4.042135532	227.7176718	0	227.7176718	92.88827452	0	247.365955
Sacramento	2028	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	88.35660784	17738.86121	17738.86121	0	2030.434848	1.733786607	0
Sacramento	2028	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	3.715144578	810.0542666	0	810.0542666	85.3740224	0	879.9486033
Sacramento	2028	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	753.2552234	25099.25994	25099.25994	0	10748.95204	2.971383225	0
Sacramento	2028	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	30.91821009	1247.132985	0	1247.132985	441.202858	0	1332.286076
Sacramento	2028	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	353.5482712	11813.30439	11813.30439	0	5045.13383	1.39958693	0
Sacramento	2028	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	14.17692533	572.990378	0	572.990378	202.3047245	0	612.1136333
Sacramento	2028	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1473.307082	49151.30871	49151.30871	0	21024.09207	5.818749265	0
Sacramento	2028	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	58.70388819	2353.957206	0	2353.957206	837.7044845	0	2514.683236
Sacramento	2028	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	210.002802	10881.27975	10881.27975	0	2996.739984	1.278740508	0
Sacramento	2028	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	4.515604109	224.4585604	0	224.4585604	64.43767064	0	239.7843842
Sacramento	2028	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.07899205	163.6727868	163.6727868	0	43.93721655	0.023605813	0
Sacramento	2028	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1104.888955	45263.25295	45263.25295	0	12772.51632	5.185275134	0
Sacramento	2028	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	50.15747067	2395.76169	0	2395.76169	579.8203609	0	2539.701656
Sacramento	2028	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	3038.729231	127212.2463	127212.2463	0	35127.70991	14.6315184	0
Sacramento	2028	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	127.6018696	6151.289287	0	6151.289287	1475.077613	0	6520.865431
Sacramento	2028	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	2083.99983	86630.17374	86630.17374	0	24091.03804	9.938053614	0
Sacramento	2028	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	90.2135073	4266.195141	0	4266.195141	1042.868144	0	4522.51278
Sacramento	2028	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	1061.42783	44817.09251	44817.09251	0	12270.10571	5.072294318	0
Sacramento	2028	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	28.85962016	1957.445984	0	1957.445984	333.6172091	0	2075.051465
Sacramento	2028	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	11.99884813	519.572674	519.572674	0	138.7066844	0.066873733	0
Sacramento	2028	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.77423197	515.1003358	515.1003358	0	124.5501216	0.057841314	0
Sacramento	2028	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.444820963	27.55834613	0	27.55834613	5.142130332	0	29.21408151
Sacramento	2028	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	716.0433936	40509.82485	40509.82485	0	8277.46163	4.325543071	0
Sacramento	2028	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	12.84942645	1041.206712	0	1041.206712	148.5393697	0	1103.763542
Sacramento	2028	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	9.24652026	525.5339965	525.5339965	0	106.8897742	0.065887185	0
Sacramento	2028	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.212006173	416.8822115	416.8822115	0	142.7519019	0.043700471	0
Sacramento	2028	T6 OOS Class 5	Aggregate	Aggregate	Diesel	8.011759278	571.887429	571.887429	0	184.1102282	0.060227674	0
Sacramento	2028	T6 OOS Class 6	Aggregate	Aggregate	Diesel	30.0270385	1494.358214	1494.358214	0	690.0213448	0.153706852	0
Sacramento	2028	T6 OOS Class 7	Aggregate	Aggregate	Diesel	42.13935276	10865.84243	10865.84243	0	968.3623263	1.04159768	0
Sacramento	2028	T6 Public Class 4	Aggregate	Aggregate	Diesel	470.1734306	16689.08936	16689.08936	0	2411.989699	2.126668546	0
Sacramento	2028	T6 Public Class 4	Aggregate	Aggregate	Electricity	18.41327719	790.5870497	0	790.5870497	94.46011196	0	933.6046876
Sacramento	2028	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	34.29222805	1406.306498	1406.306498	0	175.9191299	0.207630274	0
Sacramento	2028	T6 Public Class 5	Aggregate	Aggregate	Diesel	601.6826922	21729.21568	21729.21568	0	3086.632211	2.737711642	0
Sacramento	2028	T6 Public Class 5	Aggregate	Aggregate	Electricity	23.28324263	996.0371497	0	996.0371497	119.4430347	0	1176.220825
Sacramento	2028	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	63.76632397	2502.318775	2502.318775	0	327.121242	0.376462917	0
Sacramento	2028	T6 Public Class 6	Aggregate	Aggregate	Diesel	712.3414607	25613.7632	25613.7632	0	3654.311694	3.199723364	0
Sacramento	2028	T6 Public Class 6	Aggregate	Aggregate	Electricity	30.77799509	1267.542484	0	1267.542484	157.8911148	0	1496.841625
Sacramento	2028	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	62.05526931	2514.233106	2514.233106	0	318.3435316	0.375826888	0
Sacramento	2028	T6 Public Class 7	Aggregate	Aggregate	Diesel	2418.254387	108897.9205	108897.9205	0	12405.64501	13.31546474	0
Sacramento	2028	T6 Public Class 7	Aggregate	Aggregate	Electricity	102.3433784	6279.908902	0	6279.908902	525.021531	0	7415.947922
Sacramento	2028	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	193.7780547	9829.629182	9829.629182	0	994.0814207	1.413099924	0
Sacramento	2028	T6 Utility Class 5	Aggregate	Aggregate	Diesel	39.44579894	1584.646524	1584.646524	0	504.9062264	0.175374906	0
Sacramento	2028	T6 Utility Class 5	Aggregate	Aggregate	Electricity	2.927108859	126.6617791	0	126.6617791	37.4669934	0	141.8692215
Sacramento	2028	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.13596655	5.165069002	5.165069002	0	1.740371839	0.000690511	0
Sacramento	2028	T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.468844609	299.2984258	299.2984258	0	95.601211	0.033035593	0
Sacramento	2028	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.557859278	24.13992028	0	24.13992028	7.140598754	0	27.03824089
Sacramento	2028	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.024460927	0.940375248	0.940375248	0	0.313099864	0.000125222	0
Sacramento	2028	T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.305814981	412.4394776	412.4394776	0	106.3144318	0.045137692	0
Sacramento	2028	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.622239798	37.33768971	0	37.33768971	7.964669412	0	41.82057923

Sacramento	2028 T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.034991287	1.541385345	1.541385345	0	0.447888476	0.000204518	0
Sacramento	2028 T6TS	Aggregate	Aggregate	Gasoline	1727.598755	79748.5943	79748.5943	0	34565.7959	16.67346805	0
Sacramento	2028 T6TS	Aggregate	Aggregate	Electricity	37.60155216	3218.061835	0	3218.061835	752.3318557	0	3756.851998
Sacramento	2028 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	965.0297221	194225.1698	194225.1698	0	22176.38301	29.78155166	0
Sacramento	2028 T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	47.33137646	9812.834568	0	9812.834568	1087.675031	0	17917.51052
Sacramento	2028 T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	15.10723583	2962.603781	2962.603781	0	347.1642795	0.5225596	0
Sacramento	2028 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	866.699487	238473.8659	238473.8659	0	19916.75421	34.64137382	0
Sacramento	2028 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	374.1814793	86710.85712	86710.85712	0	8598.690395	13.0386905	0
Sacramento	2028 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	10.9100043	2272.608705	2272.608705	0	178.4876704	0.365943854	0
Sacramento	2028 T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.243792793	69.83219586	0	69.83219586	3.988450098	0	127.0923086
Sacramento	2028 T7 POAK Class 8	Aggregate	Aggregate	Diesel	36.4726957	3818.784364	3818.784364	0	596.6933017	0.633114606	0
Sacramento	2028 T7 POAK Class 8	Aggregate	Aggregate	Electricity	0.891730723	86.61967875	0	86.61967875	14.58871463	0	157.6449774
Sacramento	2028 T7 Public Class 8	Aggregate	Aggregate	Diesel	4124.615392	175875.7106	175875.7106	0	21159.27696	32.55728623	0
Sacramento	2028 T7 Public Class 8	Aggregate	Aggregate	Electricity	125.8933534	7665.109836	0	7665.109836	645.832903	0	15043.4109
Sacramento	2028 T7 Public Class 8	Aggregate	Aggregate	Natural Gas	76.68889731	3548.711553	3548.711553	0	393.4140432	0.748987743	0
Sacramento	2028 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	165.4939326	11207.25328	11207.25328	0	1558.952845	1.820888805	0
Sacramento	2028 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	11.81224088	946.1228169	0	946.1228169	111.2713091	0	1724.927762
Sacramento	2028 T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	4.180102585	290.952683	290.952683	0	39.37656635	0.047730897	0
Sacramento	2028 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	531.9822804	28584.80888	28584.80888	0	5011.273082	4.84758718	0
Sacramento	2028 T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	17.72541345	1440.223461	0	1440.223461	166.9733947	0	2625.749414
Sacramento	2028 T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	15.9300679	805.7067537	805.7067537	0	150.0612397	0.148816648	0
Sacramento	2028 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1537.655398	78350.25609	78350.25609	0	14484.71385	13.0632653	0
Sacramento	2028 T7 Single Other Class 8	Aggregate	Aggregate	Electricity	56.07102221	3837.086514	0	3837.086514	528.1890292	0	6995.600293
Sacramento	2028 T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	44.35969155	2212.443873	2212.443873	0	417.8682944	0.39108423	0
Sacramento	2028 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	223.6676262	14507.82888	14507.82888	0	1028.87108	6.095040974	0
Sacramento	2028 T7 SWCV Class 8	Aggregate	Aggregate	Electricity	26.56068065	1699.198485	0	1699.198485	122.179131	0	3161.444939
Sacramento	2028 T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	683.4598895	44289.34505	44289.34505	0	3143.915492	9.049171351	0
Sacramento	2028 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	1167.343921	81014.79543	81014.79543	0	16961.50717	12.82691179	0
Sacramento	2028 T7 Tractor Class 8	Aggregate	Aggregate	Electricity	24.91373402	2024.779547	0	2024.779547	361.9965553	0	3686.535964
Sacramento	2028 T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	12.121116	803.0242225	803.0242225	0	176.1198155	0.147731096	0
Sacramento	2028 T7 Utility Class 8	Aggregate	Aggregate	Diesel	30.3777326	1301.972234	1301.972234	0	388.8349773	0.219497232	0
Sacramento	2028 T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.865031676	53.37636862	0	53.37636862	11.07240545	0	100.4969352
Sacramento	2028 T7IS	Aggregate	Aggregate	Gasoline	4.022204413	157.0822675	157.0822675	0	80.4762659	0.040669919	0
Sacramento	2028 T7IS	Aggregate	Aggregate	Electricity	0.033887659	8.965484114	0	8.965484114	0.678024285	0	18.01564477
Sacramento	2028 UBUS	Aggregate	Aggregate	Gasoline	195.2350744	14818.02266	14818.02266	0	780.9402977	3.153958837	0
Sacramento	2028 UBUS	Aggregate	Aggregate	Diesel	6.050057269	282.0517609	282.0517609	0	24.20022908	0.030099922	0
Sacramento	2028 UBUS	Aggregate	Aggregate	Electricity	29.27330616	2478.816574	0	2478.816574	117.0932246	0	4321.182415
Sacramento	2028 UBUS	Aggregate	Aggregate	Natural Gas	358.8395155	34602.21259	34602.21259	0	1435.358062	5.718336971	0

EMFAC Fuel Usage: Year 2029

Vehicle type	GAS			DSL			NG			ELEC		
	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	Gallons/day	Miles/gallon	VMT/day	kWh/day	Miles/kWh
All other buses	0	0	0.00	25,246	2,737	9.22	3,640	466	7.81	0	0	0.00
LDA	18,318,003	575,311	31.84	27,592	607	45.48	0	0	0.00	2,187,495	809,992	2.70
LDT1	1,388,171	52,668	26.36	29	1	25.13	0	0	0.00	17,438	6,301	2.77
LDT2	9,453,761	360,986	26.19	33,141	927	35.76	0	0	0.00	201,701	70,846	2.85
LHD1	676,879	67,158	10.08	449,977	27,845	16.16	0	0	0.00	59,603	38,810	1.54
LHD2	91,689	10,195	8.99	190,977	14,071	13.57	0	0	0.00	14,417	9,233	1.56
MCY	141,431	3,477	40.68	0	0	0.00	0	0	0.00	0	0	0.00
MDV	5,395,375	251,923	21.42	83,808	3,212	26.09	0	0	0.00	168,848	60,977	2.77
MH	20,077	4,547	4.42	9,364	998	9.38	0	0	0.00	0	0	0.00
Motor coach	0	0	0.00	13,166	2,272	5.79	0	0	0.00	0	0	0.00
OBUS	16,384	3,344	4.90	0	0	0.00	0	0	0.00	910	1,010	0.90
PTO	0	0	0.00	23,922	4,561	5.25	0	0	0.00	1,833	3,798	0.48
SBUS	7,045	686	10.28	20,693	2,503	8.27	597	98	6.12	1,196	1,260	0.95
T6	75,185	15,572	4.83	648,690	74,862	8.67	17,800	2,581	6.90	51,304	56,628	0.91
T7	717	168	4.27	920,747	147,978	6.22	55,527	11,068	5.02	39,996	74,621	0.54
UBUS	57,379	6,674	8.60	226	22	10.18	140,681	41,867	3.36	8,591	15,006	0.57
Total	**35,642,094**	**1,352,708**	**26.35**	**2,447,579**	**282,596**	**8.66**	**218,244**	**56,080**	**3.89**	**2,753,332**	**1,148,483**	**2.40**

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2029
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Energy Consumption
Sacramento	2029	All Other Buses	Aggregate	Aggregate	Diesel	492.0664487	25245.51134	25245.51134	0	4379.391394	2.737140839	0
Sacramento	2029	All Other Buses	Aggregate	Aggregate	Natural Gas	67.2092741	3639.605573	3639.605573	0	598.1625395	0.46625873	0
Sacramento	2029	LDA	Aggregate	Aggregate	Gasoline	490473.1371	17976947.08	17976947.08	0	2252213.879	563.0415477	0
Sacramento	2029	LDA	Aggregate	Aggregate	Diesel	1027.252948	27592.18325	27592.18325	0	4278.921486	0.606721379	0
Sacramento	2029	LDA	Aggregate	Aggregate	Electricity	38797.82773	1776309.082	0	1776309.082	189458.1443	0	685801.9124
Sacramento	2029	LDA	Aggregate	Aggregate	Plug-in Hybrid	17855.94973	752241.2042	341055.667	411185.5371	73834.35213	12.26921365	124190.2875
Sacramento	2029	LDT1	Aggregate	Aggregate	Gasoline	43812.45091	1384517.788	1384517.788	0	190392.6051	52.53599554	0
Sacramento	2029	LDT1	Aggregate	Aggregate	Diesel	2.478705859	29.06065504	29.06065504	0	7.380741603	0.001156574	0
Sacramento	2029	LDT1	Aggregate	Aggregate	Electricity	274.6555472	12308.47627	0	12308.47627	1324.960618	0	4752.087714
Sacramento	2029	LDT1	Aggregate	Aggregate	Plug-in Hybrid	186.5040036	8783.083428	3653.221882	5129.861546	771.1940551	0.131800624	1549.371081
Sacramento	2029	LDT2	Aggregate	Aggregate	Gasoline	252853.3979	9389933.851	9389933.851	0	1167411.79	358.6733908	0
Sacramento	2029	LDT2	Aggregate	Aggregate	Diesel	850.5974667	33140.64322	33140.64322	0	4004.196978	0.926674153	0
Sacramento	2029	LDT2	Aggregate	Aggregate	Electricity	3483.420013	118096.3509	0	118096.3509	17383.18443	0	45594.93848
Sacramento	2029	LDT2	Aggregate	Aggregate	Plug-in Hybrid	3329.789513	147431.8291	63826.98578	83604.84332	13768.67964	2.312700657	25251.15451
Sacramento	2029	LHD1	Aggregate	Aggregate	Gasoline	19003.13248	676879.4886	676879.4886	0	283118.3593	67.15798597	0
Sacramento	2029	LHD1	Aggregate	Aggregate	Diesel	12792.24484	449977.1984	449977.1984	0	160910.3475	27.84502186	0
Sacramento	2029	LHD1	Aggregate	Aggregate	Electricity	963.3033154	59603.25879	0	59603.25879	13491.17111	0	38809.88286
Sacramento	2029	LHD2	Aggregate	Aggregate	Gasoline	2617.157863	91688.92466	91688.92466	0	38991.75259	10.1954032	0
Sacramento	2029	LHD2	Aggregate	Aggregate	Diesel	5254.339854	190977.1375	190977.1375	0	66092.9854	14.07121603	0
Sacramento	2029	LHD2	Aggregate	Aggregate	Electricity	243.8354371	14416.50782	0	14416.50782	3233.990763	0	9232.611389
Sacramento	2029	MCY	Aggregate	Aggregate	Gasoline	26745.56007	141430.8346	141430.8346	0	53491.12013	3.476676937	0
Sacramento	2029	MDV	Aggregate	Aggregate	Gasoline	153512.8167	5356836.544	5356836.544	0	696714.2484	250.5093704	0
Sacramento	2029	MDV	Aggregate	Aggregate	Diesel	2419.638617	83808.34518	83808.34518	0	11028.79136	3.211772718	0
Sacramento	2029	MDV	Aggregate	Aggregate	Electricity	3516.289715	118733.525	0	118733.525	17525.02083	0	45840.94026
Sacramento	2029	MDV	Aggregate	Aggregate	Plug-in Hybrid	2041.121293	88652.83946	38538.43949	50114.39997	8440.036548	1.413280549	15136.04244
Sacramento	2029	MH	Aggregate	Aggregate	Gasoline	2199.366168	20076.5118	20076.5118	0	220.0245915	4.547328138	0
Sacramento	2029	MH	Aggregate	Aggregate	Diesel	1050.915063	9363.657754	9363.657754	0	105.0915063	0.998236094	0
Sacramento	2029	Motor Coach	Aggregate	Aggregate	Diesel	110.2592342	13166.00756	13166.00756	0	2533.757202	2.2722367	0
Sacramento	2029	OBUS	Aggregate	Aggregate	Gasoline	430.8083168	16383.85327	16383.85327	0	8619.612803	3.343757663	0
Sacramento	2029	OBUS	Aggregate	Aggregate	Electricity	10.72499632	910.4638858	0	910.4638858	214.5857264	0	1009.963193
Sacramento	2029	PTO	Aggregate	Aggregate	Diesel	0	23922.48527	23922.48527	0	0	4.560869579	0
Sacramento	2029	PTO	Aggregate	Aggregate	Electricity	0	1833.31983	0	1833.31983	0	0	3797.756436
Sacramento	2029	SBUS	Aggregate	Aggregate	Gasoline	133.5183445	7045.304264	7045.304264	0	534.073378	0.685535605	0
Sacramento	2029	SBUS	Aggregate	Aggregate	Diesel	957.5700623	20693.06511	20693.06511	0	13865.6145	2.503132465	0
Sacramento	2029	SBUS	Aggregate	Aggregate	Electricity	40.18910753	1196.324205	0	1196.324205	527.1893059	0	1260.274421
Sacramento	2029	SBUS	Aggregate	Aggregate	Natural Gas	23.78422396	597.1586828	597.1586828	0	344.395563	0.097520669	0
Sacramento	2029	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	11.30021055	760.4498171	760.4498171	0	259.6788383	0.082109096	0
Sacramento	2029	T6 CAIRP Class 4	Aggregate	Aggregate	Electricity	0.993162409	81.79037508	0	81.79037508	22.82287217	0	88.84753687
Sacramento	2029	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	14.61785994	1049.381812	1049.381812	0	335.9184215	0.113602828	0
Sacramento	2029	T6 CAIRP Class 5	Aggregate	Aggregate	Electricity	1.182987488	106.0202765	0	106.0202765	27.18505247	0	115.1680796
Sacramento	2029	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	55.26280221	2684.64978	2684.64978	0	1269.939195	0.286636365	0
Sacramento	2029	T6 CAIRP Class 6	Aggregate	Aggregate	Electricity	5.971832675	334.4489341	0	334.4489341	137.2327149	0	363.3063667
Sacramento	2029	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	88.94348617	17783.45303	17783.45303	0	2043.921312	1.715931325	0
Sacramento	2029	T6 CAIRP Class 7	Aggregate	Aggregate	Electricity	5.278464401	1153.860125	0	1153.860125	121.2991119	0	1253.419243
Sacramento	2029	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	753.0150092	24999.81147	24999.81147	0	10745.52418	2.942390246	0
Sacramento	2029	T6 Instate Delivery Class 4	Aggregate	Aggregate	Electricity	47.14510369	1898.25132	0	1898.25132	672.7606297	0	2027.862172
Sacramento	2029	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	353.922381	11769.72183	11769.72183	0	5050.472377	1.386421981	0
Sacramento	2029	T6 Instate Delivery Class 5	Aggregate	Aggregate	Electricity	21.71594323	875.9308557	0	875.9308557	309.8865098	0	935.7386078
Sacramento	2029	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	1474.715182	48971.05565	48971.05565	0	21044.18565	5.764968746	0
Sacramento	2029	T6 Instate Delivery Class 6	Aggregate	Aggregate	Electricity	90.14911466	3612.684397	0	3612.684397	1286.427866	0	3859.355161
Sacramento	2029	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	215.4972045	10998.45059	10998.45059	0	3075.145109	1.291068667	0
Sacramento	2029	T6 Instate Delivery Class 7	Aggregate	Aggregate	Electricity	6.761599863	342.4488789	0	342.4488789	96.48803004	0	365.8309729
Sacramento	2029	T6 Instate Delivery Class 7	Aggregate	Aggregate	Natural Gas	3.167839813	164.4829979	164.4829979	0	45.20507413	0.023745659	0
Sacramento	2029	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	1108.021755	44957.01732	44957.01732	0	12808.73148	5.119084767	0
Sacramento	2029	T6 Instate Other Class 4	Aggregate	Aggregate	Electricity	77.1724777	3699.934392	0	3699.934392	892.1138422	0	3922.230471
Sacramento	2029	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	3064.432958	126481.1229	126481.1229	0	35424.84499	14.45814182	0
Sacramento	2029	T6 Instate Other Class 5	Aggregate	Aggregate	Electricity	200.2071121	9674.925631	0	9674.925631	2314.394216	0	10256.20568
Sacramento	2029	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	2096.865756	86123.25812	86123.25812	0	24239.76813	9.820072193	0
Sacramento	2029	T6 Instate Other Class 6	Aggregate	Aggregate	Electricity	140.3732089	6676.399298	0	6676.399298	1622.714295	0	7077.524623
Sacramento	2029	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	1093.414946	44809.24103	44809.24103	0	12639.87678	5.061990458	0
Sacramento	2029	T6 Instate Other Class 7	Aggregate	Aggregate	Electricity	43.59915181	2956.010296	0	2956.010296	504.006195	0	3133.610606
Sacramento	2029	T6 Instate Other Class 7	Aggregate	Aggregate	Natural Gas	12.45754713	519.1561599	519.1561599	0	144.0092448	0.066991352	0
Sacramento	2029	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.8235623	511.5913531	511.5913531	0	125.1203802	0.057065186	0
Sacramento	2029	T6 Instate Tractor Class 6	Aggregate	Aggregate	Electricity	0.680822038	42.43011557	0	42.43011557	7.870302755	0	44.97936301
Sacramento	2029	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	739.8185859	40987.65394	40987.65394	0	8552.302853	4.354674499	0
Sacramento	2029	T6 Instate Tractor Class 7	Aggregate	Aggregate	Electricity	17.76817635	1443.945027	0	1443.945027	205.4001186	0	1530.698814
Sacramento	2029	T6 Instate Tractor Class 7	Aggregate	Aggregate	Natural Gas	9.581979798	526.0121867	526.0121867	0	110.7676865	0.066007668	0
Sacramento	2029	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.276567977	425.6113516	425.6113516	0	144.2355321	0.043965434	0
Sacramento	2029	T6 OOS Class 5	Aggregate	Aggregate	Diesel	8.047850981	583.8622394	583.8622394	0	184.9396156	0.060616572	0
Sacramento	2029	T6 OOS Class 6	Aggregate	Aggregate	Diesel	31.08750128	1525.648736	1525.648736	0	714.3907794	0.154818992	0
Sacramento	2029	T6 OOS Class 7	Aggregate	Aggregate	Diesel	42.69274002	11093.36344	11093.36344	0	981.0791657	1.045698736	0
Sacramento	2029	T6 Public Class 4	Aggregate	Aggregate	Diesel	460.6507298	16438.95441	16438.95441	0	2363.138244	2.07920479	0
Sacramento	2029	T6 Public Class 4	Aggregate	Aggregate	Electricity	26.3557691	1130.811878	0	1130.811878	135.2050955	0	1335.376377
Sacramento	2029	T6 Public Class 4	Aggregate	Aggregate	Natural Gas	35.71945952	1448.840294	1448.840294	0	183.2408273	0.213933081	0
Sacramento	2029	T6 Public Class 5	Aggregate	Aggregate	Diesel	596.8950778	21394.95637	21394.95637	0	3062.071749	2.682300732	0
Sacramento	2029	T6 Public Class 5	Aggregate	Aggregate	Electricity	34.9980195	1497.804384	0	1497.804384	179.53984	0	1768.758032
Sacramento	2029	T6 Public Class 5	Aggregate	Aggregate	Natural Gas	64.96045144	2511.967284	2511.967284	0	333.2471159	0.37794707	0
Sacramento	2029	T6 Public Class 6	Aggregate	Aggregate	Diesel	698.6253969	25210.3262	25210.3262	0	3583.948286	3.127290092	0
Sacramento	2029	T6 Public Class 6	Aggregate	Aggregate	Electricity	43.87384496	1819.048268	0	1819.048268	225.0728246	0	2148.115113
Sacramento	2029	T6 Public Class 6	Aggregate	Aggregate	Natural Gas	64.20243038	2572.58962	2572.58962	0	329.3584678	0.384363352	0
Sacramento	2029	T6 Public Class 7	Aggregate	Aggregate	Diesel	2381.762242	106903.6381	106903.6381	0	12218.4403	12.96891589	0
Sacramento	2029	T6 Public Class 7	Aggregate	Aggregate	Electricity	146.3868801	8932.127884	0	8932.127884	750.964695	0	10547.9548
Sacramento	2029	T6 Public Class 7	Aggregate	Aggregate	Natural Gas	203.2453245	10049.53664	10049.53664	0	1042.648515	1.446759018	0
Sacramento	2029	T6 Utility Class 5	Aggregate	Aggregate	Diesel	38.39015253	1537.981585	1537.981585	0	491.3939524	0.169313477	0
Sacramento	2029	T6 Utility Class 5	Aggregate	Aggregate	Electricity	4.298716283	185.7737335	0	185.7737335	55.02356843	0	208.0783574
Sacramento	2029	T6 Utility Class 5	Aggregate	Aggregate	Natural Gas	0.125913521	4.771703082	4.771703082	0	1.611693066	0.000633903	0
Sacramento	2029	T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.263474639	290.4440124	290.4440124	0	92.97247538	0.031895104	0
Sacramento	2029	T6 Utility Class 6	Aggregate	Aggregate	Electricity	0.817640882	35.33499604	0	35.33499604	10.46580329	0	39.57743537
Sacramento	2029	T6 Utility Class 6	Aggregate	Aggregate	Natural Gas	0.022875997	0.87760863	0.87760863	0	0.292812758	0.000116163	0
Sacramento	2029	T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.051743054	398.7801749	398.7801749	0	103.0623111	0.043422233	0

Sacramento	2029	T6 Utility Class 7	Aggregate	Aggregate	Electricity	0.905824022	54.29734117	0	54.29734117	11.59454748	0	60.8164639
Sacramento	2029	T6 Utility Class 7	Aggregate	Aggregate	Natural Gas	0.031537727	1.410346178	1.410346178	0	0.403682904	0.000185877	0
Sacramento	2029	T6TS	Aggregate	Aggregate	Gasoline	1641.926591	75184.63385	75184.63385	0	32851.66724	15.57233636	0
Sacramento	2029	T6TS	Aggregate	Aggregate	Electricity	55.95115716	4749.446503	0	4749.446503	1119.470753	0	5544.631674
Sacramento	2029	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	970.9604147	195062.3506	195062.3506	0	22312.67033	29.39380753	0
Sacramento	2029	T7 CAIRP Class 8	Aggregate	Aggregate	Electricity	65.39312093	13700.79816	0	13700.79816	1502.733919	0	25016.64463
Sacramento	2029	T7 CAIRP Class 8	Aggregate	Aggregate	Natural Gas	14.04353401	2740.902511	2740.902511	0	322.7204116	0.47733956	0
Sacramento	2029	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	882.3559221	243662.0317	243662.0317	0	20276.53909	34.60723649	0
Sacramento	2029	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	382.056701	88597.31249	88597.31249	0	8779.662988	13.02643824	0
Sacramento	2029	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	10.53090877	2317.377028	2317.377028	0	172.2856676	0.365420124	0
Sacramento	2029	T7 Other Port Class 8	Aggregate	Aggregate	Electricity	0.3629985	109.377969	0	109.377969	5.938655459	0	199.06432
Sacramento	2029	T7 POAK Class 8	Aggregate	Aggregate	Diesel	35.87433981	3835.681247	3835.681247	0	586.9041993	0.625114349	0
Sacramento	2029	T7 POAK Class 8	Aggregate	Aggregate	Electricity	1.27102564	127.4639845	0	127.4639845	20.79397947	0	231.9802757
Sacramento	2029	T7 Public Class 8	Aggregate	Aggregate	Diesel	4088.481593	173533.8368	173533.8368	0	20973.91057	31.87450545	0
Sacramento	2029	T7 Public Class 8	Aggregate	Aggregate	Electricity	185.6448496	11269.29558	0	11269.29558	952.3580786	0	22116.92299
Sacramento	2029	T7 Public Class 8	Aggregate	Aggregate	Natural Gas	79.09591414	3600.204813	3600.204813	0	405.7620395	0.757797797	0
Sacramento	2029	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Diesel	161.3935051	10833.42006	10833.42006	0	1520.326818	1.743268336	0
Sacramento	2029	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Electricity	17.14136605	1379.020461	0	1379.020461	161.4716682	0	2514.166909
Sacramento	2029	T7 Single Concrete/Transit Mix Cl	Aggregate	Aggregate	Natural Gas	4.174518024	289.50214	289.50214	0	39.32395978	0.047212454	0
Sacramento	2029	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	534.7362179	28077.35964	28077.35964	0	5037.215173	4.731586215	0
Sacramento	2029	T7 Single Dump Class 8	Aggregate	Aggregate	Electricity	25.81460212	2105.269866	0	2105.269866	243.173552	0	3838.231543
Sacramento	2029	T7 Single Dump Class 8	Aggregate	Aggregate	Natural Gas	15.97204645	790.8476017	790.8476017	0	150.4566775	0.144879123	0
Sacramento	2029	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1576.610679	78265.18841	78265.18841	0	14851.67259	12.97812414	0
Sacramento	2029	T7 Single Other Class 8	Aggregate	Aggregate	Electricity	84.11034785	5748.674788	0	5748.674788	792.3194768	0	10480.72043
Sacramento	2029	T7 Single Other Class 8	Aggregate	Aggregate	Natural Gas	45.59354081	2222.099685	2222.099685	0	429.4911544	0.391031457	0
Sacramento	2029	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	204.5475976	13267.90655	13267.90655	0	940.9189488	5.564500199	0
Sacramento	2029	T7 SWCV Class 8	Aggregate	Aggregate	Electricity	40.03172792	2565.816429	0	2565.816429	184.1459484	0	4773.831567
Sacramento	2029	T7 SWCV Class 8	Aggregate	Aggregate	Natural Gas	695.6844309	45087.47517	45087.47517	0	3200.148382	9.1046537	0
Sacramento	2029	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	1205.837975	82009.74832	82009.74832	0	17520.82578	12.85291911	0
Sacramento	2029	T7 Tractor Class 8	Aggregate	Aggregate	Electricity	35.41903054	2861.10216	0	2861.10216	514.6385137	0	5209.236742
Sacramento	2029	T7 Tractor Class 8	Aggregate	Aggregate	Natural Gas	12.19283503	795.8031323	795.8031323	0	177.161893	0.14526245	0
Sacramento	2029	T7 Utility Class 8	Aggregate	Aggregate	Diesel	30.17903596	1284.928237	1284.928237	0	386.2916603	0.215435302	0
Sacramento	2029	T7 Utility Class 8	Aggregate	Aggregate	Electricity	1.304206122	79.93807709	0	79.93807709	16.69383836	0	150.5072743
Sacramento	2029	T7IS	Aggregate	Aggregate	Gasoline	2.791009211	144.1201169	144.1201169	0	55.84251229	0.035069303	0
Sacramento	2029	T7IS	Aggregate	Aggregate	Electricity	0.051128967	13.2775364	0	13.2775364	1.022988369	0	26.6804755
Sacramento	2029	UBUS	Aggregate	Aggregate	Gasoline	198.7719876	15089.12415	15089.12415	0	795.0879505	3.211705007	0
Sacramento	2029	UBUS	Aggregate	Aggregate	Diesel	5.548407104	226.400957	226.400957	0	22.19362841	0.022231411	0
Sacramento	2029	UBUS	Aggregate	Aggregate	Electricity	87.39374518	8513.43517	0	8513.43517	349.5749807	0	14840.99579
Sacramento	2029	UBUS	Aggregate	Aggregate	Natural Gas	312.3604998	29651.51276	29651.51276	0	1249.441999	4.579104485	0
Orange (SC)	2025	T7 Utility Class 8	Aggregate	Aggregate	Electricity	0.441786397	28.24913889	0	28.24913889	5.654865875	0	50.5236931
Orange (SC)	2025	T7IS	Aggregate	Aggregate	Gasoline	6.722292417	572.5132259	572.5132259	0	134.4996267	0.132943836	0
Orange (SC)	2025	T7IS	Aggregate	Aggregate	Electricity	0.027208508	7.235020643	0	7.235020643	0.54387836	0	12.92991158
Orange (SC)	2025	UBUS	Aggregate	Aggregate	Gasoline	256.3483478	42289.47506	42289.47506	0	1025.393391	3.462280467	0
Orange (SC)	2025	UBUS	Aggregate	Aggregate	Electricity	4.037405551	77.72005682	0	77.72005682	16.1496222	0	165.4036891
Orange (SC)	2025	UBUS	Aggregate	Aggregate	Natural Gas	577.6938563	111029.5135	111029.5135	0	2310.775425	37.28808911	0

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	Equipment Type	Horsepower HP	Gas				Diesel					Natural Gas			
			Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	
Air Compressors25	Air Compressors	25	27342.99676	96.69393355	0	0	2596.432812	4.919859598	0	0	0	0	0	0	0
Air Compressors50	Air Compressors	50	14034.25	12.9	6230.55	2.252489744	24181.25	29.09	23677.55	1.021273316	0	0	0	0	0
Air Compressors75	Air Compressors	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors100	Air Compressors	100	76142.65	41.82	20210.05	3.767563663	0	0	0	0	0	0	0	0	0
Air Compressors175	Air Compressors	175	9314.8	2.81	1365.1	6.823539413	0	0	0	0	0	0	0	0	0
Air Compressors300	Air Compressors	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors600	Air Compressors	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors750	Air Compressors	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors9999	Air Compressors	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Aerial Lifts25	Aerial Lifts	25	2518.320998	14.92068755	0	0	20.0102399	9.32200712	0	0	0	0	0	0	0
Aerial Lifts50	Aerial Lifts	50	7084.85	12.38	4467.6	1.585784314	9613.557163	50.01160083	11799.37726	0.814751233	0	0	0	0	0
Aerial Lifts75	Aerial Lifts	75	0	0	0	0	19111.31643	54.53515587	16101.99368	1.186891314	0	0	0	0	0
Aerial Lifts100	Aerial Lifts	100	12742.15	12.38	4467.6	2.852124183	9733.559595	9.415370489	2669.743302	1.398471378	0	0	0	0	0
Aerial Lifts175	Aerial Lifts	175	0	0	0	0	5571.247531	6.667001216	2096.747969	1.859097792	0	0	0	0	0
Aerial Lifts300	Aerial Lifts	300	0	0	0	0	119.4789461	0.07898693	32.63490697	3.661078189	0	0	0	0	0
Aerial Lifts600	Aerial Lifts	600	0	0	0	0	70.04729881	0.031594772	11.91468961	5.879070393	0	0	0	0	0
Bore/Drill rigs25	Bore/Drill rigs	25	434.0668638	4.881165216	0	0	23.49993042	1.69731954	0	0	0	0	0	0	0
Bore/Drill rigs50	Bore/Drill rigs	50	233.6	0.88	87.6	2.666666667	1419.649221	2.689915946	1274.763178	1.113657223	0	0	0	0	0
Bore/Drill rigs75	Bore/Drill rigs	75	0	0	0	0	5491.975255	6.265910165	3059.748849	1.794910478	0	0	0	0	0
Bore/Drill rigs100	Bore/Drill rigs	100	2730.2	3.99	434.35	6.285714286	4179.032869	3.313413669	1692.11628	2.46970785	0	0	0	0	0
Bore/Drill rigs175	Bore/Drill rigs	175	952.65	1.01	102.2	9.321428571	30021.4891	13.12802896	8540.812521	3.515062417	0	0	0	0	0
Bore/Drill rigs300	Bore/Drill rigs	300	0	0	0	0	35590.46648	10.27166972	6273.453376	5.671852779	0	0	0	0	0
Bore/Drill rigs600	Bore/Drill rigs	600	0	0	0	0	51238.40677	8.82767534	9067.859832	10.10849828	0	0	0	0	0
Bore/Drill rigs750	Bore/Drill rigs	750	0	0	0	0	21286.99579	2.29626971	1291.621108	16.4808361	0	0	0	0	0
Bore/Drill rigs9999	Bore/Drill rigs	9999	0	0	0	0	7025.660333	0.557665501	326.6814548	21.50614988	0	0	0	0	0
Cement and Mortar Mixers25	Cement and Mortar Mixers	25	199.3865038	2.878044388	0	0	6.86196294	2.645012657	0	0	0	0	0	0	0
Cement and Mortar Mixers50	Cement and Mortar Mixers	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers75	Cement and Mortar Mixers	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers100	Cement and Mortar Mixers	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers175	Cement and Mortar Mixers	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers300	Cement and Mortar Mixers	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers600	Cement and Mortar Mixers	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers750	Cement and Mortar Mixers	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers9999	Cement and Mortar Mixers	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws25	Concrete/Industrial Saws	25	6594.279342	31.61185868	0	0	4.696411764	0.982201378	0	0	0	0	0	0	0
Concrete/Industrial Saws50	Concrete/Industrial Saws	50	5482.3	3.24	1981.95	2.76611418	1638.85	2.04	1189.3	1.377300613	0	0	0	0	0
Concrete/Industrial Saws75	Concrete/Industrial Saws	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws100	Concrete/Industrial Saws	100	5347.25	1.86	1135.15	4.710610932	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws175	Concrete/Industrial Saws	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws300	Concrete/Industrial Saws	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws600	Concrete/Industrial Saws	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws750	Concrete/Industrial Saws	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws9999	Concrete/Industrial Saws	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes25	Cranes	25	0	0	0	0	3.99053351	0.065607708	11.28137652	0.353727535	0	0	0	0	0
Cranes50	Cranes	50	792.05	1.01	405.15	1.954954955	164.1836796	0.853398284	165.0968507	0.994468876	0	0	0	0	0
Cranes75	Cranes	75	0	0	0	0	648.6984175	2.527681173	453.4789218	1.430492087	0	0	0	0	0
Cranes100	Cranes	100	2711.95	1.98	817.6	3.316964286	1962.330684	4.959391216	950.9339847	2.063582452	0	0	0	0	0
Cranes175	Cranes	175	175.2	0.08	36.5	4.8	14635.07306	22.29980517	5811.372154	2.516629923	0	0	0	0	0
Cranes300	Cranes	300	0	0	0	0	471227.57805	50.15776168	12738.35063	3.700585621	0	0	0	0	0
Cranes600	Cranes	600	0	0	0	0	65272.50076	40.08483672	10420.97276	6.263570808	0	0	0	0	0
Cranes750	Cranes	750	0	0	0	0	10188.13515	4.625343273	1084.252315	9.396461522	0	0	0	0	0
Cranes9999	Cranes	9999	0	0	0	0	3475.620698	1.082527349	262.4083547	13.24508399	0	0	0	0	0
Crawler Tractors25	Crawler Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawler Tractors50	Crawler Tractors	50	0	0	0	0	830.7980839	2.822117014	769.1258516	1.080184839	0	0	0	0	0
Crawler Tractors75	Crawler Tractors	75	0	0	0	0	5655.792343	11.19037427	3271.072867	1.72901998	0	0	0	0	0
Crawler Tractors100	Crawler Tractors	100	0	0	0	0	21722.32901	28.15583413	9842.811126	2.206923282	0	0	0	0	0
Crawler Tractors175	Crawler Tractors	175	0	0	0	0	78598.477	57.81279469	26589.97423	2.955944083	0	0	0	0	0
Crawler Tractors300	Crawler Tractors	300	0	0	0	0	96964.60359	46.83183661	20240.96644	4.788383903	0	0	0	0	0
Crawler Tractors600	Crawler Tractors	600	0	0	0	0	170129.5013	46.78904702	20484.90548	8.305115269	0	0	0	0	0
Crawler Tractors750	Crawler Tractors	750	0	0	0	0	10757.03882	2.139063345	832.1997821	12.92602937	0	0	0	0	0
Crawler Tractors9999	Crawler Tractors	9999	0	0	0	0	17927.75733	2.529862158	1019.945615	17.57716986	0	0	0	0	0
Crushing/Proc. Equipment25	Crushing/Proc. Equipment	25	78.8827538	0.397101354	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment50	Crushing/Proc. Equipment	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment75	Crushing/Proc. Equipment	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment100	Crushing/Proc. Equipment	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment175	Crushing/Proc. Equipment	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment300	Crushing/Proc. Equipment	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment600	Crushing/Proc. Equipment	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment750	Crushing/Proc. Equipment	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment9999	Crushing/Proc. Equipment	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Dumpers/Tenders25	Dumpers/Tenders	25	489.9553756	8.216296892	0	0	3.379572815	1.366003105	0	0	0	0	0	0	0
Dumpers/Tenders100	Dumpers/Tenders	100	229.95	0.73	87.6	2.625	0	0	0	0	0	0	0	0	0
Excavators25	Excavators	25	0	0	0	0	26.53063201	2.179819946	13.94602596	1.902379365	0	0	0	0	0
Excavators50	Excavators	50	0	0	0	0	88194.10939	245.1435377	116538.1872	0.756782918	0	0	0	0	0
Excavators75	Excavators	75	0	0	0	0	70072.64873	101.3986727	53164.20012	1.318042002	0	0	0	0	0
Excavators100	Excavators	100	0	0	0	0	54306.14084	53.17533449	28305.19236	1.918912891	0	0	0	0	0
Excavators175	Excavators	175	0	0	0	0	306298.1566	151.6619793	108994.9343	2.810205435	0	0	0	0	0
Excavators300	Excavators	300	0	0	0	0	326957.2701	112.9940789	72599.93179	4.503547896	0	0	0	0	0
Excavators600	Excavators	600	0	0	0	0	378068.2275	78.77141613	52523.90559	7.198021991	0	0	0	0	0
Excavators750	Excavators	750	0	0	0	0	10999.60479	1.64067348	865.0170862	12.71605494	0	0	0	0	0
Excavators9999	Excavators	9999	0	0	0	0	53377.77728	3.05273044	1770.966143	30.14048437	0	0	0	0	0
Forklifts25	Forklifts	25	48.25387736	0.111750006	0	0	0.074893843	0.015797386	5.564908888	0.013459312	0	0	0	0	0
Forklifts50	Forklifts	50	119519.25	42.13	74708.2	1.599814344	12539.35487	36.58765133	18698.72241	0.670599552	182072.85	75.71	136396.85	1.334876582	
Forklifts75	Forklifts	75	0	0	0	0	127085.0758	247.930038	99039.12585	1.283180508	0	0	0	0	0
Forklifts100	Forklifts	100	571046.15	156.09	265654.3	2.149583688	72531.02506	127.0349462	54292.49938	1.335930855	1139303.7	265.72	478715.75	2.379916892	
Forklifts175	Forklifts	175	39722.95	5.64	9672.5	4.106792453	281205.6946	274.9830366	147347.2239	1.908456008	85512.2	9.73	17523.65	4.879816703	
Forklifts300	Forklifts	300	0	0	0	0	9117.608998	7.702805688	3832.992189	2.378718387	0	0	0	0	0
Forklifts600	Forklifts	600	0	0	0	0	2723.703038	1.42830298	703.3674693	3.872375617	0	0	0	0	0
Forklifts750	Forklifts	750	0	0	0	0	325.8148087	0.080238192	35.53200883	9.169614087	0	0	0	0	0
Forklifts9999	Forklifts	9999	0	0	0	0	3210.684341	0.31594772	157.0440636	20.44448079	0	0	0	0	0
Generator Sets25	Generator Sets	25	40736.54716	402.5344691	0	0	47746.9955	178.7603984	0	0	0	0	0	0	0
Generator Sets50	Generator Sets	50	108532.75	424.29	48734.8	2.22700719	66583.3	141.17	47650.75	1.397319035	0	0	0	0	0
Generator Sets75	Generator Sets	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets100	Generator Sets	100	48902.7	81.93	9402.4	5.201086957	0	0	0	0	4383.85	6.09	704.45	6.222797927	
Generator Sets175	Generator Sets	175	7993.5	7.73	886.95	9.012345679	0	0	0	0	6332.75	5.08	576.7	10.98101266	
Generator Sets300	Generator Sets	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets600	Generator Sets	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets750	Generator Sets	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets9999	Generator Sets	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Graders25	Graders	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Graders50	Graders	50	0	0	0	0	283.1053473	1.214033291	301.9777128	0.937504112	0	0	0	0	0
Graders75	Graders	75	0	0	0	0	1048.876822	2.331782273	564.3062377	1.85870145	0	0	0	0	0
Graders100	Graders	100	0	0	0	0	2215.071559	4.036607289	1051.85169	2.105878214	0	0	0	0	0
Graders175	Graders	175	0	0	0	0	3557.65594	34.39257336	11111.31316	3.201930809	0	0	0	0	0
Graders300	Graders	300	0	0	0	0	118169.9917	64.32238872	24973.22376	4.731867733	0	0	0	0	0
Graders600	Graders	600	0	0	0	0	28663.31564	9.516731233	4034.885761	7.103879949	0	0	0	0	0
Graders750	Graders	750	0	0	0	0	1095.053566	0.196823118	74.98460216	14.60371242	0	0	0	0	0
Graders9999	Graders	9999	0	0	0	0	791.1364551	0.131215412	50.93427084	15.53240791	0	0	0	0	0
Off-Highway Tractors25	Off-Highway Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Tractors50	Off-Highway Tractors	50	0	0	0	0	14739.09996	26.37834214	15973.13133	0.922743303	0	0	0	0	0
Off-Highway Tractors75	Off-Highway Tractors	75	0	0	0	0	12937.92512	14.24439874	8707.412059	1.485851943	0	0	0	0	0
Off-Highway Tractors100	Off-Highway Tractors	100	0	0	0	0	12352.56109	9.415409438	9955.416068	2.074172643	0	0	0	0	0
Off-Highway Tractors175	Off-Highway Tractors	175	0	0	0	0	67261.27118	20.8323527	21175.34832	3.176395031	0	0	0	0	0
Off-Highway Tractors300	Off-Highway Tractors	300	0	0	0	0	30026.86606	8.137739431	6410.274015	4.684178241	0	0	0	0	0
Off-Highway Tractors600	Off-Highway Tractors	600	0	0	0	0	79439.32054	10.56970389	9730.112372	8.164275756	0	0	0	0	0
Off-Highway Tractors750	Off-Highway Tractors	750	0	0	0	0	6484.031618	0.689026485	509.22265	12.73319562	0	0	0	0	0
Off-Highway Tractors9999	Off-Highway Tractors	9999	0	0	0	0	5760.505919	0.230345971	183.9505759	31.31550849	0	0	0	0	0
Off-Highway Trucks25	Off-Highway Trucks	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Trucks50	Off-Highway Trucks	50	0	0	0	0	630.8945214	1.705800356	1053.007563	0.599135793	0	0	0	0	0
Off-Highway Trucks75	Off-Highway Trucks	75	0	0	0	0	710.1461571	0.815649864	449.1239214	1.581180888	0	0	0	0	0
Off-Highway Trucks100	Off-Highway Trucks	100	0	0	0	0	332.9039928	0.295234677	182.9150023	1.81999283	0	0	0	0	0
Off-Highway Trucks175	Off-Highway Trucks	175	0	0	0	0	17221.03333	6.364434751	5696.691505	3.022888575	0	0	0	0	0
Off-Highway Trucks300	Off-Highway Trucks	300	0	0	0	0	40101.32552	12.63443588	9145.463875	4.384833214	0	0	0	0	0
Off-Highway Trucks600	Off-Highway Trucks	600	0	0	0	0	297588.0241	43.34476313	36008.11615	8.264470788	0	0	0	0	0
Off-Highway Trucks750	Off-Highway Trucks	750	0	0	0	0	36355.82184	5.630383944	3229.337859	11.25798025	0	0	0	0	0
Off-Highway Trucks9999	Off-Highway Trucks	9999	0	0	0	0	140357.4711	9.822994102	6576.2617	21.3430483	0	0	0	0	0
Pavers25	Pavers	25	1417.86509	4.864339236	0	0	6.365597633	0.8477046	0	0	0	0	0	0	0
Pavers50	Pavers	50	2573.25	2.81	1105.95	2.326732673	1365.488172	4.363130965	1539.862371	0.88675988	0	0	0	0	0
Pavers75	Pavers	75	0	0	0	0	6969.151363	11.31844069	4406.958324	1.581397156	0	0	0	0	0
Pavers100	Pavers	100	2299.5	1.55	609.55	3.77245509	7525.580878	8.69378706	3783.617474	1.98899094	0	0	0	0	0
Pavers175	Pavers	175	0	0	0	0	25356.58235	15.38586655	8548.487246	2.966206958	0	0	0	0	0
Pavers300	Pavers	300	0	0	0	0	30792.2197	11.38347728	6379.462826	4.826773122	0	0	0	0	0
Pavers600	Pavers	600	0	0	0	0	5439.97766	1.181376401	684.7426319	7.944558155	0	0	0	0	0
Pavers750	Pavers	750	0	0	0	0	225.6174682	0.032803853	16.90306149	13.34772806	0	0	0	0	0
Pavers9999	Pavers	9999	0	0	0	0	5168.429135	0.229629071	125.5310985	41.17249986	0	0	0	0	0
Paving Equipment25	Paving Equipment	25	1425.313081	10.78399789	0	0	10.80883398	2.106426415	0	0	0	0	0	0	0
Paving Equipment50	Paving Equipment	50	2996.65	7.65	1343.2	2.230978261	3553.53718	12.0724312	4686.83162	0.758196041	0	0	0	0	0
Paving Equipment75	Paving Equipment	75	0	0	0	0	2564.820858	4.756558653	1939.946653	1.322108963	0	0	0	0	0
Paving Equipment100	Paving Equipment	100	1237.35	1.99	343.1	3.606382979	4271.122815	5.415547122	2305.740436	1.852386655	0	0	0	0	0
Paving Equipment175	Paving Equipment	175	0	0	0	0	28174.45533	17.4865033	11452.68287	2.460074695	0	0	0	0	0
Paving Equipment300	Paving Equipment	300	0	0	0	0	12662.89993	5.545335621	2976.379143	4.254464676	0	0	0	0	0
Paving Equipment600	Paving Equipment	600	0	0	0	0	30115.73329	8.007379401	4682.064733	6.432147996	0	0	0	0	0
Paving Equipment750	Paving Equipment	750	0	0	0	0	6557.476325	1.082527149	567.4401166	11.55624379	0	0	0	0	0
Paving Equipment9999	Paving Equipment	9999	0	0	0	0	4111.811805	0.426450089	226.675867	18.13960985	0	0	0	0	0
Rollers25	Rollers	25	4367.684816	23.57729498	0	0	75.69087943	16.65208303	0	0	0	0	0	0	0
Rollers50	Rollers	50	3347.05	1.98	1222.75	2.737313433	34232.8494	122.69693	44440.89899	0.770300561	0	0	0	0	0
Rollers75	Rollers	75	0	0	0	0	13508.09473	24.93203252	9381.069728	1.44052496	0	0	0	0	0
Rollers100	Rollers	100	10453.6	3.71	2310.46	4.524486572	21117.54429	29.59778475	11147.5575	1.894365137	0	0	0	0	0
Rollers175	Rollers	175	0	0	0	0	121645.4352	80.1815423	47666.97779	2.551985475	0	0	0	0	0
Rollers300	Rollers	300	0	0	0	0	10393.49394	5.321934303	2371.163052	4.383287532	0	0	0	0	0
Rollers600	Rollers	600	0	0	0	0	8423.283719	2.299394534	1132.115972	7.440301105	0	0	0	0	0
Rollers750	Rollers	750	0	0	0	0	203.8349735	0.032803853	14.83059035	13.74422519	0	0	0	0	0
Rollers9999	Rollers	9999	0	0	0	0	9263.345374	0.426450089	203.9727917	44.75634356	0	0	0	0	0
Rough Terrain Forklifts25	Rough Terrain Forklifts	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Rough Terrain Forklifts50	Rough Terrain Forklifts	50	1085	0.84	328.5	3.333333333	1091.823342	4.067677772	1101.988163	0.990775926	0	0	0	0	0
Rough Terrain Forklifts75	Rough Terrain Forklifts	75	0	0	0	0	41480.38018	83.09485756	27382.10804	1.587912082	0	0	0	0	0
Rough Terrain Forklifts100	Rough Terrain Forklifts	100	23644.7	11.22	4635.5	5.100787402	30257.52581	47.57617538	15156.10767	1.996391584	0	0	0	0	0
Rough Terrain Forklifts175	Rough Terrain Forklifts	175	1321.3	0.32	131.4	10.05555556	194838.4204	166.9083329	79744.79392	2.443274486	0	0	0	0	0
Rough Terrain Forklifts300	Rough Terrain Forklifts	300	0	0	0	0	1666.227336	1.017546677	385.4252246	4.323088966	0	0	0	0	0
Rough Terrain Forklifts600	Rough Terrain Forklifts	600	0	0	0	0	471.5236009	0.164061448	69.06939748	6.826810107	0	0	0	0	0
Rough Terrain Forklifts750	Rough Terrain Forklifts	750	0	0	0	0	152.3235972	0.032846034	12.08278091	12.60666716	0	0	0	0	0
Rough Terrain Forklifts9999	Rough Terrain Forklifts	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubber Tired Dozers25	Rubber Tired Dozers	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubber Tired Dozers50	Rubber Tired Dozers	50	0	0	0	0	332.3546169	0.5918509	220.4732825	1.507459829	0	0	0	0	0
Rubber Tired Dozers75	Rubber Tired Dozers	75	0	0	0	0	697.3606506	0.985015581	448.1223427	1.556183622	0	0	0	0	0
Rubber Tired Dozers100	Rubber Tired Dozers	100	0	0	0	0	1475.762436	1.643251478	718.8365812	2.052087361	0	0	0	0	0
Rubber Tired Dozers175	Rubber Tired Dozers	175	0	0	0	0	4583.301603	2.723815183	1588.322995	2.885623149	0	0	0	0	0
Rubber Tired Dozers300	Rubber Tired Dozers	300	0	0	0	0	5609.420733	2.200074094	1239.590565	4.507825196	0	0	0	0	0
Rubber Tired Dozers600	Rubber Tired Dozers	600	0	0	0	0	29796.19286	8.037435038	4265.71996	6.985032596	0	0	0	0	0
Rubber Tired Dozers750	Rubber Tired Dozers	750	0	0	0	0	1066.530563	0.164287173	84.04769439	12.68958739	0	0	0	0	0
Rubber Tired Dozers9999	Rubber Tired Dozers	9999	0	0	0	0	2620.49463	0.164019265	99.10234068	26.44231177	0	0	0	0	0
Scrapers25	Scrapers	25	0	0	0	0	0	0	0	0

Sweepers/Scrubbers175	Sweepers/Scrubbers		175	259.15	0.05	29.2	8.875	696.3455738	0.632135314	253.2468745	2.749663052	0	0	0	0						
Sweepers/Scrubbers300	Sweepers/Scrubbers		300	0	0	0	0	958.4929869	0.458124134	188.9424463	5.072936171	0	0	0	0						
Sweepers/Scrubbers600	Sweepers/Scrubbers		600	0	0	0	0	147.0615404	0.047392158	19.64803655	7.48408028	0	0	0	0						
Sweepers/Scrubbers750	Sweepers/Scrubbers		750	0	0	0	0	0	0	0	0	0	0	0	0						
Sweepers/Scrubbers9999	Sweepers/Scrubbers		9999	0	0	0	0	303.2504625	0.015797386	5.940232579	51.05026755	0	0	0	0						
Tractors/Loaders/Backhoes25	Tractors/Loaders/Backhoes		25	0	0.16294032	0	0	123.4834961	15.83702782	16.68439146	7.40113876	0	0	0	0						
Tractors/Loaders/Backhoes50	Tractors/Loaders/Backhoes		50	0	0	0	0	34280.72618	105.9737285	41837.49409	0.819378094	0	0	0	0						
Tractors/Loaders/Backhoes75	Tractors/Loaders/Backhoes		75	0	0	0	0	15607270724	250.2972213	111324.9233	1.401958863	0	0	0	0						
Tractors/Loaders/Backhoes100	Tractors/Loaders/Backhoes		100	8854.9	3.46	3029.3	2.922891566	363748.1568	415.5277472	198839.4459	1.829356118	0	0	0	0						
Tractors/Loaders/Backhoes175	Tractors/Loaders/Backhoes		175	0	0	0	0	387199.6924	246.5270026	163456.1961	2.368828479	0	0	0	0						
Tractors/Loaders/Backhoes300	Tractors/Loaders/Backhoes		300	0	0	0	0	180704.5618	67.85362317	42122.53432	4.294712194	0	0	0	0						
Tractors/Loaders/Backhoes600	Tractors/Loaders/Backhoes		600	0	0	0	0	124379.0651	28.90859701	17168.73479	7.244509664	0	0	0	0						
Tractors/Loaders/Backhoes750	Tractors/Loaders/Backhoes		750	0	0	0	0	5758.785875	0.853398284	449.5271823	12.81298685	0	0	0	0						
Tractors/Loaders/Backhoes9999	Tractors/Loaders/Backhoes		9999	0	0	0	0	23300.41237	1.148134853	638.5522953	36.48043483	0	0	0	0						
Trenchers25	Trenchers		25	8829.595006	28.91333408	0	0	112.3616642	11.26812735	0	0	0	0	0	0						
Trenchers50	Trenchers		50	15990.65	17.98	7230.65	2.211509339	10512.6169	28.47552476	8838.497205	1.189412256	0	0	0	0						
Trenchers75	Trenchers		75	0	0	0	0	3368.11902	6.23446474	1851.993701	1.818644965	0	0	0	0						
Trenchers100	Trenchers		100	9942.6	5.97	2398.06	4.146118721	4031.956354	5.118457227	1607.073615	2.508880936	0	0	0	0						
Trenchers175	Trenchers		175	0	0	0	0	6583.342609	5.119144552	2071.139907	3.178603854	0	0	0	0						
Trenchers300	Trenchers		300	0	0	0	0	3969.045094	1.969062107	760.7807412	5.663744739	0	0	0	0						
Trenchers600	Trenchers		600	0	0	0	0	6463.892251	1.740505638	593.0365525	10.89966889	0	0	0	0						
Trenchers750	Trenchers		750	0	0	0	0	237.8141345	0.098905424	18.98256136	12.52803191	0	0	0	0						
Trenchers9999	Trenchers		9999	0	0	0	0	8461.750238	3.885704031	391.6977854	21.60275231	0	0	0	0						
Welders25	Welders		25	0	0	0	0	23757.32692	73.03185889	0	0	0	0	0	0						
Welders50	Welders		50	33872	67.39	14001.4	2.419186653	110949.05	145.35	93348.75	1.1885435	0	0	0	0						
Welders75	Welders		75	0	0	0	0	0	0	0	0	0	0	0	0						
Welders100	Welders		100	47493.8	68.78	14289.75	3.323627075	0	0	0	0	0	0	0	0						
Welders175	Welders		175	5927.6	4.73	981.85	6.037174721	0	0	0	0	0	0	0	0						
Welders300	Welders		300	0	0	0	0	0	0	0	0	0	0	0	0						
Welders600	Welders		600	0	0	0	0	0	0	0	0	0	0	0	0						
Welders750	Welders		750	0	0	0	0	0	0	0	0	0	0	0	0						
Welders9999	Welders		9999	0	0	0	0	0	0	0	0	0	0	0	0						

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2024
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bi Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total_Activity	Total_Population	Horsepower_Hours_hphy
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	100 Gasoline	2.48506E-07	3.0069E-07	3.57849E-07	3.56752E-06	9.44493E-07	0.000119196	8.96661E-09	8.2492BE-09	1.07887E-09	9.71831E-10	3.86301546	19.87883976	0.011668846	103.0935603
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	100 Diesel	0.0121097	0.014652737	0.017437968	0.100938117	0.107818663	16.22799633	0.007732826	0.00771402	0.000148073	0.000132789	527844.3143	3050.122224	273.9035982	18866984.63
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	175 Gasoline	7.33867E-07	8.87979E-07	1.05677E-06	1.14482E-05	5.44333E-06	0.000642932	4.83651E-08	4.44958E-08	5.83753E-09	5.24188E-09	20.83677058	54.95962347	0.048416843	556.0772441
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	175 Diesel	0.004586869	0.010235231	0.013180771	0.090651349	0.085437191	15.190176	0.003993238	0.003673779	0.000138689	0.000124297	494087.3706	3952.209357	177.1893006	19633353.02
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	25 Gasoline	6.30813E-06	7.63284E-06	9.08371E-06	7.11432E-05	1.14914E-06	0.000187939	1.29213E-07	1.18876E-07	1.52359E-09	1.53228E-09	6.090898527	203.3883874	0.085344613	162.549806
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	25 Diesel	0.000628331	0.000760281	0.000904797	0.002381994	0.001738558	0.217703493	0.000106132	9.76414E-05	1.97247E-06	1.7814E-06	7081.191582	4828.256749	18.31868687	253106.3217
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	300 Diesel	0.004588787	0.005552432	0.006607853	0.029157106	0.040711327	12.79623259	0.001846293	0.001698589	0.000116908	0.000104708	416220.1225	26201.45888	59.92147081	16539173.15
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	50 Gasoline	5.90406E-06	7.14392E-06	8.50185E-06	0.000182522	1.61712E-05	0.003782706	2.84557E-07	2.61793E-07	3.42977E-08	3.08407E-08	122.5936457	392.3371416	0.431619488	3271.696825
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	50 Diesel	0.01902182	0.015756402	0.018751421	0.052053341	0.040635721	4.921451819	0.003393109	0.003121661	0.46254E-05	4.02708E-05	16007B.9345	26113.06344	211.9229336	5721775.752
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	600 Diesel	0.006059757	0.007295781	0.008683582	0.047616869	0.05428238	17.09191956	0.002738137	0.002518607	0.000156157	0.000139858	555944.6543	21902.76268	46.36326338	22091351.35
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	75 Gasoline	1.91797E-07	2.32074E-07	2.76188E-07	2.92108E-06	7.54806E-07	9.58812E-05	7.21275E-09	6.63573E-09	8.68088E-10	7.81727E-10	3.107412698	60.77005131	0.013720024	82.92854136
Sacramento		2024 Agricultural - Agricultural Tractors	Aggregate	75 Diesel	0.008628837	0.010448893	0.012425525	0.045893818	0.071807744	6.550487723	0.004549666	0.004185684	5.92E-05	5.32734E-05	211765.1409	30346.22493	186.4744966	7569239.848
Sacramento		2024 Agricultural - ATVs	Aggregate	100 Gasoline	0.000185824	0.000224848	0.000267521	0.001648167	0.00194332	0.385588871	8.81762E-05	8.11225E-05	5.12137E-06	5.1553E-06	12541.96076	280.4979214	0.797953266	498374.9007
Sacramento		2024 Agricultural - ATVs	Aggregate	100 Gasoline	7.8096E-05	9.44961E-05	0.000112458	0.000797289	0.000297455	0.175854444	1.32288E-05	1.21705E-05	1.60036E-06	1.43376E-06	5699.267749	298.2396347	7.061538098	182517.7133
Sacramento		2024 Agricultural - ATVs	Aggregate	175 Gasoline	7.6732E-05	9.28457E-05	0.000110494	0.000137012	0.00041768	0.244702682	1.840BE-05	1.69355E-05	2.22787E-06	1.99508E-06	7930.563793	476.3133337	5.981723689	253974.6698
Sacramento		2024 Agricultural - ATVs	Aggregate	175 Diesel	8.27315E-05	1.01035E-05	0.000123E-05	0.000355766	8.58268E-05	0.028326647	3.36831E-06	3.09966E-06	5.98853E-07	2.31789E-07	2.31789E-07	1.55166E-06	12541.96076	280.4979214	0.443628451	43934.74242
Sacramento		2024 Agricultural - ATVs	Aggregate	25 Gasoline	0.010074377	0.012189997	0.014507103	0.125336075	0.004577831	0.447855038	0.000385602	0.000354753	3.77943E-06	3.6514E-06	14514.52393	3358.016923	81.65661526	464824.6319
Sacramento		2024 Agricultural - ATVs	Aggregate	25 Diesel	0.000268924	0.0003254	0.000387353	0.001606941	0.001378425	0.199940873	6.54814E-05	6.02429E-05	1.82077E-06	1.63606E-06	6503.430919	8415.356714	18.11185074	278946.1836
Sacramento		2024 Agricultural - ATVs	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	505.0067558	0.140318744	61412.51391
Sacramento		2024 Agricultural - ATVs	Aggregate	50 Gasoline	0.000233917	0.000283039	0.00033684	0.011498261	0.000598498	0.3409037	2.56448E-05	2.35932E-05	3.09991E-06	2.77941E-06	11048.34043	2798.499171	37.99200992	353820.8242
Sacramento		2024 Agricultural - ATVs	Aggregate	50 Diesel	0.000415599	0.000502875	0.000598443	0.001604489	0.001273571	0.444408805	0.000103748	0.000095498	4.05615E-06	3.63974E-06	14468.16876	7939.137929	26.60331115	620570.9728
Sacramento		2024 Agricultural - ATVs	Aggregate	75 Gasoline	7.59548E-05	9.19035E-05	0.000109375	0.00356183	0.000207278	0.124883361	9.39445E-06	8.64289E-06	1.03188E-06	1.01818E-06	4047.342075	1101.918076	12.54250854	129615.2946
Sacramento		2024 Agricultural - Bale Wagons (Self Propelled)	Aggregate	175 Diesel	0.002249975	0.00030247	0.000359964	0.0022268	0.002565386	0.363223122	0.000323996	0.000313709	3.31487E-06	2.97215E-06	11814.47516	5877.89034	3.411717622	450688.4094
Sacramento		2024 Agricultural - Bale Wagons (Self Propelled)	Aggregate	300 Diesel	2.94323E-05	3.56134E-05	4.23829E-05	0.000159858	0.000309582	0.057675353	1.3808E-05	1.22795E-05	5.26633E-07	4.71908E-07	1875.862885	2299.872025	0.472032239	71558.78942
Sacramento		2024 Agricultural - Bale Wagons (Self Propelled)	Aggregate	75 Diesel	1.10173E-05	1.3331E-05	1.5865E-05	7.92226E-05	0.000100135	0.012714716	5.15098E-06	4.73898E-06	1.9597E-07	1.74047E-07	413.568667	396.9938529	0.236948811	14191.03194
Sacramento		2024 Agricultural - Combine Harvesters	Aggregate	175 Diesel	0.000119351	0.000144415	0.000171865	0.001133882	0.001201199	0.191250577	5.49822E-05	5.05836E-05	1.74577E-06	1.56495E-06	620.763637	654.4609152	2.315047655	267397.0579
Sacramento		2024 Agricultural - Combine Harvesters	Aggregate	300 Diesel	0.000180228	0.000218078	0.000259153	0.001906778	0.001781249	0.345248799	8.35420E-05	7.68729E-05	3.31559E-06	2.82507E-06	1229.8285	3271.76705	2.092165926	482709.7388
Sacramento		2024 Agricultural - Combine Harvesters	Aggregate	600 Diesel	0.000494736	0.00059863	0.000711419	0.004095851	0.005253698	1.047723824	0.000219353	0.000201805	9.56866E-06	8.57322E-06	34079.0725	8595.608018	4.150018047	1464487.592
Sacramento		2024 Agricultural - Combine Harvesters	Aggregate	750 Diesel	0.000663724	0.000803107	0.000955763	0.005311524	0.007448149	1.413626637	0.000311073	0.000286187	1.29104E-05	1.15673E-05	45980.70938	2212.177019	3.85012154	197464.541
Sacramento		2024 Agricultural - Combine Harvesters	Aggregate	9999 Diesel	1.55022E-05	1.87577E-05	2.23123E-05	0.000122245	0.000219356	0.027906809	7.27045E-06	6.69226E-06	2.54710E-07	2.28316E-07	907.7181856	1636.834713	0.052806021	39017.90548
Sacramento		2024 Agricultural - Construction Equipment	Aggregate	100 Diesel	0.000208842	0.000339819	0.000404413	0.002009798	0.002454213	0.327498664	0.000179264	0.000164923	2.98718E-06	2.67983E-06	10652.47932	5431.068787	7.041575431	436907.5882
Sacramento		2024 Agricultural - Construction Equipment	Aggregate	175 Diesel	0.000757702	0.000916819	0.001091091	0.00775769	0.00864634	1.345015084	0.000368085	0.000338638	1.228E-05	1.10059E-05	43748.99712	7872.75127	28.11426987	2086123.772
Sacramento		2024 Agricultural - Construction Equipment	Aggregate	300 Diesel	0.000192865	0.000233567	0.000277135	0.000555519	0.001017285	0.311617096	0.000085115	0.000078356	2.84455E-06	2.54987E-06	10135.90451	4395.09299	2.464557168	243319.6839
Sacramento		2024 Agricultural - Construction Equipment	Aggregate	50 Diesel	4.19125E-05	5.07141E-05	6.03539E-05	0.000193795	0.000153578	0.02216313	1.00461E-05	9.2424E-06	2.01467E-07	1.81354E-07	720.8950984	1176.084019	0.722798137	30920.74507
Sacramento		2024 Agricultural - Construction Equipment	Aggregate	600 Diesel	0.000132628	0.00016048	0.000190984	0.001095382	0.0013803	0.22071865	6.31286E-05	5.80738E-05	2.01492E-06	1.80608E-06	7179.264915	3605.00079	1.14508678	342335.5065
Sacramento		2024 Agricultural - Construction Equipment	Aggregate	75 Diesel	6.64853E-05	0.000104647	0.000124539	0.000212891	0.000786051	0.098809553	3.12E-05	2.87E-05	9.31035E-07	8.3671E-07	3246.482453	2980.069668	2.702308607	118248.6382
Sacramento		2024 Agricultural - Cotton Pickers	Aggregate	600 Diesel	5.69431E-05	6.89012E-05	8.1998E-05	0.000457805	0.000616492	0.121177837	2.53872E-05	2.33562E-05	1.0067E-06	9.91563E-07	3941.523716	2786.171331	0.534378166	169424.8306
Sacramento		2024 Agricultural - Forage & Silage Harvesters	Aggregate	600 Diesel	0.000113551	0.000137397	0.000163514	0.001010719	0.001129726	0.236457846	4.96886E-05	4.57135E-05	2.15945E-06	1.93487E-06	7691.210113	281.969234	0.625118487	330603.6153
Sacramento		2024 Agricultural - Forage & Silage Harvesters	Aggregate	750 Diesel	0.000331674	0.000383176	0.000456013	0.002400442	0.003452558	0.541608597	0.000158726	0.000146074	4.41384E-06	3.98676E-06	1560.150746	3688.974913	1.344501507	757251.99
Sacramento		2024 Agricultural - Forage & Silage Harvesters	Aggregate	9999 Diesel	0.000186344	0.000225477	0.000268336	0.001510553	0.002546441	0.287218685	8.88897E-05	8.17786E-05	2.62157E-06	2.35023E-06	9342.296275	2244.0637	0.532910219	401574.8926
Sacramento		2024 Agricultural - Forklifts	Aggregate	100 Diesel	0.000355565	0.000430234	0.000512014	0.002781893	0.002899153	0.445063989	0.000208692	0.000191997	4.0603E-06	3.64183E-06	14476.49428	10370.39798	9.01184929	620928.073
Sacramento		2024 Agricultural - Forklifts	Aggregate	175 Diesel	7.83343E-05	9.47845E-05	0.000112801	0.000747066	0.000784799	0.125551126	3.6163E-05	3.32745E-05	1.07355E-06	1.00735E-06	4083.772693	3095.564588	1.974026633	194730.2979
Sacramento		2024 Agricultural - Forklifts	Aggregate	50 Diesel	0.000400088	0.000484106	0.000576126	0.001898553	0.00154584	0.216790953	0.000101078	9.29913E-05	1.97097E-06	1.77394E-06	7051.509587	9112.178157	9.224912863	302454.4586
Sacramento		2024 Agricultural - Forklifts	Aggregate	75 Diesel	0.00108679	0.001315016	0.001564977	0.007850233	0.008099644	1.259892079	0.000512464	0.000471283	1.14915E-05	1.03093E-05	40980.22068	1524.84906	32.13348531	1757730.084
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	175 Diesel	5.27117E-05	6.37811E-05	7.59046E-05	0.000521046	0.000516357	0.084570471	2.43631E-05	2.24264E-05	7.71978E-07	6.92026E-07	2750.804218	2581.841254	1.123989823	124922.989
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	300 Diesel	0.000129429	0.000156609	0.000186378	0.000702973	0.001361377	0.253608335	6.10545E-05	5.61702E-05	2.31585E-06	2.0752E-06	8249.060136	1922.329415	2.122073415	374616.7016
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel	7.48773E-06	9.06016E-06	1.07823E-05	6.01624E-05	8.11356E-05	0.016011818	3.3324E-06	3.06658E-06	1.46234E-07	1.3102E-07	520.8127196	396.9918529	0.078882938	23651.80296
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	750 Diesel	4.33173E-06	5.2418E-06	6.23769E-06	3.41432E-05	3.93704E-05	0.004999088	2.02523E-06	1.86321E-06	8.45963E-08	7.58237E-08	301.1907712	642.328596	0.110907112	13657.60196
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	9999 Diesel	1.55022E-05	1.87577E-05	2.23123E-05	0.000122245	0.000219356	0.027906809	7.27045E-06	6.69226E-06	2.54710E-07	2.28316E-07	907.7181856	1636.834713	0.052806021	39017.90548
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	50 Diesel	0.000133705	0.000158377	0.000193606	0.001135499	0.001352413	0.327498664	0.000179264	0.000164923	2.98718E-06	2.67983E-06	10652.47932	5431.068787	7.041575431	436907.5882
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	75 Diesel	0.000800895	0.000969082	0.001153388	0.007332329	0.008158784	1.213590081	0.000384954	0.000354158	1.10766E-05	9.93046E-06	39474.16619	13254.19439	16.23894546	1696781.353
Sacramento		2024 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	175 Diesel	8.88516E-05	0.00010751	0.000127964	0.000410833	0.000346716	0.046984442	1.8038E-05	1.65995E-05	4.27096E-07	3.8445E-07	1528.2489	931.0825003	3.767112302	69388.85641
Sacramento		2024 Agricultural - Hot Harvester	Aggregate	300 Diesel	0.000450237	0.000544786	0.000648341	0.002207091	0.004533139	0.682228701	0.000222626	0.000204816	6.22678E-06	5.58248E-06	22190.69648	3508.441115	4.423688799	953858.2707
Sacramento		2024 Agricultural - Hot Harvester	Aggregate	50 Diesel	0.000521052	0.000630473	0.000750114	0.002361184	0.001851207	0.253370959	0.000131454	0.000120938	2.30193E-06	2.07326E-06	8241.339061	5488.46042	9.498992631	318551.9824
Sacramento		2024 Agricultural - Hot Harvester	Aggregate	75 Diesel	0.000146209	0.000176913	0.000210514	0.001073898	0.001033934	0.170904756	6.9542BE-05	6.39819E-05	1.06E-06	9.55919E-07	3798.06	1560.150746	3688.974913	141427.5172
Sacramento		2024 Agricultural - Other Harvesters	Aggregate	100 Diesel	0.000680508	0.000823415	0.000979932	0.005104124	0.005554145	0.805415152	0.000408336	0.000375669	7.34665E-06	6.59048E-06	26197.55389	10950.30317	12.91909934	1012930.353
Sacramento		2024 Agricultural - Other Harvesters	Aggregate	175 Diesel	0.000803303	0.000971996	0.001156756	0.007426106	0.008162961	1.235299275	0.000382177	0.000351603	1.12751E-05	1.01081E-05	40180.29618	12875.68301	16.15122817	1727134.076
Sacramento		2024 Agricultural - Other Harvesters	Aggregate	300 Diesel	0.000217374	0.000263022	0.000313014	0.002010527	0.002210046	0.402235748	0.000101973	9.3847E-05	3.44794E-06	3.09178E-06	13705.39056	2576.139887	2.516108442	324922.989
Sacramento		2024 Agricultural - Other Harvesters	Aggregate	600 Diesel	0.000228818	0.00027687	0.000329498	0.001838508	0.002479432	0.489306746	0.000101861	9.3712E-05	4.46878E-06	4.00386E-06	15915.5683	2296.041789	1.970049873	684124.38
Sacramento		2024 Agricultural - Other Harvesters	Aggregate	750 Diesel	0.000107687	0.000130304	0.000155073	0.000774364	0.000977272	0.124280444	5.0348E-05	4.6320SE-05	1.13355E-06	1.01695E-06	4042.441503	3403.387311	2.601727008	156301.2989
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	75 Diesel	1.95975E-05	2.37128E-05	2.82201E-05	0.000151683	0.000219916	0.041739147	8.1846E-06	7.5355E-06	1.91707E-07	1.71839E-07	683.6397616	1502.058083	0.110907113	58357.60196
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	100 Diesel	0.000104023	0.000125867	0.000149793	0.000778173	0.000850204	0.122619008	6.26159E-05	5.76066E-05	1.11846E-06	1.00336E-06	3988.400958	1621.521559	2.199078544	162924.8542
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	175 Diesel	0.000427404	0.000517159	0.000615461	0.003950427	0.004338398	0.657118327	0.000203169	0.000186915	5.99778E-06	5.37701E-06	21373.93709	11216.61771	8.260563404	970660.1388
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	25 Diesel	1.64805E-06	4.41414E-06	5.25319E-06	1.68679E-05	1.42354E-05	0.001929072	7.39785E-07	6.80681E-07	1.75356E-08	1.57185E-08	62.74648527	993.3247997	0.182291737	2563.179459
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	300 Diesel	0.000513063	0.000620804	0.000738808	0.002557716	0.005201944	0.813220665	0.000251858	0.000231709	7.42307E-06	6.65435E-06	26451.44203	8992.612329	5.801648532	1201246.193
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	50 Diesel	0.000169147	0.000204667	0.000243571	0.000787596	0.00062623	0.08991167	4.09E-05	3.7683E-05	8.1734E-07	7.35721E-07	2924.536272	6352.490257	3.346137266	119466.352
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	600 Diesel	0.000644818	0.000780303	0.000928533	0.003376357	0.006674063	1.104963027	0.000303973	0.000279655	1.00877E-05	9.0415E-06	35940.87892	3765.580838	5.22164405	163210.447
Sacramento		2024 Agricultural - Sprayers/Spray Rigs	Aggregate	75 Diesel	0.001740719	0.00210627	0.002506636	0.011390903	0.015165463	1.719084607	0.000943447	0.000867971	1.56721E-05	1.40668E-05	55916.2707	5939.032877	50.13170964	2284161.436
Sacramento		2024 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	100 Diesel	0.000253236	0.000306415	0.000364659	0.001987814	0.002004442	0.317094304	0.000148695	0.000136799	2.89284E-06	2.59469E-06	10314.0537	3260.155241	4.570281413	368660.012
Sacramento		2024 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	175 Diesel	6.22125E-05	7.52772E-05	8.9586E-05	0.000582833	0.000586261	0.093944791	2.99583E-05	2.75611E-05	7.68723E-07	6.89539E-07	2743.270731	2629.939041	1.010693154	121423.9578
Sacramento		2024 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	300 Diesel	0.000118149	0.00014296	0.000170135	0.000636554	0.001201483	0.22828752	5.5234SE-05	5.08157E-05	2.08458E-06	1.86801E-06	7425.456003	2689.212579	1.483802611	295062.3856
Sacramento		2024 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	50 Diesel	0.000144981	0.000175426	0.000208772	0.000760363	0.000531244	0.076665109	3.4750E-05	3.1970E-05	6.969E-07	6.2732E-07	2493.668241	654.4608773	2.315047661	89132.34663
Sacramento		2024 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	75 Diesel	9.41841E-05	0.000113963	0.000135625	0.000679336	0.000860442	0.108834019	4.5150E-05	4.1536E-05	9.9057E-07	8.9055E-07	3540.019163	1947.357265	1.245853401	126532.5504
Sacramento		2024 Airport Ground Support - A/C Tug Narrow Body	Aggregate	100 Diesel	4.24679E-05	5.13862E-05	6.11538E-05	0.000496183	0.000408026	0.083590919	2.8807BE-05	2.65033E-05	7.91841E-07	2716.301504	1045.469209	2.085158578	47795.70055
Sacramento		2024 Airport Ground Support - A/C Tug Narrow Body	Aggregate	175 Diesel	0.000103125	0.000124781	0.00014854	0.001513871	0.00093369	0.263334055	4.3368E-05	3.9894E-05	2.49451E-06	0	8557.086056	2570.914203	3.515547991	176510.9128
Sacramento		2024 Airport Ground Support - A/C Tug Narrow Body	Aggregate	300 Diesel	1.14002E-05	1.37942E-05	4.52162E-05	0.000237775	0.000327836	0.000327836	1.1754E-05	1.0814E-05	2.72612E-05	1.08385E-06	3717.985305	636.6233877	771374.5473

ITEM 11.1. ATTACHMENT 3

Sacramento	2024 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Gasoline	5.00473E-05	4.60335E-05	5.507E-05	0.004593419	0.000484841	0.133838105	9.92044E-06	7.49545E-06	1.22471E-06	1.93337E-06	5518.8	824.9	4.41	103194.99
Sacramento	2024 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Nat Gas	0	0	0.26988E-09	9.2828E-06	1.0332E-06	0.000378157	0	0	0	0	3.65	0	0.17	0
Sacramento	2024 Airport Ground Support - Misc - Service Truck	Aggregate	300 Gasoline	0.00086462	0.000795277	0.000951461	0.051581993	0.005354755	1.243294416	9.17184E-05	6.92984E-05	1.27094E-05	1.75947E-05	50224	15622	18.6	2811960
Sacramento	2024 Airport Ground Support - Misc - Service Truck	Aggregate	300 Nat Gas	0	0	1.06659E-05	0.006087881	0.000530768	0.17358965	0	0	0	0	9500.95	2361.55	1.8	425079
Sacramento	2024 Airport Ground Support - Misc - Sweeper	Aggregate	100 Gasoline	7.04085E-06	6.47637E-06	7.7483E-06	0.000388267	3.57079E-05	0.009743298	6.79326E-07	5.13268E-07	8.04416E-08	1.32983E-07	379.6	156.95	0.43	8365.495
Sacramento	2024 Airport Ground Support - Misc - Sweeper	Aggregate	50 Nat Gas	0	0	9.23434E-08	2.46776E-05	7.23649E-06	0.002065296	0	0	0	0	98.55	51.1	0.15	2299.5
Sacramento	2024 Airport Ground Support - Misc - Water Truck	Aggregate	175 Gasoline	1.45306E-05	1.33652E-05	1.599E-05	0.001192741	0.000125486	0.034562762	2.47778E-06	1.8721E-06	3.43345E-07	4.85899E-07	1387	503.7	1.63	75555
Sacramento	2024 Airport Ground Support - Other	Aggregate	100 Diesel	8.22563E-06	9.95302E-06	1.1844E-05	0.000106359	8.93619E-05	0.017983186	6.1934FE-06	5.69801E-06	1.70351E-07	0	584.3667545	349.5077458	0.719443	10420.1481
Sacramento	2024 Airport Ground Support - Other	Aggregate	175 Diesel	2.91885E-05	3.53181E-05	4.2031E-05	0.000428672	0.000266468	0.073187074	1.07764E-05	9.91429E-06	6.93287E-07	0	2378.226726	1073.750634	1.521009	47145.01143
Sacramento	2024 Airport Ground Support - Other	Aggregate	300 Diesel	4.72772E-05	5.72054E-05	6.80792E-05	0.000302958	0.000509411	0.134029665	2.08287E-05	1.91624E-05	1.26964E-06	0	4355.317352	1308.675723	1.831890338	86656.46393
Sacramento	2024 Airport Ground Support - Other	Aggregate	50 Diesel	3.34385E-05	4.04606E-05	4.8155E-05	0.000259682	0.000202952	0.031340009	2.19613E-05	1.01004E-05	2.96878E-07	0	1018.399074	1576.292492	3.600963838	17908.49875
Sacramento	2024 Airport Ground Support - Other	Aggregate	600 Diesel	3.17174E-05	3.837BE-05	4.5673E-05	0.000219276	0.000242406	0.113532706	1.04151E-05	9.58194E-06	1.07547E-06	0	3689.265086	622.2719482	0.93123	73134.50931
Sacramento	2024 Airport Ground Support - Other	Aggregate	75 Diesel	2.79561E-05	3.38268E-05	4.02567E-05	0.00029394	0.000313302	0.050008929	1.331E-05	1.22452E-05	4.73725E-07	0	1625.048875	1285.767913	2.795403073	27306.01999
Sacramento	2024 Airport Ground Support - Misc - Sweeper	Aggregate	750 Diesel	1.63306E-06	4.396E-06	5.2161E-06	5.64477E-05	3.07356E-05	0.011451704	1.5087E-06	1.388E-06	1.0848E-07	0	372.1251348	34.49171771	0.062082	1736.859013
Sacramento	2024 Airport Ground Support - Other	Aggregate	9999 Diesel	1.60651E-05	1.94387E-05	2.31337E-05	0.000154973	0.000368313	0.079332136	8.71627E-06	8.01897E-06	7.51498E-07	0	2577.911603	54.98940196	0.093123	51103.48422
Sacramento	2024 Airport Ground Support - Passenger Stand	Aggregate	175 Diesel	8.53833E-07	1.03314E-06	1.2295E-06	1.46964E-05	7.65152E-06	0.002361472	3.7424E-07	3.443E-07	2.23698E-08	0	76.73642927	33.21380248	0.062082	152.1912153
Sacramento	2024 Airport Ground Support - Passenger Stand	Aggregate	300 Diesel	1.05405E-06	1.2754E-06	1.5178E-06	6.21828E-06	1.65684E-05	0.003216878	5.28465E-07	4.86188E-07	3.04725E-08	0	104.5316516	18.8381161	0.031041	2072.192771
Sacramento	2024 Airport Ground Support - Passenger Stand	Aggregate	50 Diesel	5.81827E-06	7.04011E-06	8.37831E-06	4.00659E-05	3.47917E-05	0.004966057	1.59747E-06	1.46967E-06	4.70426E-08	0	161.3732231	185.4697166	0.465615	287.5330028
Sacramento	2024 Airport Ground Support - Passenger Stand	Aggregate	75 Diesel	9.59461E-06	1.16095E-05	1.3816E-05	7.19338E-05	8.4711E-05	0.011766126	3.56523E-06	3.28001E-06	1.11458E-07	0	382.3423284	315.6101442	0.62082	6817.745286
Sacramento	2024 Airport Ground Support - Other Forklift	Aggregate	175 Diesel	0.0001744	0.00021108	0.00025108	0.001721792	0.001448769	0.254956872	0.000021	0.000018077	0.000002416	5.72E-09	8292.923712	3610.167241	0	0
Sacramento	2024 Cargo Handling Equipment - Port Tractors/Loaders/Backhoes	Aggregate	300 Diesel	0.0000558	6.76E-05	0.0000804	0.000944178	0.00011162	0.526214918	0.0000087	0.000008	0.00000498	1.18E-08	17116.07193	2113.850092	0	0
Sacramento	2024 Commercial Harbor Craft - AE - Commercial Fishing	Aggregate	75 Diesel	0.000016347	0.00019523	0.00023234	0.000529539	0.001380225	0.085765387	6.2944E-05	6.01744E-05	0	0	2886.315653	1880.54087	1.583454026	49420.61304
Sacramento	2024 Commercial Harbor Craft - AE - Excursion	Aggregate	75 Diesel	1.13652E-05	1.3751FE-05	1.6655E-05	5.42691E-05	0.000253949	0.01473761	7.0422E-06	6.0024478E-06	0.00023405	0	1250.960387	963.4008189	1.102426052	20965.52788
Sacramento	2024 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	100 Diesel	5.46388E-06	6.6113E-06	7.8679E-06	2.41942E-05	0.000108	0.0125824	3.4113E-06	3.2612E-06	0	0	423.4432922	235.4687796	1.541667	7579.74048
Sacramento	2024 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	175 Diesel	5.17768E-06	6.264989E-06	7.4558BE-06	2.70742E-05	0.000100989	0.014454362	2.63287E-06	2.51702E-06	0	0	486.4160065	235.4687737	1.541667016	8712.344699
Sacramento	2024 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	50 Diesel	0.000111483	0.000134895	0.000160535	0.000500413	0.001908675	0.213444244	6.4095E-05	5.93131E-05	0	0	7184.49158	8882.677048	7.708333097	113826.9891
Sacramento	2024 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	300 Diesel	0.000255287	0.000308897	0.000367614	0.001014333	0.002810898	0.169794022	5.69893E-05	9.27217E-05	0	0	5714.183301	1578.696592	1.583454026	106562.6244
Sacramento	2024 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	50 Diesel	7.14952E-06	8.650922E-06	1.0295E-05	6.8544TE-05	0.000140061	0.020404793	5.93357E-06	5.67249E-06	0	0	686.695117	1578.696655	1.583454013	11508.69616
Sacramento	2024 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	600 Diesel	0.000103659	0.000125428	0.000149269	0.000526675	0.002939756	0.288910432	5.50979E-05	5.76584E-05	0	0	9722.881545	1578.696655	1.583454013	111555.4366
Sacramento	2024 Commercial Harbor Craft - ME - Excursion	Aggregate	600 Diesel	2.89517E-05	3.5031SE-05	4.1690AE-05	0.000127893	0.000801049	0.131544057	8.44679E-06	8.07513E-06	0	0	4426.93356	1028.658958	5.102426009	82707.39844
Sacramento	2024 Commercial Harbor Craft - ME - Excursion	Aggregate	800 Diesel	0.000362393	0.000438493	0.000521843	0.001585588	0.009548583	1.455224224	0.000111968	0.000107041	0	0	48973.56145	5461.563943	5.102425999	914812.0001
Sacramento	2024 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	600 Diesel	0.000718888	0.000869852	0.001035196	0.003257711	0.014653896	1.470396074	0.000244786	0.000234015	0	0	49484.14903	7876.983942	0.924999901	92362.3112
Sacramento	2024 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	800 Diesel	3.96524E-05	4.7979AE-05	5.7099SE-05	0.000242129	0.000830092	0.181572741	1.72541E-05	1.64949E-05	0	0	6110.579804	471.4465519	3.083333127	114160.7524
Sacramento	2024 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	9999 Diesel	0.000192741	0.000233218	0.000277548	0.001210212	0.004299037	1.611361962	0.000111668	0.000106755	0	0	54228.16126	2489.793787	3.083333042	1081068.468
Sacramento	2024 Commercial Harbor Craft - ME - Work Boat	Aggregate	300 Diesel	0.000157206	0.000190219	0.000226376	0.000556873	0.002696505	0.233450834	1.50387E-06	1.43858E-05	0	0	8058.387102	1960.344748	3.068023	150142.7979
Sacramento	2024 Commercial Harbor Craft - ME - Work Boat	Aggregate	600 Diesel	0.000543701	0.000657878	0.00078293	0.001843859	0.00881037	0.739174305	0.000204135	0.000195153	0	0	24875.89009	3920.688978	6.136045	463484.2811
Sacramento	2024 Commercial Harbor Craft - ME - Work Boat	Aggregate	9999 Diesel	0.005267622	0.006373822	0.007585375	0.024754236	0.044189606	8.760500772	0.001936344	0.001851145	0	0	294822.5548	11762.06952	18.40813927	5816402.499
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	100 Diesel	7.33072E-05	8.87017E-05	0.000105562	0.000385178	0.00076546	0.128604721	8.59779E-06	8.21135E-06	1.21825E-06	0	4170.052859	1692.11628	3.131413669	74294.93822
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	175 Diesel	0.000393306	0.000475901	0.000566361	0.001539434	0.003938191	0.923875301	0.00017915	0.000164818	8.75169E-06	0	30021.4891	8540.812521	13.12802896	597665.3996
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	300 Diesel	0.000457425	0.000553484	0.000658692	0.002612383	0.005187669	1.095253897	0.000220185	0.00020257	1.03575E-05	0	35590.46648	6273.453376	10.27166972	709080.5887
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	50 Diesel	4.71852E-05	5.709411E-05	6.7945E-05	0.000375611	0.000318583	0.094388175	1.4736E-05	1.35555E-05	1.43848E-07	0	3455.140492	1274.763178	2.689019946	25314.505
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	600 Diesel	0.000598013	0.000723595	0.000861138	0.004685197	0.006272921	1.576492744	0.000270663	0.00024901	1.49338E-05	0	51228.40677	5067.859832	8.827670534	1029166.231
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	75 Diesel	8.04209E-05	9.730998E-05	0.000115806	0.00101077	0.000999366	0.169008948	3.47778E-05	3.19955E-05	1.60099E-06	0	5491.975255	3059.748843	6.265910165	97362.05651
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	750 Diesel	0.00021858	0.000264481	0.000314753	0.001265583	0.002239924	0.455081745	9.4358E-05	8.6975E-05	2.05546E-06	0	21286.99579	1291.621108	2.2962897	241984.8548
Sacramento	2024 Construction and Mining - Bore/Drill Rigs	Aggregate	9999 Diesel	6.6534E-05	8.0506E-05	9.5809E-05	0.000400873	0.001128681	0.216206266	5.6219SE-05	5.2412E-05	2.04808E-06	0	7025.660333	526.6814549	0.157665501	139273.8687
Sacramento	2024 Construction and Mining - Bucket	Aggregate	100 Diesel	5.80263E-06	7.0211E-06	8.3557E-06	6.06375E-05	5.70898E-05	0.009940227	4.0073E-06	3.68672E-06	9.41618E-08	0	323.0094187	184.6940297	0.360842383	5759.749257
Sacramento	2024 Construction and Mining - Bucket	Aggregate	175 Diesel	5.4836E-06	6.6351SE-06	7.8983E-06	5.72981E-05	5.41025E-05	0.016260422	3.8574E-06	3.5403E-07	1.23008E-08	0	1588.77	1340.326	0.360842383	5440.49724
Sacramento	2024 Construction and Mining - Bucket	Aggregate	300 Diesel	1.31444E-05	1.5904TE-05	1.8928E-05	0.000137268	0.000129645	0.038954196	9.2435E-06	8.4735E-06	2.94125E-07	0	759.8455193	456.8540089	0.864202383	13784.40724
Sacramento	2024 Construction and Mining - Bucket	Aggregate	50 Diesel	2.70822E-06	3.2769SE-06	3.8998E-06	2.60997E-05	2.38039E-05	0.003424747	1.0157SE-06	9.3449E-07	3.2442E-08	0	111.2877543	128.3618207	0.295234677	1984.429936
Sacramento	2024 Construction and Mining - Bucket	Aggregate	75 Diesel	3.7960TE-06	4.593424E-06	5.4634E-06	3.79715E-05	5.38562E-05	0.008945734	1.4342E-06	1.3159E-06	9.3218E-08	0	319.7717039	220.4460131	0.426450088	5702.015877
Sacramento	2024 Construction and Mining - Bucket	Aggregate	600 Diesel	7.5777BE-06	9.16911E-06	1.0912E-05	5.50042E-05	5.69713E-05	0.033328919	3.1715E-06	2.9178AE-06	3.1571BE-07	0	1083.029032	75.73561641	0.131215412	21469.53254
Sacramento	2024 Construction and Mining - Compactor	Aggregate	100 Diesel	1.08713E-06	1.3154BE-06	1.5654TE-06	2.76039E-05	1.72483E-05	0.004757476	1.3357ZE-06	1.2288E-06	4.50666E-08	0	154.5949967	90.32494619	0.196823118	2756.663942
Sacramento	2024 Construction and Mining - Compactor	Aggregate	175 Diesel	2.23522E-05	2.7046E-05	3.218TE-05	0.000478757	0.000187157	0.080168716	7.2386E-06	6.6625E-06	2.7387E-07	0	2652.932018	1070.457524	1.574584944	52590.6588
Sacramento	2024 Construction and Mining - Compactor	Aggregate	300 Diesel	5.6729E-06	6.8642TE-06	8.1689BE-06	4.16534E-05	3.91334E-05	0.020851192	1.7481E-06	1.6082BE-06	1.9717BE-07	0	676.3933106	157.9126199	0.262430824	13408.54932
Sacramento	2024 Construction and Mining - Compactor	Aggregate	50 Diesel	3.3097E-06	4.0047SE-06	4.7659EE-06	3.48628E-05	2.99587E-05	0.00505019	8.2925E-07	7.6291BE-07	4.7859SE-08	0	164.1067994	242.312745	0.157665501	2926.273852
Sacramento	2024 Construction and Mining - Compactor	Aggregate	600 Diesel	1.33787E-05	1.6188ZE-05	1.9265E-05	0.000107241	0.000115764	0.065318883	5.9159SE-06	5.6972E-06	1.7291E-07	0	1739.007906	217.3389234	0.360842383	34753.17839
Sacramento	2024 Construction and Mining - Compactor	Aggregate	75 Diesel	2.05448E-06	2.4859ZE-06	2.9584SE-06	3.15539E-05	2.84385E-05	0.005424996	5.0021E-07	4.6091BE-07	5.1389BE-08	0	176.2861797	129.4414797	0.295234677	3143.450727
Sacramento	2024 Construction and Mining - Compactor	Aggregate	9999 Diesel	2.47904E-06	2.9996AE-06	3.5689E-06	2.98064E-05	5.16892E-05	0.015838143	8.9911SE-07	8.2734E-07	1.5083E-07	0	514.6632289	18.00064423	0.032803853	10202.47714
Sacramento	2024 Construction and Mining - Concrete Mixer	Aggregate	175 Diesel	1.27414E-06	1.541TE-06	1.8347E-06	2.84706E-05	1.0361E-05	0.004643682	4.7483E-07	4.3705E-07	1.2108E-08	0	150.8772212	63.17308026	0.039411559	2912.326898
Sacramento	2024 Construction and Mining - Concrete Mixer	Aggregate	300 Diesel	1.20963E-06	1.4636SE-06	1.7418BE-06	1.13166E-05	7.34289E-06	0.005545136	3.0401SE-07	2.7969BE-07	5.252BE-08	0	180.1901758	42.95355547	0.065607706	3572.017673
Sacramento	2024 Construction and Mining - Concrete Mixer	Aggregate	50 Diesel	7.74415E-07	9.3704E-07	1.1155E-06	1.15802E-05	1.17556E-05	0.002312122	1.3201TE-07	1.2419E-07	4.1988E-08	0	75.42885115	136.8144055	0.32803853	1345.009092
Sacramento	2024 Construction and Mining - Concrete Mixer	Aggregate	600 Diesel	1.30818E-06	1.5828BE-06	1.8837TE-06	7.78415E-06	1.65845E-05	0.00431921	4.9707E-07	4.5730SE-07	3.9020SE-08	0	133.8544512	22.00229585	0.032803853	2651.47688
Sacramento	2024 Construction and Mining - Concrete Mixer	Aggregate	75 Diesel	3.4865E-07	4.2186E-07	5.0205E-07	4.24509E-06	3.33251E-06	0.000653105	6.0931SE-08	5.6057E-08	6.1867AE-09	0	21.22277663	17.81706162	0.032803853	378.4343888
Sacramento	2024 Construction and Mining - Concrete Pump	Aggregate	100 Diesel	2.14472E-06	2.5951ZE-06	3.088AE-06	2.46319E-05	2.24656E-05	0.004003906	1.3828E-06	1.2715E-06	3.7928E-08	0	130.1076126	69.77939865	0.131215412	2320.036636
Sacramento	2024 Construction and Mining - Concrete Pump	Aggregate	175 Diesel	2.0223AE-05	2.447O6E-05	2.912E-05	0.000424847	0.000159176	0.070991606	5.5668E-06	5.1215E-06	6.724E-07	0	2306.884616	847.1812682	1.049723296	45730.75409
Sacramento	2024 Construction and Mining - Concrete Pump	Aggregate	300 Diesel	6.6561TE-06	8.0539TE-06	9.5848BE-06	6.13505E-05	2.71173E-05	0.028646031	1.6103BE-06	1.4815SE-06	2.7135BE-07	0	930.8577725	247.567206	0.393646236	18452.95061
Sacramento	2024 Construction and Mining - Concrete Pump	Aggregate	50 Diesel	3.6912ZE-07	4.4658E-07	5.3153E-07	2.7925E-06	2.44042E-06	0.000378949	1.0035E-07	9.2318E-08	1.5887AE-09	0	12.13376234	12.44427127	0.032803853	219.5196164
Sacramento	2024 Construction and Mining - Concrete Pump	Aggregate	600 Diesel	2.4115BE-05	2.9180ZE-05	3.4726BE-05	0.001224908	0.000349819	0.06945489	5.0271EE-05	5.4498BE-06	5.5492E-07	0	2109.420688	300.5340555	0.590469354	41816.30848
Sacramento	2024 Construction and Mining - Concrete Pump	Aggregate	75 Diesel	2.3456TE-06	2.8382E-06	3.3777E-06	2.83033E-05	2.80739E-05	0.004730837	0.58578E-07	8.8189ZE-07	4.4814E-08	0	153.729358	115.4630655	0.229626971	2741.228286
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	100 Diesel	2.1402E-06	2.5896E-06	3.0818BE-06	2.45539E-05	3.05546E-05	0.006489429	2.0178E-06	1.8557E-06	6.1469E-08	0	210.8426173	143.0387185	0.688880913	3756.644574
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	175 Diesel	1.6341E-05	1.9773E-05	2.3353E-05	0.000250225	0.000196552	0.045922502	8.8643SE-06	8.1537E-06	4.3501SE-07	0	1492.259723	688.5833649	2.461825475	36963.55028
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	300 Diesel	3.1137AE-06	3.7676E-06	4.4837BE-06	2.25719E-05	4.3529BE-05	0.0123733	1.48149E-06	1.3629E-06	1.172E-07	0	402.0725318	118.299302	0.426450088	7970.524382
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	50 Diesel	1.0408BE-06	1.2594E-06	1.498BE-06	1.09870E-05	1.95292E-05	0.005573943	5.182E-07	4.7648E-07	3.3849E-08	0	116.1169986	189.2402703	1.115833003	2070.539109
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	600 Diesel	2.7042TE-06	3.2721TE-06	3.8941SE-06	3.12882E-05	3.19004E-05	0.009653368	1.4217BE-06	1.3080BE-06	1.5582E-08	0	314.0778293	57.96834455	0.229626971	6226.152742
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	75 Diesel	1.9532AE-06	2.3634ZE-06	2.8126E-06	3.65965E-05	3.3179E-05	0.006900771	2.2965E-07	6.7101E-07	6.5369TE-08	0	224.241775	171.0047497	0.78756038	3488.826879
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	750 Diesel	1.2430SE-07	1.5040E-07	1.7899E-07	1.51451E-06	4.13632E-06	0.000119304	2.2726E-07	2.0711E-07	6.8468AE-07	0	68.66894408	7.806548891	0.032803853	1365.129979
Sacramento	2024 Construction and Mining - Crane less than 35ton	Aggregate	9999 Diesel	3.9955E-06	4.8346E-06	5.7536E-06	5.437SE-05	5.71624E-05	0.002519909	7.8694E-06	6.6987E-06	2.3870E-08	0	81.88489162	5.597424838	0.032803853	1623.253203
Sacramento	2024 Construction and Mining - Cranes	Aggregate	100 Diesel	3.2285E-05	3.9065BE-05	4.6491E-05	0.000316425	0.000345158	0.060388372	2.3404E-05	2.1528E-05	5.7204E-07	0	1962.330684	950.9339847	4.959391216	236044.6785
Sacramento	2024 Construction and Mining - Cranes	Aggregate	175 Diesel	0.000209495	0.000253489	0.000301673	0.002149623	0.001035764	0.420060078	0.000051058	0.000045953	2.43432E-06	0	14625.07306	5811.372154	24.29980517	244884.4046
Sacramento	2024 Construction and Mining - Cranes	Aggregate	25 Diesel	6.24944E-07	7.5618ZE-07	8.9991SE-07	1.97843E-06	1.36049E-06	0.000122804	1.1649E-07	1.0717E-07	1.1633E-09	0	3.99053351	11.28137652	0.065607706	71.15728237
Sacramento	2024 Construction and Mining - Cranes	Aggregate	300 Diesel	3.0047338E-06	3.6357E-06	4.3268E-06	2.61748E-05	2.03739E-05	0.005598766	1.4501407E-06	1.3346E-06	0.000241957	0	1373639E-05	1.4717E-06	0.000241957	1.3736E-05
Sacramento	2024 Construction and Mining - Cranes	Aggregate	50 Diesel	4.5771AE-06	5.5383BE-06	6.5910E-06	3.98283E-05	2.68869E-05	0.008221	1.4577E-06	1.3406E-06	2.4961BE-07	0	164.1836796	165.0968507	0.853938284	10127.14067
Sacramento	2024 Construction and Mining - Cranes	Aggregate	600 Diesel	2.0052874E-06	2.4273E-06	2.8891E-06	1.74597E-05	1.78208E-05	0.003620473	9.7157E-07	8.9326E-07	1.5582E-08	0	65272.50076	10420.97276	40.08483672	1261710.747
Sacramento	2024 Construction and Mining - Cranes	Aggregate	75 Diesel	1.4693E-05	1.7779ZE-05	2.1158TE-05	0.000109576	0.000164626	0.019962915	1.0105SE-05	9.2974E-06	1.8910SE-07	0	648.6984175	453.4789218	2.52768173	8064.913787
Sacramento	2024 Construction and Mining - Cranes	Aggregate	750 Diesel	6.9531BE-05	8.4133E-05	0.000100124	0.000559946	0.000948803	0.315276344	4.7251E-05	4.3485E-05	1.2915E-06	0	3031815.511	1084.252315	4.625342373	36655.7005
Sacramento	2024 Construction and Mining - Cranes	Aggregate	9999 Diesel	2.3120SE-05	2.7975BE-05	3.3293SE-05	0.000189486	0.000560514	0.106958056	1.2749E-05	1.1729E-05	1.0131E-06	0	3475.620698	262.4083547	1.082527149	68899.30876
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	100 Diesel	1.0044175E-05	1.0090SE-06	1.0060E-05	0.000371	0.003977936	0.004269708	0.668478609	0.000304167	0.000279834	6.33237E-06	0	21722.32903	3842.811126	28.15583413	371973.9398
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	175 Diesel	0.000106305	0.000123129	0.000144079	0.001244834	0.001013776	0.424837881	0.000101873	0.000093423	2.91226E-06	0	78598.4727	2658.97423	57.81279463	1547259.65
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	300 Diesel	0.000107514	0.000130925	0.000154828	0.000724702	0.011507735	2.983969318	0.000537393	0.000494401	2.82666E-05	0	96964.60359	20249.9644	46.83183661	1912363.868
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	50 Diesel	4.1585ZE-05	5.0318E-05	5.9882TE-05	0.000218686	0.000182221	0.025566814	1.4246BE-05	1.3107E-05	2.4218E-07	0	830.7980839	769.1258516	2.822117014	12947.04508
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	600 Diesel	0.000165601	0.000199848	0.000237656	0.000869857	0.001454972	0.317928064	5.2553124E-05	5.0187300E-05	1.5481E-06	0	476025.9013	24084.90548	46.78904702	343347.7663
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	75 Diesel	0.000155878	0.000188612	0.00022446E	0.001097127	0.001698018	0.17404893	0.000104038	9.5715E-05	1.6487E-06	0	5655.750343	3271.072867	11.19037427	93658.70286
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	750 Diesel	9.3158TE-05	0.000112722	0.000134149	0.000867933	0.001042612	0.331034961	4.4344E-05	4.0796TE-05	3.1583E-06	0	10757.03882	832.1997821	2.119063345	230955.8208
Sacramento	2024 Construction and Mining - Crawler Tractors	Aggregate	9999 Diesel	0.000446442	0.00017195	0.000203876	0.001426218	0.002801087	0.551705218	7.8506E-05	7.2262E-05	5.2262E-06	0	17927.75733	1039.945615	2.529862156	373655.7005
Sacramento	2024 Construction and Mining - Crushing/Processing Equipment	Aggregate	100 Diesel	2.1816E-06	2.6397SE-06	3.1415E-06	1.25765E-05	3.0102BE-05	0.009108556	2.0418AE-06	1.8784E-06	8.6283E-08	0	295.9841272	170.8125387	0.32803853	5277.847202
Sacramento	2024 Construction and Mining - Crushing/Processing Equipment	Aggregate	175 Diesel	3.0310ZE-05	3.6675E-05	4.3646TE-05	0.000176483	0.000345158	0.060388372	2.3404E-05	2.1528E-05	5.7204E-07	0	4224.043516	1784.202343	2.591504387	83735.7421
Sacramento	2024 Construction and Mining - Crushing/Processing Equipment	Aggregate	300 Diesel	1.5612ZE-05	1.8890BE-05	2.2481E-05	0.000127067	0.000259624	0.051653757	0.000120504	0.000110953	2.9432E-06	0	2066.920807	515.4161794	0.885704031	40973.7992
Sacramento	2024 Construction and Mining - Crushing/Processing Equipment	Aggregate	50 Diesel	1.0953TE-06	1.3259E-06	1.5773E-06	1.7418E-05	1.619E-05	0.002839419	3.9879SE-07	3.6689E-07	2.6897E-08	0	92.26740711	110.3182354	0.295234677	1645.268214
Sacramento	2024 Construction and Mining -

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Sacramento	2024 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16294032	0
Sacramento	2024 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16294032	0
Sacramento	2024 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16294032	0
Sacramento	2024 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Diesel	0.000323228	0.000388772	0.000464645	0.001326934	0.002456733	0.003551566	8.25935E-05	0.000062404	3.37068E-08	2.90354E-08	115.5209579	0	15.77142011	0
Sacramento	2024 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16294032	0
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	100 Gasoline	0.000256865	0.000236264	0.000282664	0.010995418	0.000678607	0.244522489	1.70487E-05	1.28812E-05	2.36243E-06	3.48331E-06	9942.6	2398.05	5.97	158271.3	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	15 Gasoline	0.002525282	0.002550534	0.002778918	0.08161413	0.001883824	3.22398E-06	0.00104457	0.00078923	1.30374E-06	1.79965E-06	5112.220832	0	37.30243714	0	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	9.22321E-05	0.000110935	0.000132585	0.000581901	0.000694719	0.001331778	2.44318E-05	1.84596E-05	1.26395E-08	1.03874E-08	43.31842242	0	13.12311366	0	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.046017878	0	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	25 Gasoline	0.00434134	0.004384754	0.00477738	0.14100529	0.002835558	5.24774E-06	0.001700268	0.001284648	2.24503E-06	3.09896E-06	8829.595006	0	28.91333408	0	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	0.000314388	0.000378139	0.000451937	0.001290643	0.002389546	0.003454544	8.33577E-05	6.07146E-05	3.27285E-08	2.82413E-08	112.3616642	0	11.26812735	0	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.046017878	0	
Sacramento	2024 Construction and Mining - Misc - Trenchers	Aggregate	50 Gasoline	0.00071951	0.000661805	0.000791777	0.05160505	0.001026089	0.338717205	2.33509E-05	1.76426E-05	4.11818E-06	5.6019E-06	15990.65	7230.65	17.98	216919.5	
Sacramento	2024 Construction and Mining - Rural Rig Other	Aggregate	175 Diesel	4.52058E-07	5.46095E-07	6.53964E-07	0.000186E-06	4.84066E-06	0.000204521	4.68944E-07	3.56261E-06	9.70459E-08	0	33.29198295	18.33241385	0.032803853	659.9668986	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	100 Diesel	0.000221311	0.000267788	0.00031869	0.002356454	0.002232455	0.380135244	0.000156178	0.000143684	3.60095E-06	0	12352.56109	5955.416068	9.415408438	219716.9114	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000746921	0.000903775	0.001075567	0.012785131	0.005976047	2.069884907	0.000271536	0.000249813	1.96076E-05	0	67261.17118	21175.34832	20.8323527	1335584.502	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000836708	0.000944104	0.000952862	0.002365551	0.002355361	0.924040715	0.000157436	0.000144341	7.53266E-06	0	30026.86606	6410.274015	8.153739413	599383.5587	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	0.000604795	0.000731802	0.000870905	0.004091873	0.003184227	0.453578114	0.000195306	0.000179681	4.29666E-06	0	14739.09996	15973.13133	26.37834214	256090.3279	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.000782194	0.000946454	0.001126359	0.005432979	0.005387766	2.444649762	0.000239677	0.000220503	2.31577E-05	0	79439.32054	9730.112372	10.56970089	1608976.532	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	0.000268893	0.00032536	0.000387205	0.004362637	0.002742452	0.398149373	0.000133682	0.000122988	1.77159E-06	0	12937.92512	8707.412053	14.24343874	222537.8357	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	6.05817E-05	7.33039E-05	8.72377E-05	0.000446755	0.000422729	0.199538292	2.17884E-05	2.00453E-05	1.89019E-06	0	6484.031618	509.22265	0.689026485	129212.8393	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	9999 Diesel	4.48695E-05	5.4292E-05	6.4612E-05	0.000352308	0.000741905	0.177272657	1.7976E-05	1.65379E-05	1.67927E-06	0	5760.505919	183.950579	0.230345971	127673.2036	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	100 Gasoline	0.170424E-06	7.46622E-06	8.58964E-06	0.003686E-06	0.000672E-05	0.162338E-05	0.001204521	0.000904E-07	3.36621E-06	9.70459E-08	0	33.29198295	18.33241385	0.032803853	659.9668986
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000233665	0.000282735	0.000336477	0.003143096	0.002310068	0.529956636	0.000119247	0.000109707	5.02018E-06	0	17221.03333	5696.691505	6.364434751	341613.1466	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.0005596	0.000677116	0.000805825	0.003324497	0.005941265	1.234070171	0.000285681	0.000262827	1.16901E-05	0	40101.32552	9145.463875	12.63443589	798630.141	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	2.01514E-05	2.43827E-05	2.90174E-05	0.000170513	0.000154707	0.039415022	5.50322E-06	4.95544E-06	3.39115E-07	0	1383.625402	1053.007563	1.705800356	11249.80895	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.002773412	0.003354618	0.003992273	0.019727255	0.00220036	9.157914336	0.000841234	0.000773935	8.67511E-05	0	297588.0241	36008.11615	43.34476311	5939034.127	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	1.47387E-05	1.78338E-05	2.12237E-05	0.000133085	0.000158706	0.021853896	7.91955E-06	7.28598E-06	2.07018E-07	0	710.1461571	449.1239214	0.853648661	11569.1569	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	0.000368801	0.00044637	0.000531217	0.002722749	0.003952009	1.118806799	0.000161312	0.000148407	1.05982E-06	0	36355.82184	3229.337859	5.630383994	844668.7847	
Sacramento	2024 Construction and Mining - Off-Highway Tractors	Aggregate	9999 Diesel	0.001302804	0.001576392	0.001876037	0.008658447	0.022113793	4.319332744	0.000560292	0.000515469	4.09162E-05	0	140357.471	6576.2617	9.822994102	2973829.611	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	100 Diesel	0.000181278	0.000219346	0.00026104	0.002072125	0.001973414	0.359854948	0.000134241	0.000123502	3.40384E-06	0	11693.54931	5506.786437	17.03177567	198049.2688	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	175 Diesel	0.000441766	0.000534436	0.000636147	0.005052535	0.004682051	1.159824357	0.000432992	0.000398402	1.09868E-05	0	37688.69484	13369.35401	29.99315553	736252.8524	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	300 Diesel	0.000391385	0.00047357	0.000563595	0.002718589	0.004569646	1.103006474	0.000200281	0.000184258	1.0423E-05	0	35754.65085	7148.239481	18.65272156	697048.4964	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	50 Diesel	0.000240273	0.00029073	0.000345993	0.001973084	0.00181644	0.274634888	8.71706E-05	8.01968E-05	2.60156E-06	0	8924.308585	9305.071246	30.05193597	152276.3252	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	600 Diesel	0.000957397	0.001158451	0.001378025	0.008346L1	0.008082841	1.469040726	0.000605562	0.000573116	3.86156E-06	0	29705.73116	11297.07657	13290.89479	2263216.65	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	750 Diesel	0.000224153	0.000271225	0.000322781	0.002671348	0.002916393	0.464452823	0.000107027	9.84651E-05	4.39967E-06	0	15092.47552	9466.740213	29.00511331	258097.3016	
Sacramento	2024 Construction and Mining - Other Construction Equipment	Aggregate	9999 Diesel	0.000121801	0.000147379	0.000175393	0.001090431	0.001331281	0.550806156	5.3768E-05	4.94665E-05	5.21768E-06	0	17898.54212	1322.94157	3.512028852	359280.0499	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	100 Diesel	0.000164375	0.000198894	0.000236752	0.001705513	0.001424322	0.335119619	0.138077932	8.12442E-05	3.70516E-05	0.916564E-06	23983.95166	982.7929005	2.559603388	146000.0623	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	100 Diesel	6.62111E-05	8.01154E-05	9.5344E-05	0.000687595	0.000692906	0.115176238	4.71443E-05	4.33728E-05	1.09104E-06	0	3742.671947	1863.374519	4.790039287	65753.30449	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	175 Diesel	0.000192637	0.00023309	0.000277397	0.002795696	0.002051654	0.48038268	9.3331E-05	8.58645E-05	4.55057E-06	0	15610.119	5959.313375	11.64682391	308346.2307	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	300 Diesel	0.000717799	0.000820877	0.000947331	0.002155557	0.002197426	0.856640831	0.000882E-05	0.000814E-05	2.70458E-06	0	11638.43044	3418.864791	7.28431014	410943.6398	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	50 Diesel	4.02677E-05	4.87239E-05	5.79855E-05	0.000375922	0.000339789	0.054116742	1.49293E-05	1.3735E-05	5.12637E-07	0	1758.532967	2118.384179	6.102875614	28735.59888	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	600 Diesel	0.000230448	0.000278843	0.000331846	0.001825251	0.002012146	0.880809322	8.19637E-05	7.54057E-05	8.3445E-06	0	28624.68471	3589.17784	7.021271387	569270.194	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	75 Diesel	3.1844E-05	3.7512E-05	4.4413E-05	0.000384941	0.000400999	0.101038886	4.42757E-06	4.00377E-06	2.61552E-07	0	2115.56212	1460.428372	3.838058803	37723.69053	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	750 Diesel	3.20992E-05	3.884E-05	4.62228E-05	0.000333292	0.000325415	0.096391253	1.7543E-05	1.61395E-05	9.31096E-07	0	3132.250583	226.7144018	0.623273207	62092.47751	
Sacramento	2024 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	7.17656E-05	8.683646E-05	0.000103342	0.000617545	0.001468166	0.327004292	3.525E-05	3.24319E-05	3.09765E-06	0	10626.06152	543.8353158	1.148134855	210646.7757	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	100 Diesel	0.000118891	0.000143858	0.000171203	0.001137802	0.001241274	0.221507216	8.44301E-05	7.73564E-05	2.15383E-06	0	7525.580878	3783.617474	8.697387926	131033.2186	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	175 Diesel	0.000304387	0.000368308	0.000438317	0.004594971	0.002977867	0.780318394	0.000127846	0.000117618	7.3918E-06	0	25356.58235	8548.487246	15.38586655	502387.8358	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	300 Diesel	0.000267722	0.000323944	0.00038552	0.001898526	0.002436345	0.947539611	9.18246E-05	8.44786E-05	8.97637E-06	0	30792.2197	6379.462826	11.38347728	610357.7614	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	50 Diesel	6.48987E-05	7.85274E-05	9.34541E-05	0.000636457	0.000384703	0.00030894	0.24202126	0.22267145	1.98059E-07	0	1365.488172	1539.862371	4.363136963	844668.7847	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	600 Diesel	4.58379E-05	5.54638E-05	6.60065E-05	0.000321608	0.000412684	0.167408785	1.59285E-05	1.46542E-05	1.58583E-06	0	5439.97766	684.7426319	1.181376401	108767.3918	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	75 Diesel	0.000132223	0.00015999	0.000190402	0.001286142	0.001486921	0.21446727	6.53852E-05	6.01544E-05	2.01161E-06	0	6969.151363	4406.958324	11.31844069	122477.9452	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	750 Diesel	1.21467E-06	1.46975E-06	1.74813E-06	0.000155E-05	0.000403107	5.41235E-06	0.000943107	0.000867E-07	3.37677E-08	0	120.5167462	16.90306149	0.032803853	1294.720511	
Sacramento	2024 Construction and Mining - Pavers	Aggregate	9999 Diesel	4.20323E-05	5.08591E-05	6.05265E-05	0.00030444	0.000821939	0.159052305	1.93984E-05	1.78465E-05	1.50667E-06	0	5168.429135	125.5310985	0.229626971	102456.8633	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	100 Diesel	6.13206E-05	7.41979E-05	8.83016E-05	0.0007532	0.000668593	0.131438679	4.40318E-05	4.05907E-05	1.24078E-06	0	4271.122815	2305.740436	5.415547122	71650.68437	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	175 Diesel	0.000275284	0.00033094	0.000396409	0.005082234	0.002448076	0.867035053	0.000305741	0.000281756	8.21325E-06	0	28174.45533	11452.68287	17.48560313	556772.3374	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	300 Diesel	0.000119343	0.000144406	0.000171855	0.000817371	0.001180263	0.38968555	4.7026E-05	4.3264E-05	3.69142E-06	0	12662.89993	2976.379143	5.545535621	250308.0054	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	50 Diesel	7.89112E-05	9.54825E-05	0.000113632	0.000779893	0.000671343	0.103935842	2.58941E-05	2.38225E-05	1.03591E-06	0	3553.53718	4686.83162	12.0724312	62182.6286	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	600 Diesel	0.000227989	0.000275866	0.000328304	0.001821143	0.001461165	0.301775553	7.05226E-05	6.48408E-05	8.77917E-06	0	30115.73329	4682.064733	8.007379401	530779.8167	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	75 Diesel	4.4093E-05	5.3352E-05	6.34939E-05	0.000474211	0.000525159	0.078929284	2.01751E-05	1.85611E-05	9.47682E-07	0	2564.820858	1939.946653	4.756558685	45734.65717	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	750 Diesel	4.16291E-05	5.03714E-05	5.99641E-05	0.000388267	0.000328426	0.217809465	1.73607E-05	1.59702E-05	1.9116E-06	0	6557.476215	567.4401166	1.682527146	129992.7769	
Sacramento	2024 Construction and Mining - Paving Equipment	Aggregate	9999 Diesel	3.29641E-05	3.98866E-05	4.7483E-05	0.00023934	0.000592177	0.126536074	1.50056E-05	1.38052E-05	1.15865E-06	0	4111.811805	226.6738679	0.426450089	81510.90576	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	100 Diesel	0.000368056	0.000445348	0.000530001	0.003855013	0.003871996	0.649867085	0.000268875	0.000247365	6.15606E-06	0	21117.54629	11147.5575	29.5977847	363336.2002	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	175 Diesel	0.001275602	0.001543479	0.001836867	0.01357294	0.012084444	2.034502295	0.000841468	0.000774104	1.54614E-05	0	53051.4352	47666.9779	82.1815423	1404432.108	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	300 Diesel	0.001023114	0.001148968	0.001177285	0.003827647	0.003441303	0.339847165	5.4131E-05	5.90013E-05	3.02985E-06	0	10393.48944	2371.163052	5.321934303	201384.1297	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	50 Diesel	0.001020182	0.00123442	0.001469062	0.007929177	0.006868486	0.053474861	0.000329809	0.000303424	9.97936E-06	0	34232.8494	44440.89899	122.69693	590247.4115	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	600 Diesel	8.44505E-05	0.000102185	0.000121609	0.000749069	0.000899946	0.139216449	3.27135E-05	3.42558E-05	2.45555E-06	0	8423.283793	1132.115972	2.299394934	171355.5737	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	75 Diesel	0.000222975	0.000269799	0.000321083	0.002497227	0.002790603	0.418405047	0.000305314	0.688915E-05	3.96404E-06	0	13598.09473	9381.069729	24.93203252	240718.5171	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	750 Diesel	1.79013E-06	2.16606E-06	2.57779E-06	1.14607E-05	1.91765E-05	0.006272777	7.54064E-07	6.93738E-07	5.94208E-08	0	201.8349735	14.83059035	0.032803853	4040.742647	
Sacramento	2024 Construction and Mining - Rollers	Aggregate	9999 Diesel	6.41662E-05	7.76451E-05	9.23993E-05	0.000557746	0.001155291	0.285868838	2.90085E-05	2.66978E-05	2.3604E-06	0	9268.345374	206.5727917	0.426450089	183632.8583	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	100 Diesel	0.000355128	0.00042549	0.0005062	0.00522859	0.004190894	0.931139048	0.000260944	0.000240348	8.8205E-06	0	30257.52581	15156.10767	47.57617538	520039.9736	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	175 Diesel	0.001714707	0.002074795	0.002469178	0.033991227	0.017178725	5.99591858	0.000671917	0.000618164	5.67982E-05	0	194838.4204	79744.79392	166.9083329	3859704.701	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	300 Diesel	1.48634E-05	1.79847E-05	2.14023E-05	0.000185887	0.000159757	0.051276153	6.9416E-06	6.38623E-06	4.85729E-07	0	1666.227536	385.4252246	1.01754677	32217.19807	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	50 Diesel	1.12985E-05	2.57712E-05	3.06698E-05	0.000217251	0.000199511	0.033599553	7.32748E-06	7.9412E-06	1.18282E-07	0	1091.823342	1101.988163	4.067677772	19468.87093	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	600 Diesel	2.9446E-06	3.56297E-06	4.24022E-06	2.6975E-05	2.81802E-05	0.014510575	8.77954E-07	8.07718E-07	1.37456E-07	0	431.5236609	69.06939744	0.164061446	9315.35867	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	75 Diesel	0.000431822	0.000507738	0.000597568	0.006969893	0.003906019	1.338065196	0.000103213	0.000094955	3.24724E-05	0	4340.380318	2182.10804	8.019485754	77014.4309	
Sacramento	2024 Construction and Mining - Rough Terrain Forklifts	Aggregate	750 Diesel	6.11836E-07	7.40322E-07	8.81044E-07	8.89606E-06	1.66345E-06	0.004687576	1.28017E-07	1.17775E-07	4.44045E-08	0	152.3235972	12.08278091	0.032846034	3020.695226	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	100 Diesel	2.9372E-05	3.55401E-05	4.22957E-05	0.00027257	0.000290454	0.045414817	2.32755E-05	2.14135E-05	4.30206E-07	0	1475.762416	718.8365811	1.641251478	24925.14783	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	175 Diesel	6.99773E-05	8.46726E-05	0.000100767	0.000652988	0.000762421	0.141045607	1.67645E-05	1.54206E-05	1.33618E-06	0	4583.810603	1588.322995	2.723815883	96669.78085	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	300 Diesel	7.16101E-05	8.66483E-05	0.000103119	0.00049779	0.000685216	0.175392834	3.61765E-05	3.32823E-05	1.66144E-06	0	5699.420733	1239.590565	2.200074096	112923.9071	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	50 Diesel	8.36137E-06	1.01173E-05	1.20404E-05	6.03471E-05	4.46756E-05	0.010227815	2.30821E-06	2.12356E-06	9.68861E-08	0	332.3546169	220.4732825	0.5918504	3431.400847	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	600 Diesel	0.000373671	0.000452142	0.000538837	0.002622648	0.003930695	0.916942083	0.000108908	0.000100214	7.39054E-06	0	29796.19296	4265.71996	8.037455038	589430.0098	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	75 Diesel	1.46393E-05	1.77135E-05	2.10806E-05	0.000126641	0.000164307	0.021460437	8.1792E-06	7.52486E-06	2.03291E-07	0	697.3605506	448.1223427	0.985015581	11062.87524	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	750 Diesel	1.76493E-05	2.13556E-05	2.54149E-05	0.000193853	0.000225547	0.033821198	1.04666E-05	9.61088E-06	3.10909E-07	0	1066.530563	84.04769439	0.164287173	22471.05806	
Sacramento	2024 Construction and Mining - Rubber Tired Dozers	Aggregate	9999 Diesel	1.78859E-05	2.16057E-05	2.57125E-05	0.000159905	0.000415402	0.080642587	1.40606E-05	1.29126E-05	1.63912E-07	0	2620.49493	99.10240666	0.164287173	11470.15655	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	100 Diesel	0.000408551	0.000494346	0.000588313	0.004830437	0.00423952	0.80601238	0.000295232	0.000271613	7.6352E-06	0	26191.51292	14665.97642	27.36683658	455818.9985	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	175 Diesel	0.002632753	0.003185631	0.003791164	0.036553442	0.02604873	6.110165958	0.001230664	0.001132215	5.78804E-05	0	198550.9088	74050.95197	102.2314884	3929528.584	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	300 Diesel	0.003738533	0.004523625	0.005383487	0.012302259	0.032937097	7.631082131	0.001372962	0.001263125	0.000109654	0	374025.1824	91477.20845	129.3923631	7423250.243	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	50 Diesel	8.29707E-05	0.000100395	0.000119478	0.000548783	0.000442067	0.064157025	2.71171E-05	2.49478E-05	6.07747E-07	0	2084.793721	2466.295564	5.052972243	34993.49044	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	600 Diesel	0.002667994	0.003252473	0.003870711	0.020748462	0.021732977	4.870114446	0.000919008	0.000845554	8.40249E-05	0	288235.9165	41736.19844	57.49665516	5763893.218	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	75 Diesel	0.000268472	0.00034455	0.000414653	0.002990743	0.003229101	0.495784598	0.000113103	0.000103566	6.69479E-06	0	26110.60608	11662.2035	22.54175744	728896.3031	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	750 Diesel	7.7158E-05	9.33616E-05	0.000111108	0.000734195	0.000834799	0.221074973	3.72027E-05	3.42265E-05	2.0942E-06	0	7183.869804	773.9427201	1.58514591	189867.9421	
Sacramento	2024 Construction and Mining - Rubber Tired Loaders	Aggregate	9999 Diesel	0.000214433	0.000259464	0.000308784	0.001482006	0.004033785	0.775043198	9.6808E-05	8.90567E-05	7.34183E-06	0	25185.16394	1471.367473	2.329571669	502923.9809	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	100 Diesel	1.05094E-05	1.27168E-05	1.51335E-05	0.000132713	0.000119066	0.024281964	8.3242E-06	7.65441E-06	2.38728E-07	0	880.6447334	315.1685825	1.024704978	77011.4309	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	175 Diesel	0.000149995	0.000181494	0.000215992	0.001289773	0.001843015	0.193196156	0.000103281	9.50186E-05	1.83031E-06	0	6277.942802	1685.16949	6.170714216	120922.0349	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	300 Diesel	0.000147031	0.000187909	0.001651727	0.008214265	0.014201064	2.844861104	0.000665248	0.000612028	2.69489E-05	0	92444.3879	15310.96484	48.73317927	1756721.129	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	50 Diesel	0.000372866	0.000451168	0.000536837	0.003822102	0.004020808	0.804115237	0.000171717	0.000158045	6.96439E-06	0	23896.74843	4186.181662	13.35542721	139088.035	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	600 Diesel	0.003289845	0.003988033	0.00473752	0.037174973	0.038911045	9.869496815	0.001690979	0.001555701	9.34918E-05	0	320711.0209	32422.33079	101.8010566	6785762.643	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	75 Diesel	1.37499E-05	1.66374E-05	1.97999E-05	0.000115438	0.000152676	0.020343845	8.3587E-06	7.69006E-06	1.92713E-07	0	661.0767993	334.5988857	1.280139103	10414.96822	
Sacramento	2024 Construction and Mining - Scrapers	Aggregate	750 Diesel	0.000372866	0.000451168	0.000536837	0.003832197	0.004602808	1.64510777	0.000171717	0.000158045	1.37488E-05	0	5348.064	4186.181662	13.35542721	139088.035	
Sacramento	2024 Construction and Mining - Skid Steer Loaders	Aggregate	100 Diesel	0.001349859	0.001633328	0.001943795	0.0217934	0.016539641	3.701166177	0.001062671	0.000977657	3.50604E-05	0	12070.04607	69087.87848	146.7336203	2141654.685	
Sacramento	2024 Construction and Mining - Skid Steer Loaders	Aggregate	175 Diesel	0.

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Sacramento	2024 Industrial - Boom	Aggregate	175 Diesel	1.71131E-05	2.07068E-05	2.46428E-05	0.000316004	0.000148167	0.053354939	6.02802E-06	5.54578E-06	5.05421E-07	0	1733.778037	888.1423395	1.137411792	34369.71946
Sacramento	2024 Industrial - Boom	Aggregate	300 Diesel	2.15236E-06	2.60436E-06	3.099E-06	1.64821E-05	1.73048E-05	0.003805052	5.33347E-07	5.82679E-07	7.61145E-08	0	261.1004325	72.11098936	0.110710719	32.77288107
Sacramento	2024 Industrial - Boom	Aggregate	50 Diesel	0.000158061	0.000191253	0.000227607	0.002451256	0.002120748	0.386428407	5.18986E-05	4.77467E-05	3.66056E-06	0	12557.05852	13795.15399	33.68002695	223911.4536
Sacramento	2024 Industrial - Boom	Aggregate	600 Diesel	3.32009E-06	4.01731E-06	4.78094E-06	1.88423E-05	3.07938E-05	0.007608079	1.62271E-06	1.49289E-06	7.20699E-08	0	247.2258538	38.71376557	0.063189544	4900.96603
Sacramento	2024 Industrial - Boom	Aggregate	75 Diesel	0.000231178	0.000279726	0.000332897	0.003830502	0.003318656	0.640759144	4.56724E-05	4.20177E-05	6.15504E-06	0	21114.03674	16381.62378	31.21563474	376495.3911
Sacramento	2024 Industrial - Boom	Aggregate	9999 Diesel	8.89424E-07	1.0762E-06	1.28077E-06	1.01378E-05	1.75327E-05	0.005343009	3.10159E-07	2.85346E-07	5.06133E-08	0	173.6220227	10.12298013	0.015797386	3441.813244
Sacramento	2024 Industrial - Forklifts	Aggregate	100 Diesel	0.000353441	0.000427664	0.000508955	0.004977444	0.004042826	0.855419472	0.000275009	0.000253008	8.10322E-06	0	27797.00497	28765.9937	70.44692151	484771.6136
Sacramento	2024 Industrial - Forklifts	Aggregate	175 Diesel	0.000845702	0.001023199	0.00121781	0.014819919	0.007956887	2.532176021	0.00033243	0.000305836	2.39868E-05	0	82283.50158	64506.86537	106.0962771	1629386.585
Sacramento	2024 Industrial - Forklifts	Aggregate	25 Diesel	9.79968E-09	1.18576E-08	1.41115E-08	3.18817E-08	2.55077E-08	2.304955E-06	2.17737E-09	2.00318E-09	2.18344E-11	0	0.074899843	5.56490888	0.015797386	1.33557813
Sacramento	2024 Industrial - Forklifts	Aggregate	300 Diesel	7.69566-05	9.31168E-05	0.000110817	0.000536478	0.000740084	0.229307323	3.27839E-05	3.01611E-05	2.17218E-06	0	7451.381462	3447.566964	6.685258918	147959.5462
Sacramento	2024 Industrial - Forklifts	Aggregate	50 Diesel	0.000112438	0.00013605	0.000161931	0.000965109	0.000821074	0.1352823	6.41043E-05	3.32196E-05	7.61145E-06	0	4396.021938	8484.556092	21.29507067	71844.08244
Sacramento	2024 Industrial - Forklifts	Aggregate	600 Diesel	2.38975E-05	2.8916E-05	3.44124E-05	0.000217033	0.000244236	0.069308118	1.07267E-05	9.86858E-06	6.56542E-07	0	2252.179377	634.2980718	1.262415534	45067.50221
Sacramento	2024 Industrial - Forklifts	Aggregate	75 Diesel	0.000051613	0.00061905	0.000736721	0.00764597	0.007195329	1.311717067	0.00016275	0.00014973	1.24256E-05	0	42624.47496	56412.16876	132.7016931	749493.8138
Sacramento	2024 Industrial - Forklifts	Aggregate	750 Diesel	0.599955677	1.161598-05	1.38239E-05	1.02401E-05	5.33076E-06	0.005338864	3.44466E-07	3.16948E-07	5.69572E-07	0	175.4912115	23.44922792	0.047392158	3439.220095
Sacramento	2024 Industrial - Forklifts	Aggregate	9999 Diesel	2.53248E-05	3.0643E-05	3.64677E-05	0.000185861	0.000497631	0.098804958	1.91186E-05	1.09651E-05	9.3596E-07	0	3210.684341	157.0440636	0.31594772	63647.31683
Sacramento	2024 Industrial - Garbage Refuse	Aggregate	175 Diesel	2.25747E-07	2.73154E-07	3.25076E-07	3.36345E-06	3.1234E-06	0.000591491	1.41505E-07	1.30184E-07	5.60308E-09	0	19.22606185	9.315354578	0.015797386	381.0218214
Sacramento	2024 Industrial - Garbage Refuse	Aggregate	300 Diesel	2.05056E-07	8.53117E-07	1.01528E-06	5.38728E-06	5.34711E-06	0.002707918	8.10116E-07	1.85079E-07	2.59034E-08	0	90.91624405	20.09682782	0.031594772	1802.287106
Sacramento	2024 Industrial - Garbage Refuse	Aggregate	50 Diesel	3.76815E-08	4.55946E-08	5.42613E-08	6.43008E-07	6.66911E-07	0.97629E-05	1.9465E-08	1.79078E-08	9.45035E-10	0	3.2418133	0.684890756	0.015797386	57.80646218
Sacramento	2024 Industrial - Garbage Refuse	Aggregate	600 Diesel	1.04535E-05	1.26487E-05	1.5053E-05	8.01638E-05	6.91946E-05	0.041778212	2.70474E-06	2.48836E-06	3.95757E-07	0	1357.590275	145.4938022	0.205366018	26912.32435
Sacramento	2024 Industrial - Garbage Refuse	Aggregate	75 Diesel	1.94546E-07	2.35404E-07	2.80151E-07	2.69651E-06	2.26244E-06	0.000433158	6.41045E-08	5.95156E-08	3.41303E-09	0	14.07488846	8.925201641	0.015797386	250.9766701
Sacramento	2024 Industrial - Garbage Refuse	Aggregate	9999 Diesel	1.92886E-06	2.33393E-06	2.77756E-06	2.03268E-05	3.55559E-05	0.010574775	8.51653E-07	7.83521E-07	1.00173E-07	0	343.6291606	18.97959506	0.031594772	6811.966665
Sacramento	2024 Industrial - Marine Aggregate Transfer	Aggregate	300 Diesel	9.95528E-07	1.20459E-06	1.43355E-06	6.09091E-06	9.96523E-06	0.002956718	3.39489E-07	3.1233E-07	2.80084E-08	0	96.07907225	21.83485927	0.031594772	1904.632939
Sacramento	2024 Industrial - Marine Aggregate Transfer	Aggregate	600 Diesel	1.53142E-06	1.85302E-06	2.20525E-06	1.47072E-05	1.39282E-05	0.007278188	3.04683E-07	2.84922E-07	8.49449E-08	0	236.506001	22.95422264	0.031594772	4688.399974
Sacramento	2024 Industrial - Marine Aggregate Transfer	Aggregate	75 Gasoline	0.000159184	0.000146417	0.000175172	0.008747482	0.000404824	0.322424725	0.248024	0.168451E-05	3.11507E-06	4.46388E-06	12742.15	4467.6	12.38	299329.2
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	15 Gasoline	2.75216E-05	2.77968E-05	3.02858E-05	0.000779982	2.05238E-05	3.08114E-08	9.98288E-06	7.54262E-06	1.25743E-08	1.73572E-08	49.29805502	0	0.455362	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	15 Diesel	2.97565E-05	3.57906E-05	4.27735E-05	0.000187737	0.000224135	0.000429667	7.82342E-05	5.95355E-05	4.07784E-06	5.51269E-09	13.97568445	0	6.512930543	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	15 Electric	3.23846E-06	2.93093E-07	3.20573E-06	0.000114481	3.12922E-06	1.05181E-08	2.92109E-07	2.20705E-07	2.39677E-10	2.15631E-09	0.156701667	0	0.15544708	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.146559553	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	25 Gasoline	0.001494536	0.001509482	0.001644646	0.0396471	0.00097586	1.475556-06	0.000478078	0.000361214	6.40982E-07	8.84792E-07	2518.320998	0	14.92068735	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	25 Diesel	5.60535E-05	6.74201E-05	8.05779E-05	0.000229661	0.000427159	0.000651193	1.50007E-05	1.13338E-05	5.83868-09	5.02943E-09	20.0102399	0	9.32200712	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	25 Electric	0.000269485	2.43894E-05	0.000266761	0.006869053	0.000189361	6.06525E-07	0.000018542	1.40095E-05	1.47191E-08	1.32423E-07	378.3429343	0	6.133162278	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.146559553	0
Sacramento	2024 Industrial - Aerial Lifts	Aggregate	50 Gasoline	0.000202319	0.000186093	0.00022264	0.016512882	0.000309885	0.160610578	1.10723E-05	8.36577E-06	1.95273E-06	2.48192E-06	7084.65	4467.6	12.38	147430.8
Sacramento	2024 Industrial - Man Lifts	Aggregate	100 Gasoline	0.010802505	0.009936144	0.011887498	1.022444026	0.054603495	12.82110164	0.000893918	0.000675405	0.00012387	0.000191768	547401.45	261018.8	144.87	18271316
Sacramento	2024 Industrial - Man Lifts	Aggregate	100 Nat Gas	0	0	0.003943665	0.921446625	0.092285491	20.48319996	0.001821644	0	0	0	1193903.7	478715.75	265.72	18510102.5
Sacramento	2024 Industrial - Man Lifts	Aggregate	175 Gasoline	0.00056353	0.000518335	0.000620131	0.039676972	0.003390894	0.950513616	6.81417E-05	5.14848E-05	9.44236E-06	1.3453E-05	38401.65	9541.1	5.32	1393000.6
Sacramento	2024 Industrial - Man Lifts	Aggregate	175 Nat Gas	0	0	8.9256E-05	0.054012593	0.004604435	1.56341448	0.00013904	0	0	0	8551.2	17523.65	9.73	2558452.9
Sacramento	2024 Industrial - Man Lifts	Aggregate	25 Gasoline	9.60036E-05	9.69636E-06	1.05646E-05	5.00380184	5.37348E-06	2.16888E-07	1.36979E-08	1.46638E-08	1.22666E-08	1.69325E-08	48.25387782	0	0.115750006	0
Sacramento	2024 Industrial - Forklifts	Aggregate	25 Electric	5.05488E-05	4.57486E-06	5.00379E-05	0.000726848	2.02923E-05	5.62317E-08	2.24232E-06	1.6942E-06	1.6404E-09	1.47582E-08	42.16517792	0	0.216073086	0
Sacramento	2024 Industrial - Forklifts	Aggregate	50 Gasoline	0.005115977	0.004705676	0.005629821	0.601689788	0.01203046	2.164195832	0.000149198	0.000112727	2.63127E-05	4.14868E-05	118424.25	74379.7	41.29	3049567.7
Sacramento	2024 Industrial - Forklifts	Aggregate	50 Nat Gas	0	0	0.003372565	0.546605033	0.014301452	3.413388225	0.000400076	0	0	0	182072.95	136396.85	75.71	5592270.85
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	100 Gasoline	4.94441E-05	4.54787E-05	5.44102E-05	0.003586104	0.000298105	0.095226569	6.4509E-06	4.87402E-06	8.93898E-07	1.30298E-06	3719.35	930.75	1.31	73529.25
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	15 Gasoline	0.000132412	0.000315536	0.000343791	0.018492414	0.000161521	7.26551E-06	1.54655E-06	1.16585E-06	2.87529E-07	3.96897E-07	1124.781879	0	15.61743564	0
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	15 Diesel	1.68707E-05	1.93918E-05	2.42519E-05	0.000119472	0.000124635	0.000264067	4.35286E-06	3.80268E-06	2.15870E-09	2.14267E-08	8.588678376	0	1.570132277	0
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	175 Gasoline	6.93317E-06	6.37713E-06	7.62953E-06	0.000673773	6.01714E-05	0.019179952	1.375E-06	1.03889E-06	1.90533E-07	2.65966E-07	759.2	83.95	0.12	14607.3
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.013688882	0
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	25 Gasoline	0.000277018	0.000279788	0.000304842	0.024452923	0.000155051	6.6142E-06	5.91864E-07	4.47188E-07	3.73534E-07	5.15616E-07	1469.501069	0	5.244705052	0
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	25 Diesel	0.000048743	5.86271E-05	7.00688E-05	0.000200103	0.000370477	0.000535579	1.24587E-05	9.41325E-06	5.08301E-09	4.37856E-09	17.42065614	0	1.624873952	0
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.013688882	0
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	50 Gasoline	0.000159783	0.000146969	0.000175832	0.013530943	0.000359819	0.108131543	7.45449E-06	5.63228E-06	1.31468E-06	1.76074E-06	5026.05	2817.8	3.96	84534
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	100 Gasoline	0.000112387	0.000103374	0.000123675	0.005763935	0.000517778	0.127913082	8.91841E-06	6.73835E-06	1.23582E-06	1.81828E-06	5190.3	1905.3	4.96	102886.2
Sacramento	2024 Industrial - Other Material Handling Equipment	Aggregate	50 Gasoline	4.32669E-06	3.97969E-06	4.76126E-06	0.000348176	8.91754E-06	0.002219721	1.53026E-07	1.15619E-07	2.66878E-08	1.58031E-08	102.2	14.6	0.04	598.6
Sacramento	2024 Industrial - Other Material Handling Equipment	Aggregate	100 Gasoline	0.000263436	0.000240469	0.000287695	0.016653021	0.001667533	0.560609138	3.08878E-05	2.33645E-05	4.54627E-06	7.38588E-06	2224.85	4971.3	9.61	338048.4
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	25 Gasoline	0.000126288	0.000127552	0.000138973	0.007796206	0.359026-05	3.20518E-06	3.12664E-07	2.43792E-07	1.20909E-07	1.66899E-07	473.4958892	0	6.926601432	0
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	15 Diesel	6.8196E-06	8.20247E-06	9.80328E-06	4.82939E-05	0.000057657	0.000106736	2.02767E-06	1.53202E-06	1.1749E-09	8.72605E-09	3.471775424	0	0.745402749	0
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	175 Gasoline	2.02507E-06	1.86266E-06	2.22847E-06	0.000202042	1.98697E-05	0.005653232	4.01888E-07	3.03407E-07	2.15870E-09	9.07864E-08	2.259.15	29.2	0.05	4088
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009488562	0
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	25 Gasoline	0.000277396	0.000280017	0.000305258	0.02651698	0.000115526	7.17248E-06	5.41822E-07	4.84932E-07	4.04202E-07	5.57948E-07	1590.544428	0	6.888961712	0
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	25 Diesel	9.87889E-06	1.18821E-05	1.42011E-05	4.05554E-05	7.50858E-05	0.000108547	2.52504E-06	1.90781E-06	1.03019E-09	8.87415E-10	3.530696738	0	0.165017318	0
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009488562	0
Sacramento	2024 Industrial - Other Sweepers/Scrubbers	Aggregate	50 Gasoline	0.000448014	0.000411083	0.000493012	0.028929572	0.000088686	0.349514148	2.40952E-06	1.82055E-06	4.24945E-06	5.46764E-06	15607.4	5945.85	11.53	208104.75
Sacramento	2024 Industrial - Mower	Aggregate	100 Diesel	2.80272E-05	3.39129E-05	4.03592E-05	0.000517213	0.000375509	0.086824081	2.53465E-05	2.33188E-05	8.22468E-07	0	2821.363673	1470.806472	2.622518272	50312.50688
Sacramento	2024 Industrial - Mower	Aggregate	175 Diesel	7.09514E-06	8.58512E-06	1.0217E-05	0.000159545	9.925E-05	0.026731676	2.10694E-06	1.93839E-06	2.53267E-07	0	868.796716	373.6852951	0.584743156	17392.85361
Sacramento	2024 Industrial - Mower	Aggregate	300 Diesel	4.55962E-06	5.51721E-06	6.56594E-06	2.12354E-06	6.76714E-06	0.001068292	7.67288E-07	1.92004E-07	1.01979E-08	0	34.71434325	10.34831877	0.015797386	688.1631979
Sacramento	2024 Industrial - Mower	Aggregate	50 Diesel	0.000009304	0.000253258	0.000301398	0.002187741	0.001853528	0.28146988	7.64426E-05	7.03272E-05	2.56317E-06	0	9146.412922	12205.49083	25.08656863	243922.0928
Sacramento	2024 Industrial - Mower	Aggregate	75 Diesel	7.98544E-05	9.66238E-05	0.00011499	0.001137518	0.001009715	0.188899368	2.31231E-05	2.12733E-05	1.78941E-06	0	6138.317914	4986.863283	9.525823758	109455.5452
Sacramento	2024 Industrial - Mower	Aggregate	9999 Diesel	1.51423E-05	1.83238E-05	2.18057E-05	0.000282308	0.000623308	0.185147351	2.74298E-06	6.85703E-07	1.56453E-07	0	1620.537159	58.31078808	0.126370988	32363.29015
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	100 Diesel	4.11598E-05	4.98033E-05	5.92701E-05	0.000442534	0.000430575	0.073625734	3.02649E-05	2.78437E-05	6.97442E-07	0	2392.481073	1454.525331	3.618466916	42486.41147
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	175 Diesel	8.89962E-05	0.000107685	0.000128154	0.001371143	0.000887517	0.235596931	4.23432E-05	3.87718E-05	2.20335E-06	0	7558.237852	3388.121077	5.925339815	150632.7795
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	300 Diesel	6.06464E-05	7.26782E-05	8.6491E-05	0.000823928	0.000623308	0.154535841	2.8644E-05	2.61655E-05	1.46216E-06	0	5015.745246	1258.098647	2.654623946	100244.3768
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	600 Diesel	0.000210106	0.000254228	0.000302553	0.001545359	0.001387634	0.187796924	7.30182E-05	6.79188E-05	1.77896E-06	0	6102.493805	9173.020785	21.25463245	108288.6535
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	600 Diesel	0.000158593	0.000191897	0.000228373	0.001200391	0.00157649	0.488416287	6.56307E-05	6.03802E-05	4.63615E-06	0	15903.66763	2427.13449	4.761426629	331687.4229
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	75 Diesel	5.37886E-05	6.50842E-05	7.74556E-05	0.000522868	0.000612005	0.102838833	2.74386E-05	2.52574E-05	2.57267E-07	0	3341.765823	2894.304717	6.809723157	59154.84158
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	750 Diesel	1.35629E-05	4.06111E-05	4.83305E-05	0.000233459	0.000353482	0.114058681	1.47447E-05	1.35651E-05	1.08046E-06	0	3706.356742	323.5481567	0.71088237	73473.32744
Sacramento	2024 Industrial - Other General Industrial Equipment	Aggregate	9999 Diesel	4.95303E-05	5.99316E-05	7.13236E-05	0.000365837	0.000956462	0.187517811	2.39879E-05	2.20688E-05	1.77632E-06	0	6093.423986	328.3342259	0.63189544	120793.5897
Sacramento	2024 Industrial - Other Truck	Aggregate	100 Diesel	2.56153E-05	3.09945E-05	3.68868E-05	0.000422266	3.31275E-05	0.010687012	2.56269E-06	2.35896E-06	1.01239E-07	0	347.2762624	212.9537149	0.315947172	6192.465089
Sacramento	2024 Industrial - Other Truck	Aggregate	175 Diesel	2.6769E-05	3.23905E-05	3.85474E-05	0.00052401	0.000196092	0.085497012	7.33482E-06	6.74803E-06	8.09897E-07	0	2778.240315	959.6148381	1.011243484	55516.07522
Sacramento	2024 Industrial - Other Truck	Aggregate	300 Diesel	5.65118E-05	6.83792E-05	8.13769E-05	0.000345399	0.000550821	0.154453891	2.20337E-05	2.02715E-05	1.46311E-06	0	5019.006125	1124.914932	1.437562126	99494.76159
Sacramento	2024 Industrial - Other Truck	Aggregate	50 Diesel	6.07081E-06	7.34482E-06	8.7409E-06	6.76326E-05	5.49366E-05	0.008776688	1.93434E-06	1.78041E-06	8.33318E-08	0	285.8557641	476.0913209	0.805666884	5097.242904
Sacramento	2024 Industrial - Other Truck	Aggregate	600 Diesel	0.000175465	0.000212312	0.000252669	0.001182181	0.001162948	0.566463179	5.26216E-05	4.84199E-05	5.366E-06	0	18407.31983	2321.822115	3.682170685	367746.4174
Sacramento	2024 Industrial - Other Truck	Aggregate	75 Diesel	1.09393E-05	1.32366E-05	1.57526E-05	0.000118948	0.000125818	0.019474198	1.07579E-06	4.66973E-06	1.84475E-07	0	632.817461	450.6686006	0.71088237	11284.09789
Sacramento	2024 Industrial - Other Truck	Aggregate	750 Diesel	1.65595E-05	2.00373E-05	2.38437E-05	0.000168095	8.33117E-05	0.042025421	6.46458E-06	6.19624E-06	1.39648E-07	0	1394.865693	105.4632112	0.179137264	29653.33951
Sacramento	2024 Industrial - Other Truck	Aggregate	9999 Diesel	1.40122E-05	1.69547E-05	2.01775E-05	9.5838BE-05	0.000249513	0.049090729	5.8762E-06	5.40616E-06	4.65027E-07	0	1595.211797	38.92599394	0.063189544	31622.83796
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	100 Diesel	5.91077E-07	7.15204E-07	8.51151E-07	5.8076E-06	4.9142E-06	0.000968171	2.69002E-07	2.47498E-07	9.17131E-09	0	31.46088645	16.20645421	0.031594772	560.9954597
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	175 Diesel	9.12090E-05	1.10363E-05	1.31314E-05	0.000154379	0.000154379	0.025688259	3.72751E-06	3.43196E-06	1.43134E-07	0	834.7444686	297.885318	0.505631474	16734.11507
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	300 Diesel	7.47272E-06	9.04199E-06	1.07607E-05	5.62912E-05	4.64727E-05	0.027811774	1.94825E-06	1.79239E-06	2.63456E-07	0	903.7485499	213.3195646	0.31594772	17915.54649
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	50 Diesel	3.02259E-07	3.65733E-07	4.35253E-07	1.45199E-06	1.16737E-06	0.000166852	5.5155E-08	5.07426E-08	1.58056E-09	0	5.421832737	0.876098487	0.015797386	96.68059459
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	600 Diesel	2.37621E-06	2.87521E-06	3.42174E-06	1.92355E-05	8.58814E-06	0.001440305	5.02744E-07	4.62632E-07	1.87515E-07	0	371.0453661	61.68867367	0.094784316	7395.282894
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	75 Diesel	4.30183E-07	5.20521E-07	6.19463E-07	8.34729E-06	7.04309E-06	0.001487327	5.86013E-08	5.39132E-08	1.40892E-08	0	48.33095787	41.75902253	0.079115947	821.9845995
Sacramento	2024 Industrial - Railcars or Track Cars	Aggregate	9999 Diesel	1.36083E-06	1.6466E-06	1.99595E-06	1.01873E-05	3.08236E-05	0.004925664	8.4229E-07	7.74907E-07	4.66599E-08	0	160.0603052	10.87229716	0.015797386	3172.971203
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	100 Diesel	1.45068E-05	1.02233E-05	3.76909E-05	0.000528808	0.000464812	0.092646795	1.34822E-05	1.24044E-05	2.76444E-07	0	3010.638746	1997.38885	4.599044052	53162.7269
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	175 Diesel	8.45301E-06	1.02281E-05	1.21723E-05	0.00012299	9.7430E-05	0.021429138	4.57653E-06	4.21041E-06	2.02994E-07	0	696.3435738	253.2468745	0.632135314	13865.6336
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	300 Diesel	7.35444E-06	8.88887E-06	1.05904E-05	5.99399E-05	7.00881E-05	0.029496471	2.88652E-06	2.655E-06	2.79414E-07	0	958.4929699	188.9424463	0.458124194	19000.77966
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	50 Diesel	6.21936E-05	7.52542E-05	8.95587E-05	0.00053677	0.000506258	0.079128336	2.02605E-05	1.8645E-05	2.14956E-06	0	2571.289085	2924.461288	7.017678812	44707.76558
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	600 Diesel	1.58071E-06	1.91266E-06	2.27623E-06	1.89589E-05	1.67062E-05	0.004525642	8.54123E-07	7.85794E-07	4.28705E-08	0	147.0615404	19.64803565	0.047392158	2915.288912
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	75 Diesel	2.89961E-05	3.50853E-05	4.17544E-05	0.000411162	0.000414119	0.07192657	1.098E-05	1.01016E-05	6.83146E-07	0	2337.266453	1313.932681	4.281826483	41408.82024
Sacramento	2024 Industrial - Sweepers/Scrubbers	Aggregate	9999 Diesel	1.43673E-06	1.73845E-06	2.06888E-06	1.75253E-05	3.13704E-05	0.009332169	7.53644E-07	6.93105E-07	1.84018E-08	0	303.2504625	5.940132579	0.015797386	6013.51537
Sacramento	2024 Industrial - Tow Tractor	Aggregate	600 Diesel	6.21816E-07	7.52398E-07	8.95416E-07	3.7936BE-06	9.79705E-06	0.002027402	2.60012E-07	2.39211E-07	1.92052E-08	0	65.88079132	8.208638258	0.015797386	1305.994347
Sacramento	2024 Industrial - Yard Goat	Aggregate	100 Diesel	6.37096E-06	7.70887E-06	9.17419E-06	6.47146E-05	6.01914E-05	0.010553183	3.52664E-06	3.24451E-06	9.99683E-08	0	342.9275298	177.4275771	0.189568632	6114.919475
Sacramento	2024 Industrial - Yard Goat	Aggregate	175 Diesel	0.000540503	0.000654008	0.000778324	0.009278409	0.004158319	1.477734497	0.000173193	0.000159335	1.39883E-05	0	48019.24018	15032.39932	11.83263214	953057.83
Sacramento	2024 Industrial - Yard Goat	Aggregate	300 Diesel	0.000320053	0.000387264	0.000460876	0.002008176	0.002119587	0.916409033	0.29512E-05	8.55155E-05	8.68097E-06	0	29778.87142	7649.550086	6.935292328	590899.2685
Sacramento	2024 Industrial - Yard Goat	Aggregate	50 Diesel	2.10479E-06	2.5468E-06	3.0309E-06	2.38652E-05	1.90783E-05	0.002571737	8.54969E-07	7.86572E-07	2.43616E-08	0	83.56903696	13.79250001	0.221163404	1490.163044
Sacramento	2024 Industrial - Yard Goat	Aggregate	600 Diesel	2.73944E-05	3.29055E-05	3.91631E-05	0.000153861

Sacramento	2024 Light Commercial - Misc - Pressure Washers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62563.90841	0
Sacramento	2024 Light Commercial - Misc - Pressure Washers	Aggregate	50 Gasoline	2.99263E-05	2.75362E-05	3.29321E-05	0.002043815	5.06622E-05	0.02540039	1.75108E-05	1.32304E-06	3.08822E-07	3.77211E-07	1076.75	434.35	3.78	12596.15		
Sacramento	2024 Light Commercial - Misc - Pressure Washers	Aggregate	50 Diesel	4.24505E-06	5.05196E-06	6.11287E-06	5.52192E-05	6.02207E-05	0.009650512	1.73148E-06	1.59296E-06	1.24053E-07	7.89674E-08	313.9	489.1	3.37	18585.8		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	100 Gasoline	0.0008161	0.000750648	0.000898068	0.039494112	0.002237736	1.423970101	9.92826E-05	7.50135E-05	1.37575E-05	1.97339E-05	56330.45	9490	42.97	882570		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	15 Gasoline	0.012284269	0.012407112	0.013518089	0.779778732	0.006994852	1.779810831	2.68233E-05	3.55002E-05	2.90247E-05	4.00648E-05	113685.3048	0	2920.316166	0		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	15 Diesel	0.000758421	0.000912214	0.001090242	0.00462404	0.005704168	0.75901251	0.000169057	0.000223752	7.20355E-06	6.20521E-06	24688.22582	0	183.5682004	0		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	175 Gasoline	2.91468E-05	2.68092E-05	3.20743E-05	0.002156178	0.000111713	0.064646214	4.63444E-06	3.50158E-06	6.42193E-07	9.00192E-07	2569.6	288.35	1.3	41522.4		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	2 Gasoline	0.005594594	0.00565054	0.00615651	0.052266099	0.000331526	0.15448189	1.60115E-06	2.11916E-06	9553.252523	0	1058.529514	0				
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	84086.10587	0				
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	25 Gasoline	9.17347E-05	9.2652E-05	0.000100948	0.006428544	6.54893E-05	0.014656936	2.34446E-07	3.10297E-07	2.3784E-07	3.28307E-07	935.3904288	0	9.724662535	0		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	25 Diesel	0.000618682	0.000744139	0.000889366	0.002476482	0.004585202	0.593375556	0.000157165	0.000168968	5.63154E-06	4.85106E-06	19300.59061	0	54.82562958	0		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	5 Gasoline	0.009419893	0.009514091	0.010366018	0.409811225	0.003177864	0.963551631	1.32959E-05	1.75974E-05	1.58081E-05	2.18209E-05	61183.51976	0	3206.221244	0		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	50 Gasoline	0.000514465	0.000473375	0.000566341	0.03888903	0.000815594	0.378745229	2.61104E-05	1.97278E-05	4.60485E-06	5.85764E-06	16720.65	7482.5	33.9	231957.5		
Sacramento	2024 Light Commercial - Misc - Pumps	Aggregate	50 Diesel	0.000832644	0.000967113	0.001170227	0.003159551	0.007753504	1.199132261	0.000276543	0.000294538	1.51106E-05	9.81216E-06	39003.9	24878.4	61.78	920360.8		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	100 Gasoline	0.000944994	0.000869205	0.001039908	0.037315342	0.002779965	1.192966141	8.31765E-05	6.28444E-05	1.11257E-05	1.66382E-05	47493.8	14289.75	68.78	1000282.5		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	15 Gasoline	0.063979758	0.064619555	0.07040582	3.620688791	0.028536151	6.51450069	0.000156984	0.000207773	0.000118425	0.00016347	463513.5633	0	9568.187208	0		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	15 Diesel	0.000457434	0.000550192	0.000657568	0.002788044	0.003444023	0.457811631	0.00010198	0.000134967	4.34495E-06	3.74278E-06	14891.1339	0	82.99382717	0		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	40675.31313	0				
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	175 Gasoline	8.22294E-05	7.56346E-05	9.04884E-05	0.004905099	0.000386985	0.148533193	1.06482E-05	8.04534E-06	1.47552E-06	2.07658E-06	5927.6	981.85	4.73	127640.5		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	25 Diesel	0.000761713	0.000918173	0.001094975	0.003248694	0.005644215	0.730393814	0.000157191	0.000168901	6.93193E-06	5.97123E-06	23757.32692	0	73.03185889	0		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	50 Gasoline	0.001256851	0.001156054	0.00138309	0.08289832	0.001997513	0.759936941	5.23894E-05	3.95831E-05	9.23945E-06	1.18662E-05	33872	14001.4	67.39	630063		
Sacramento	2024 Light Commercial - Misc - Welders	Aggregate	50 Diesel	0.002831455	0.003369665	0.004077295	0.027094233	0.02294336	3.411007237	0.000896228	0.000824353	4.28696E-05	2.79113E-05	110949.05	93348.75	145.35	4294042.5		
Sacramento	2024 Locomotive - Line Haul	Aggregate	0 Diesel	0.031406	0.038	0.045	0.209	0.881	0.021	0.019	0.001	0	0	0	0	0	0		
Sacramento	2024 Locomotive - Passenger	Aggregate	0 Diesel	0.003919232	0.00000387	0.00000461	0.015254983	0.07944523	0	0.001701135	0.001565045	0.0000602	0.0000532	0	0	0	0		
Sacramento	2024 Locomotive - Short Line	Aggregate	0 Diesel	0.000242451	4.87E-09	5.8E-09	0.000664535	0.006566368	0	0.000111387	0.000102476	0.00000313	0.00000277	0	0	0	0		
Sacramento	2024 Locomotive - Switcher	Aggregate	0 Diesel	0.001614125	9.73E-08	0.000000116	0.004324939	0.025268161	0	0.000543678	0.000500004	0.000013	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - A/C Unit	Aggregate	100 Diesel	3.26103E-06	3.8809E-06	4.69589E-06	6.20231E-05	4.36423E-05	0.01088488	1.89865E-06	1.74676E-06	1.24641E-07	8.90679E-08	354.05	98.55	0.33	9953.55		
Sacramento	2024 Military Tactical Support - Misc - A/C Unit	Aggregate	300 Diesel	1.69738E-06	2.02002E-06	2.44422E-06	1.60317E-05	1.92626E-05	0.009201651	5.54785E-07	5.10402E-07	1.02787E-07	7.52945E-08	299.3	54.75	0.16	11388		
Sacramento	2024 Military Tactical Support - Misc - A/C Unit	Aggregate	600 Diesel	9.86124E-07	1.17357E-06	1.42002E-06	9.42465E-06	1.0704E-05	0.005498548	3.23132E-07	2.97282E-07	5.36846E-08	4.4993E-08	178.85	0	0.09	0		
Sacramento	2024 Military Tactical Support - Misc - Aircraft Support	Aggregate	100 Diesel	5.96848E-07	7.10299E-07	8.59461E-07	1.13517E-05	7.98759E-06	0.001795444	3.47499E-07	3.19699E-07	2.28123E-08	1.46916E-08	58.4	0	0.09	0		
Sacramento	2024 Military Tactical Support - Misc - Aircraft Support	Aggregate	175 Diesel	1.33726E-06	1.59145E-06	1.92565E-06	2.92654E-05	1.49235E-05	0.005835193	6.30576E-07	5.801E-07	6.43565E-08	4.77477E-08	189.8	51.1	0.16	7154		
Sacramento	2024 Military Tactical Support - Misc - Cart	Aggregate	100 Diesel	3.04693E-07	3.6261E-07	4.38759E-07	5.7951E-06	4.0777E-06	0.000897172	1.774E-07	1.63288E-07	7.34458E-09	29.2	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Cart	Aggregate	175 Diesel	1.09607E-07	1.30442E-07	1.57835E-07	2.39871E-06	1.22319E-06	0	5.16847E-08	4.75499E-08	5.27493E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Cart	Aggregate	300 Diesel	3.73863E-07	4.44928E-07	5.38363E-07	3.53113E-06	4.24276E-06	0.001795444	1.22196E-07	1.12421E-07	2.26397E-08	1.46916E-08	58.4	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Communications	Aggregate	100 Diesel	1.50466E-07	1.79067E-07	2.16671E-07	2.86178E-06	2.01368E-06	0	8.76048E-08	8.05964E-08	1.51106E-08	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Communications	Aggregate	50 Diesel	8.92565E-08	1.06223E-07	1.28529E-07	1.05165E-06	1.03471E-06	0	3.0817E-08	2.83517E-08	2.11261E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Compressor	Aggregate	100 Diesel	3.36072E-06	3.99953E-06	4.83943E-06	6.3919E-05	4.49764E-05	0.011109311	1.95669E-06	1.80015E-06	1.28451E-07	9.09043E-08	361.35	138.7	0.49	9847.7		
Sacramento	2024 Military Tactical Support - Misc - Compressor	Aggregate	175 Diesel	1.59516E-07	1.89837E-07	2.29703E-07	3.40904E-06	1.78015E-06	0	7.38187E-08	6.79381E-08	7.67681E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Compressor	Aggregate	300 Diesel	3.38564E-07	4.02919E-07	4.87532E-07	3.19774E-06	3.84218E-06	0.001795444	2.10659E-07	1.01806E-07	2.05021E-08	1.46916E-08	58.4	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Compressor	Aggregate	50 Diesel	1.09339E-07	1.30123E-07	1.57448E-07	1.30053E-06	1.26751E-06	0	3.77509E-08	3.47308E-08	2.58795E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Crane	Aggregate	600 Diesel	1.92326E-06	2.28884E-06	2.7693E-06	1.83811E-05	2.08764E-05	0.010884454	1.30213E-07	1.19796E-07	1.04703E-07	8.90679E-08	354.05	0	0.09	0		
Sacramento	2024 Military Tactical Support - Misc - Crane	Aggregate	100 Diesel	2.62655E-07	3.12581E-07	3.78223E-07	6.62515E-06	4.45199E-06	0.001683229	1.05787E-08	4.65324E-08	2.01285E-08	1.37734E-08	54.75	0	0.06	0		
Sacramento	2024 Military Tactical Support - Misc - Crane	Aggregate	175 Diesel	4.94704E-08	5.88739E-08	7.12374E-08	2.14494E-06	3.4229E-07	0	1.03531E-08	9.52488E-09	4.86121E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Crane	Aggregate	300 Diesel	4.76802E-08	5.67344E-08	6.86596E-08	7.39471E-07	2.73428E-07	0	1.99665E-09	9.17487E-09	4.68677E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Deicer	Aggregate	100 Diesel	1.37927E-07	1.64145E-07	1.98615E-07	2.6233E-06	1.84587E-06	0	8.03044E-08	7.38801E-08	5.27176E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Generator	Aggregate	100 Diesel	1.74841E-05	2.08076E-05	2.51772E-05	0.000332539	0.000233989	0.058015289	1.01797E-05	9.3653E-06	6.68267E-07	4.74722E-07	1887.05	660.65	2.22	54833.95		
Sacramento	2024 Military Tactical Support - Misc - Generator	Aggregate	175 Diesel	1.89907E-05	2.26066E-05	2.73467E-05	0.000415605	0.000211932	0.082314861	2.80596E-06	2.58355E-06	1.63943E-07	6.7765E-07	2693.7	532.9	1.79	78336.3		
Sacramento	2024 Military Tactical Support - Misc - Generator	Aggregate	300 Diesel	6.05184E-06	7.20218E-06	8.71464E-06	5.71596E-05	6.86788E-05	0.033103501	1.97803E-06	1.81979E-06	3.66476E-07	7.70876E-07	1076.75	127.75	0.47	28488.25		
Sacramento	2024 Military Tactical Support - Misc - Generator	Aggregate	50 Diesel	5.72357E-07	6.81152E-07	8.24194E-07	6.80786E-06	6.65305E-06	0.001234368	1.97614E-07	1.81805E-07	1.35471E-08	1.01005E-08	40.15	0	0.07	0		
Sacramento	2024 Military Tactical Support - Misc - Generator	Aggregate	600 Diesel	3.7368E-06	4.4234E-06	5.35231E-06	3.55233E-05	4.03456E-05	0.020647008	1.21795E-06	1.12561E-06	1.68953E-07	671.6	58.4	0.16	20323.2			
Sacramento	2024 Military Tactical Support - Misc - Generator	Aggregate	750 Diesel	1.9834E-07	2.36041E-07	2.8561E-07	1.87941E-06	2.17546E-06	0.001346583	6.51377E-08	5.99266E-08	1.09666E-08	1.10187E-08	43.8	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Hydraulic Unit	Aggregate	100 Diesel	1.99524E-06	2.3745E-06	2.87115E-06	3.79484E-05	2.67022E-05	0.006508485	1.16168E-06	1.06874E-06	7.62607E-08	5.32571E-08	211.7	58.4	0.17	5548		
Sacramento	2024 Military Tactical Support - Misc - Lift	Aggregate	100 Diesel	9.9594E-08	7.08806E-08	8.5765E-08	1.13279E-06	7.97081E-07	0	3.46769E-08	3.19028E-08	2.27644E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Light	Aggregate	50 Diesel	1.39463E-07	1.65973E-07	2.00827E-07	1.65883E-06	1.61673E-06	0	4.81516E-08	4.42995E-08	3.30096E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	100 Diesel	3.96227E-07	4.71548E-07	5.7059E-07	7.53602E-06	5.30269E-06	0.001683229	2.30693E-07	2.12007E-07	1.51443E-08	1.37734E-08	54.75	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	175 Diesel	1.65469E-07	6.72955E-07	8.14276E-07	1.23751E-05	6.31049E-06	0.001907659	2.66643E-07	2.45312E-07	2.72136E-08	1.56098E-08	62.05	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	300 Diesel	2.4823E-07	2.95414E-07	3.57451E-07	2.34453E-06	2.81702E-06	0.001683229	8.11335E-08	7.46428E-08	1.50318E-08	1.37734E-08	54.75	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	50 Diesel	2.78927E-08	3.31946E-08	4.01654E-08	3.31767E-07	3.23345E-07	0	9.63032E-09	8.859E-09	6.60192E-10	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	600 Diesel	9.34411E-08	1.11843E-07	1.4315E-07	9.50385E-07	1.0794E-06	0	3.25848E-08	2.99596E-08	5.41357E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	750 Diesel	1.16271E-07	1.38372E-07	1.6743E-07	1.10174E-06	1.27529E-06	0	8.31849E-08	5.51301E-08	6.4288E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Pressure Washers	Aggregate	175 Diesel	1.08891E-07	1.29589E-07	1.56803E-07	2.38304E-06	1.2152E-06	0	5.13669E-08	4.72395E-08	5.24046E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Pump	Aggregate	100 Diesel	1.41062E-06	1.67875E-06	2.03129E-06	2.68292E-05	1.88782E-05	0.00448861	8.21295E-07	7.55591E-07	5.39157E-08	3.6729E-08	146	54.75	0.16	5475		
Sacramento	2024 Military Tactical Support - Misc - Pump	Aggregate	50 Diesel	1.26186E-06	1.50172E-06	1.81708E-06	1.50091E-05	1.46281E-05	0.001907659	4.35676E-07	4.00822E-07	2.98671E-08	1.56098E-08	62.05	58.4	0.16	2277.6		
Sacramento	2024 Military Tactical Support - Misc - Start Cart	Aggregate	100 Diesel	3.13471E-08	3.73056E-08	4.51398E-08	5.96204E-07	4.19516E-07	0	1.82145E-08	1.67909E-08	1.198E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Start Cart	Aggregate	300 Diesel	5.21145E-08	6.20205E-08	7.5044E-08	4.98072E-07	5.65685E-07	0.000647008	1.70768E-08	1.57107E-08	2.83711E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Test Stand	Aggregate	100 Diesel	9.51697E-07	1.132E-06	1.37044E-06	1.81007E-05	1.27365E-05	0.003029812	5.541E-07	5.09772E-07	3.63751E-08	2.47921E-08	98.55	29.2	0.14	2686.4		
Sacramento	2024 Military Tactical Support - Misc - Test Stand	Aggregate	175 Diesel	6.78182E-07	8.07093E-07	9.76581E-07	1.44417E-06	7.56823E-07	0	3.19706E-08	2.94179E-08	3.37995E-09	0	0	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Test Stand	Aggregate	300 Diesel	1.15898E-06	1.37928E-06	1.66892E-06	1.09445E-05	1.31526E-05	0.00594709	3.78809E-07	3.48504E-07	7.01831E-08	4.86659E-08	193.45	14.6	0.13	2876.2		
Sacramento	2024 Military Tactical Support - Misc - Test Stand	Aggregate	600 Diesel	7.57962E-07	9.02037E-07	1.09146E-06	7.24405E-06	8.22743E-06	0.003927534	2.48368E-07	2.28499E-07	4.12635E-08	3.21179E-08	127.75	0	0	0		
Sacramento	2024 Military Tactical Support - Misc - Welder	Aggregate	100 Diesel	1.12724E-06	1.34151E-06	1.62323E-06	2.14395E-05	1.50858E-05	0.003703104	6.56306E-07	6.03802E-07	4.30844E-08	3.03014E-08	120.45	58.4	0.16	3620.8		
Sacramento	2024 Military Tactical Support - Misc - Welder	Aggregate	50 Diesel	4.10022E-07	4.8796E-07	5.90433E-07	4.87697E-06	4.7531E-06	0	1.45666E-07	1.3024E-07	9.70482E-09	0	0	0	0	0		
Sacramento	2024 Ocean Going Vessels - Bulk Cargo	Aggregate	0 Diesel	0.001052445	0.001316369	0.001572896	0.002493527	0.024082626	1.101498546	0.00033704	0.000310077	0.000700253	3.12167E-05	35828.19056	839.1381548	0	595461.4251		
Sacramento	2024 Ocean Going Vessels - General Cargo	Aggregate	0 Diesel	0.001323418	0.001790004	0.002018246	0.00315133	0.031334553	1.483809857	0.000443496	0.000408477	0.000914145	9.9036E-05	48363.53954	863.8990903	0	791762.2839		
Sacramento	2024 Ocean Going Vessels - Tanker	Aggregate	Handysize 0 Diesel	0.000951836	0.00123855	0.001479937	0.002525052	0.02245877	1.026040836	0.000310384	0.000285553	0.000628658	2.94293E-05	33374.08767	415.0237283	0	556802.8767		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	100 Diesel	1.65858E-05	2.06888E-05	2.38835E-05	0.002760889	0.000198552	0.045974781	1.58479E-05	1.45801E-05	4.3551E-07	0	1493.958513	592.2673956	1.119387066	266339.5272		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	175 Diesel	0.000108414	0.000225803	0.000260741	0.000305557	0.001765256	0.539747019	0.000145905	0.000134195	0.000121928	0.000046	17539.17528	4940.314922	7.259946188	344218.4367		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	300 Diesel	0.000346103	0.000418784	0.000493838	0.002260589	0.00325731	0.902686511	0.000154102	0.000141773	8.55097E-06	0	29332.95567	5010.933209	7.683131246	581484.732		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	50 Diesel	1.72699E-05	2.08966E-05	2.49687E-05	0.000215515	0.000181967	0.028674027	7.02249E-06	6.46069E-06	2.7162E-07	0	931.767522	726.0589169	1.698830976	16614.8322		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	600 Diesel	0.000697113	0.000844506	0.001003842	0.003735657	0.005813178	2.163278059	0.000725201	0.000667355	2.04923E-05	0	70296.09794	6473.0109	10.81169666	1385876.963		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	75 Diesel	2.4362E-05	2.9478E-05	3.50812E-05	0.00037982	0.000327904	0.065611538	5.09803E-06	4.69019E-06	6.21525E-07	0	2132.058366	1146.111093	2.239038315	36209.41902		
Sacramento	2024 Oil Drilling - Drill Rig	Aggregate	750 Diesel	9.12234E-05	0.00011038	0.000131362	0.00064459	0.000915937	0.338957237	3.81793E-05	3.51249E-05	3.21088E-06	0	11014.47454	651.9826418	1.119387066	218346.5194		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	9999 Diesel	6.94301E-05	8.40164E-05	9.99884E-05	0.001509078	0.001386902	0.313818377	4.36488E-05	4.01611E-05	1.87274E-06	0	10197.58291	467.7211592	0.771991008	202152.7879		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	100 Diesel	1.47596E-05	1.7858E-05	2.1253E-05	0.000200739	0.000173878	0.031909494	2.21374E-05	1.11664E-05	3.02272E-07		1036.904568	418.4002994	0.771991008	18489.58565		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	175 Diesel	0.000241374	0.000292062	0.000347578	0.003711547	0.002362731	0.624453621	0.000109339	0.000100592	5.91533E-06	0	20291.72935	5584.678373	8.609129837	394135.3573		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	300 Diesel	0.000247323	0.000299326	0.000356144	0.001771019	0.00224234	0.724964427	0.000103088	0.000094855	2.93738E-06	0	23557.20651	3924.310463	4.250518925	448270.0999		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	50 Diesel	1.67511E-05	2.02689E-05	2.41216E-05	0.000173486	0.000148328	0.023237627	6.43861E-06	5.92352E-06	2.20126E-07		755.1107388	677.258106	1.543982116	13464.77305		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	600 Diesel	0.000823926	0.000996951	0.001186454	0.0065678	0.008038415	2.360127686	0.00034434	0.000316793	2.2357E-05	0	76692.76093	7172.412475	12.35733946	1505251.851		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	75 Diesel	2.60858E-05	3.15639E-05	3.75636E-05	0.000347915	0.000339092	0.067646438	9.58311E-06	8.81205E-06	5.44017E-07	0	1870.036104	1016.853962	1.968727254	33390.08275		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	750 Diesel	0.000154883	0.000187409	0.000223032	0.001272258	0.00169848	0.435855476	7.45393E-05	6.85762E-05	4.12877E-06		14163.19674	854.682589	1.544904149	280562.9588		
Sacramento	2024 Oil Drilling - Drill Rig (Mobile)	Aggregate	9999 Diesel	0.000102839	0.000146215	0.000174008	0.000685077	0.00211584	0.366067067	5.23443E-05	4.81475E-05	3.46768E-06	0	11895.41321	616.6229797	1.15798662	235809.8939		
Sacramento	2024 Oil Drilling - Misc - Compressors (Workover)	Aggregate	25 Diesel	1.47413E-06	5.05443E-06	6.11587E-06	5.28194E-05	3.8764E-05	0.003815319	1.56515E-06	1.45394E-06	3.19016E-08	3.12197E-08	124.1	240.9	0.32	5781.6		
Sacramento	2024 Oil Drilling - Misc - Generator (Drilling)	Aggregate	50 Diesel	3.09819E-06	3.6871E-06	4.46139E-06	3.05356E-05	2.2821E-05	0.003590888	8.13867E-07	7.48758E-07	4.17432E-08	2.93832E-08	116.8	116.8	0	3854.4		
Sacramento	2024 Oil Drilling - Workover Rig (Mobile)	Aggregate	100 Diesel	1.22133E-05	1.47781E-05	1.75871E-05	9.89402E-05	0.000114571	0.015740918	1.14183E-05	1.05048E-05	1.49111E-07	0	511.5038011	226.6060227	0.231597324	9120.892413		
Sacramento	2024 Oil Drilling - Workover Rig (Mobile)	Aggregate	175 Diesel	4.06097E-06	4.91983E-06	5.8555E-06	3.50636E-05	3.80123E-05	0.008411E-05	0.009691538	2.25047E-06	3.58064E-08	1.23197E-08	314.9270837	81.30718387	0.154398216	6243.004375		
Sacramento	2024 Oil Drilling - Workover Rig (Mobile)	Aggregate	300 Diesel	0.000116859	0.000141399	0.000168277	0.000758995	0.001154706	0.235841277	6.32613E-05	5.82004E-05	2.23408E-06		7663.703446	1177.770155	1.816573935	139783.8023		
Sacramento	2024 Oil Drilling - Workover Rig (Mobile)	Aggregate	50 Diesel	4.39521E-07	5.3182E-07	6.3291E-07	6.34997E-06	4.85144E-06	0.000933837	1.18394E-07	1.08925E-07	8.84606E-09	0	30.34520302	22.08576029	0.038599554	541.101127		
Sacramento	2024 Oil Drilling - Workover Rig (Mobile)	Aggregate	600 Diesel	0.001828918	0.002212991	0.002633643	0.01676919	0.015317104	5.479994148	0.000724755	0.000666775	5.15109E-05	0	1870.036104	1016.853962	21.71122408	3486000.056		
Sacramento	2024 Oil Drilling - Workover Rig (Mobile)	Aggregate	750 Diesel	8.6433E-05	0.000104584	0.000124463	0.000709058	0.000962325	0.186994997	4.34643E-05	3.99872E-05	1.77137E-06		6076.435048	371.4920561	0.656749842	121237.625		
Sacramento	2024 Pleasure Craft - Personal Water Craft	Aggregate	120 Gasoline	0.410376784	0.414480551	0.451594618	1.308194738	0.025827859	4.244868281	0.021206817	0.016022926	7.37713E-05	0.000101832	288404.1682	0	1481.060893	0		
Sacramento	2024 Pleasure Craft - Personal Water Craft	Aggregate	120 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sacramento	2024 Pleasure Craft - Personal Water Craft	Aggregate	15 Gasoline	2.14212E-06	2.16354E-06	2.35727E-06	5.36602E-05	1.03654E-06	0.000131718	1.0592E-08	8.0028E-09	2.34653E-09	3.23908E-09	8.336605484	0	0.368523422	0		
Sacramento	2024 Pleasure Craft - Personal Water Craft	Aggregate	15 Diesel	0	0	0	0	0	0

Sacramento	2024 Portable Equipment - Non-Rental Generator	Aggregate	75 Diesel	0.000832036	0.001006764	0.001198132	0.012264666	0.009000553	1.651462454	0.000230669	0.000212216	1.52826E-05	1.35134E-05	53716.74044	53876.44893	37.81568689	3395963.294
Sacramento	2024 Portable Equipment - Non-Rental Generator	Aggregate	750 Diesel	0.000692502	0.000729028	0.000867603	0.003687081	0.004842825	1.70581843	0.000245349	0.000225721	1.57933E-05	1.39582E-05	55484.76481	4863.417087	3.545220646	3507737.498
Sacramento	2024 Portable Equipment - Non-Rental Generator	Aggregate	9999 Diesel	0.003531561	0.004273189	0.005085448	0.023191953	0.049838178	10.89757388	0.001153559	0.001061274	0.000100905	8.91717E-05	354462.886	17832.52932	12.99914237	22409084.02
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	100 Diesel	0.000150346	0.000181919	0.000216499	0.005750161	0.002853635	0.901450952	0.000195433	0.000179798	8.35114E-06	7.37631E-06	29321.28834	20439.51587	63.81397162	1853686.916
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	175 Diesel	0.000662215	0.00080128	0.00095359	0.021638941	0.010236167	3.890796686	0.00043735	0.000383962	3.60444E-05	3.18373E-05	126555.0514	59425.99985	185.5332138	8000789.057
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	300 Diesel	0.000339839	0.000411205	0.000489369	0.002670346	0.005136094	1.275469111	0.000177858	0.000163629	1.18123E-05	1.04368E-05	41486.89121	10976.77704	34.27046624	2622794.283
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	600 Diesel	0.000327992	0.000396871	0.000472309	0.003092072	0.003981677	1.492713191	0.000140327	0.000129101	1.38263E-05	1.22144E-05	48553.13958	7191.681511	22.45306409	3069521.316
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	75 Diesel	0.000167123	0.000202219	0.000240657	0.003990076	0.003138236	0.625603228	0.63488E-05	6.10775E-05	5.79377E-06	5.11913E-06	20348.8527	19803.98721	60.26875098	1286451.044
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	750 Diesel	6.4974E-05	7.86185E-05	9.35625E-05	0.000967092	0.000389068	0.516981188	2.30657E-05	2.12205E-05	4.79001E-06	4.23031E-06	16815.72851	1514.038213	4.726960861	1063087.528
Sacramento	2024 Portable Equipment - Non-Rental Other	Aggregate	9999 Diesel	0.003004495	0.003635439	0.004326472	0.027917174	0.06243511	14.27483976	0.001217362	0.001119973	0.000132225	0.000116807	464314.4387	9462.73883	29.54350538	29353880.7
Sacramento	2024 Portable Equipment - Non-Rental Pump	Aggregate	100 Diesel	0.000110177	0.000133314	0.000158655	0.003468261	0.002042328	0.546328641	0.00012955	0.000119186	5.06068E-06	4.47045E-06	17770.3064	12896.83677	40.17916732	1123435.781
Sacramento	2024 Portable Equipment - Non-Rental Pump	Aggregate	175 Diesel	0.000242481	0.000293402	0.000349172	0.007520658	0.003493874	1.345341293	0.00012672	0.000116582	1.24628E-05	1.10085E-05	43759.60764	21621.16753	67.35919227	2766475.034
Sacramento	2024 Portable Equipment - Non-Rental Pump	Aggregate	300 Diesel	5.79094E-05	7.00704E-05	8.33896E-05	0.000623328	0.0008483	0.325066477	2.51237E-05	2.31138E-05	3.01134E-06	2.65993E-06	10573.36273	3034.549829	9.453921722	668446.2128
Sacramento	2024 Portable Equipment - Non-Rental Pump	Aggregate	50 Diesel	1.59294E-05	1.92745E-05	2.29383E-05	9.4731E-05	8.35976E-05	0.010398485	5.37122E-06	4.94153E-06	9.58883E-08	8.50715E-08	338.1640703	376.3187286	1.181740215	19230.32833
Sacramento	2024 Portable Equipment - Non-Rental Pump	Aggregate	600 Diesel	0.000271684	0.000328738	0.000391226	0.003267382	0.001616832	1.712677633	7.42794E-05	6.83376E-05	1.58688E-05	1.40144E-05	55707.87254	7965.6933	24.81654452	3521842.331
Sacramento	2024 Portable Equipment - Non-Rental Pump	Aggregate	75 Diesel	0.000152635	0.000184688	0.000219794	0.003570648	0.002926855	0.564471016	6.92362E-05	6.36973E-05	5.22757E-06	4.6189E-06	18360.41928	17827.98024	55.54179012	1160742.618
Sacramento	2024 Portable Equipment - Non-Rental Compressor	Aggregate	100 Diesel	2.41692E-05	2.92448E-05	3.48037E-05	0.000923862	0.000319009	0.134689395	2.50833E-05	2.30748E-05	1.24773E-06	1.10212E-06	4381.011051	3183.669581	9.908701076	276966.7816
Sacramento	2024 Portable Equipment - Non-Rental Compressor	Aggregate	175 Diesel	0.000137021	0.000165795	0.00019731	0.00713453	0.001068377	1.313614051	2.25957E-05	2.07888E-05	1.21719E-05	1.07489E-05	42727.62293	19738.7514	36.63394667	2701233.134
Sacramento	2024 Portable Equipment - Rental Compressor	Aggregate	300 Diesel	0.000104172	0.000126048	0.000150007	0.001751792	0.000210791	0.936546538	1.55232E-05	1.42814E-05	8.67783E-06	7.66349E-06	30462.83442	7640.806995	14.18088258	1925855.267
Sacramento	2024 Portable Equipment - Rental Compressor	Aggregate	600 Diesel	0.000433836	0.000524942	0.000624724	0.003583163	0.004098852	1.844522598	0.000181006	0.000166526	1.70841E-05	1.50932E-05	59996.36346	7004.078079	12.99914237	3792960.005
Sacramento	2024 Portable Equipment - Rental Compressor	Aggregate	75 Diesel	2.29415E-05	2.77592E-05	3.30357E-05	0.000540365	0.000409871	0.084455588	3.53185E-06	3.2493E-06	7.8214E-07	6.91076E-07	2747.067535	2546.935665	4.726960861	173669.1475
Sacramento	2024 Portable Equipment - Rental Compressor	Aggregate	750 Diesel	0.000155121	0.000187697	0.000223375	0.002052192	0.000317815	1.077474623	2.65678E-05	2.44423E-05	9.94803E-06	8.78617E-06	34925.54264	3183.669581	5.908701076	2207986.931
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	100 Diesel	0.00067796	0.000820132	0.000976262	0.019530822	0.008662569	2.667729833	0.000663233	0.000610174	2.47071E-05	2.18293E-05	86772.63963	57298.10078	38.9974271	5485751.68
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	175 Diesel	0.000862664	0.001043824	0.001242236	0.027725142	0.004970428	4.540962633	0.000162485	0.000149486	4.20648E-05	3.71574E-05	147702.85	65979.6312	44.90612818	9337749.329
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	300 Diesel	0.000623493	0.000754426	0.00089783	0.005533144	0.001441911	2.457119675	6.48282E-05	5.96419E-05	2.27566E-05	2.01059E-05	79922.16808	24308.28518	16.54436301	5052666.021
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	600 Diesel	0.001391808	0.001684088	0.002004204	0.010561139	0.006936349	5.034954986	0.000320388	0.000294757	4.46278E-05	4.11996E-05	163770.8259	24308.28518	16.54436301	10353564.07
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	75 Diesel	0.000454944	0.000550483	0.00065512	0.007909779	0.00570916	1.13267224	4.79407E-05	4.4105E-05	1.04852E-05	9.26833E-06	36842.17016	34726.12168	23.63480431	2329155.8
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	750 Diesel	0.000486959	0.00058922	0.00070122	0.002564824	0.003734464	1.186609014	0.000187186	0.000172211	1.09842E-05	9.70968E-06	38596.55922	3472.612168	2.363480431	2440067.981
Sacramento	2024 Portable Equipment - Rental Generator	Aggregate	9999 Diesel	0.00056271	0.000680879	0.000810303	0.003114429	0.007327034	1.440882374	0.000252579	0.000232372	1.33388E-05	1.17903E-05	46867.25048	3472.612168	2.363480431	2962939.691
Sacramento	2024 Portable Equipment - Rental Other	Aggregate	100 Diesel	6.29685E-05	7.61919E-05	9.06746E-05	0.001894107	0.000583948	0.251012222	5.16228E-05	4.74929E-05	2.32477E-06	2.05396E-06	8164.616969	6006.715124	4.726960861	516165.7113
Sacramento	2024 Portable Equipment - Rental Other	Aggregate	175 Diesel	0.000273079	0.000330426	0.000393234	0.005917031	0.002101642	0.909271412	9.74063E-05	8.96138E-05	8.41995E-06	7.44031E-06	29575.66265	12013.43025	9.453921722	1869768.417
Sacramento	2024 Portable Equipment - Rental Other	Aggregate	75 Diesel	0.000146071	0.000176746	0.000210342	0.002289041	0.00169769	0.315431288	4.3472E-05	3.99942E-05	2.91939E-06	2.58108E-06	10259.96115	10511.75147	8.272181507	648633.0177
Sacramento	2024 Portable Equipment - Rental Pump	Aggregate	100 Diesel	0.000324755	0.000392953	0.000467647	0.007710454	0.003888147	1.052464356	0.00031558	0.000290334	9.74567E-06	8.61201E-06	34233.26671	25772.91723	25.99828474	2164221.363
Sacramento	2024 Portable Equipment - Rental Pump	Aggregate	175 Diesel	0.000235404	0.000284839	0.000338981	0.005763877	0.002152136	0.921339544	7.42619E-05	6.8321E-05	8.53294E-06	7.53906E-06	29968.20001	15229.45109	15.3626228	1894584.563
Sacramento	2024 Portable Equipment - Rental Pump	Aggregate	300 Diesel	0.000412319	0.00049806	0.000593739	0.002426922	0.003561466	1.091744036	0.000157921	0.000145288	1.01071E-05	8.9334E-06	35510.90784	10543.46614	10.63566194	2244093.62
Sacramento	2024 Portable Equipment - Rental Pump	Aggregate	600 Diesel	8.88497E-05	0.000107508	0.000127943	0.000810852	0.00014146	0.38702037	1.29957E-05	1.1956E-05	3.58467E-06	3.16688E-06	12588.52289	2342.992476	2.363480431	795844.2991
Sacramento	2024 Portable Equipment - Rental Pump	Aggregate	75 Diesel	0.000159891	0.000193469	0.000230244	0.003736203	0.00300095	0.582841128	7.76234E-05	7.14135E-05	5.39762E-06	4.76922E-06	18957.93969	16400.94733	16.54436301	1198517.758
Sacramento	2024 Portable Equipment - All Terrain Vehicles (Atvs) Active	Aggregate	120 Gasoline	0.003292802	0.00332573	0.003623528	0.071936895	0.001723818	1.341987392	0.000371104	0.000219279	1.65635E-05	1.19753E-05	54696.71205	0	1650.099386	0
Sacramento	2024 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	15 Gasoline	0.002303282	0.002326316	0.002534621	0.025977738	0.00052028	0.368849615	0.18758E-05	4.67506E-05	5.24726E-06	1.60738E-06	15579.57549	0	730.1327193	0
Sacramento	2024 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	25 Gasoline	0.00156331	0.001578943	0.001720327	0.012098301	0.000219167	0.158830251	3.19078E-05	2.41082E-05	2.45573E-06	2.48022E-06	6836.546091	0	414.790645	0
Sacramento	2024 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	50 Gasoline	0.009586872	0.009682741	0.010549768	0.173301554	0.003739193	2.978101931	0.000381412	0.000288178	3.69046E-05	4.39601E-05	122481.4088	0	4962.383377	0
Sacramento	2024 Recreational - Golf Carts	Aggregate	120 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Golf Carts	Aggregate	15 Gasoline	0.001853446	0.001871981	0.002039604	0.050469625	0.001411945	0.611886962	0.000136793	0.000103355	5.21476E-06	9.16261E-06	26021.264	0	692.1503858	0
Sacramento	2024 Recreational - Golf Carts	Aggregate	25 Gasoline	0.000549168	0.00055466	0.000604328	0.014953963	0.000418353	0.18129984	4.05313E-05	3.06237E-05	1.54511E-06	2.70773E-06	7710.00415	0	115.3583976	0
Sacramento	2024 Recreational - Golf Carts	Aggregate	5 Gasoline	4.22654E-05	4.2688E-05	4.65105E-05	0.001173658	3.2674ZE-05	0.006474994	3.14897E-06	2.37923E-06	1.65548E-07	1.11838E-07	315.7919752	0	16.47977109	0
Sacramento	2024 Recreational - Golf Carts	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Minibikes	Aggregate	120 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Minibikes	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Minibikes	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Minibikes	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Minibikes	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Off-Road Motorcycles Active	Aggregate	120 Gasoline	0.006453212	0.006517743	0.007101366	0.032544657	0.002223269	0.246232491	9.26042E-05	6.99677E-05	4.50144E-06	4.64718E-06	11931.19344	0	401.9507475	0
Sacramento	2024 Recreational - Off-Road Motorcycles Active	Aggregate	15 Gasoline	0.000719937	0.000727136	0.000792247	0.007494732	8.92302E-05	0.051825531	1.66305E-05	1.25653E-05	1.72363E-06	1.0971E-06	2465.938354	0	121.0655096	0
Sacramento	2024 Recreational - Off-Road Motorcycles Active	Aggregate	25 Gasoline	0.001827421	0.001845695	0.002010966	0.004597161	2.49076E-05	0.021925989	2.23456E-05	1.68833E-05	9.61241E-07	5.83782E-07	1325.051133	0	57.33750595	0
Sacramento	2024 Recreational - Off-Road Motorcycles Active	Aggregate	5 Gasoline	0.002019225	0.002039419	0.002222035	0.013891208	6.51854E-05	0.076215674	5.65057E-05	4.26931E-05	2.32923E-06	1.75658E-06	3919.625418	0	188.43212	0
Sacramento	2024 Recreational - Off-Road Motorcycles Active	Aggregate	50 Gasoline	0.009486608	0.009581474	0.010439434	0.032073795	0.000265041	0.234395594	0.000120546	9.10796-05	6.637E-06	4.9793E-06	11856.88405	0	417.5826266	0
Sacramento	2024 Recreational - Snowmobiles Active	Aggregate	120 Gasoline	0	0	0	0	0	0	0	0	0	1.25227E-08	0	0	0	0
Sacramento	2024 Recreational - Snowmobiles Active	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Snowmobiles Active	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	1.04356E-08	0	0	0	0
Sacramento	2024 Recreational - Snowmobiles Active	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2024 Recreational - Snowmobiles Active	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	8.13973E-08	0	0	0	0
Sacramento	2024 Transport Refrigeration Unit - Instate Genset	Aggregate	25 Diesel	0.000171173	0.001749877	0.000246548	0.000190291	0.00296153	0.473228965	0.000109039	0.000100336	742.83	1.06052E-08	15392.61	32700.64	41.80201	0
Sacramento	2024 Transport Refrigeration Unit - Instate Genset	Aggregate	50 Diesel	0.0002118	0.00216534	0.00030494	0.00023565	0.0022208	0.375998901	5.9201E-05	0.000544421	590.22	8.42935-09	12230.03	22946.09	29.33	0
Sacramento	2024 Transport Refrigeration Unit - Instate Trailer	Aggregate	25 Diesel	0.0036761	0.0375385	0.00529298	0.00408566	0.0406861	6.498532621	0.001483371	0.001364604	10201.81	1.45766E-07	211376.28	322147.95	179.69	0
Sacramento	2024 Transport Refrigeration Unit - Instate Trailer	Aggregate	50 Diesel	0.007518453	0.07617588	0.010816292	0.008350166	0.06790212	12.00256412	0.001264675	0.001163853	18842.47	2.69062E-07	390404.65	513304.82	286.42	0
Sacramento	2024 Transport Refrigeration Unit - Instate Truck	Aggregate	23 Diesel	0.0009489	0.0096904	0.00136717	0.00105386	0.0123732	1.976377716	0.00063853	0.00058729	3102.9	4.2497E-08	64291.69	116050.54	100.28	0
Sacramento	2024 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	25 Diesel	0.000155703	0.001591437	0.000224439	0.000173175	0.002635493	0.421233025	0.000103774	9.55441E-05	661.22407	9.44023E-09	13701.35	29107.64	234.69808	0
Sacramento	2024 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	50 Diesel	0.00017413	0.0017784	0.00025072	0.00019336	0.0016655	0.257421805	5.5726E-05	0.000051265	404.04	5.769E-09	8373.1	15492.94	124.89	0
Sacramento	2024 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	25 Diesel	0.003973831	0.04055169	0.005722979	0.004414143	0.04270443	6.836676876	0.001682792	0.001547152	10723.26	1.53007E-07	222179.86	338613.12	1244.81	0
Sacramento	2024 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	50 Diesel	0.0024243	0.024759	0.0034928	0.0026935	0.020383	3.346169875	0.00054173	0.00049843	5253.01	7.5007E-08	108840.1	143485.02	527.42	0
Sacramento	2024 Transport Refrigeration Unit - Railcar TRU	Aggregate	25 Diesel	0.000196564	0.002007653	0.00028298	0.000218443	0.002028686	0.324318701	8.42832E-05	7.76862E-05	509.1	7.2729E-09	10549.04	16077.3	49.0746	0
Sacramento	2024 Transport Refrigeration Unit - Railcar TRU	Aggregate	50 Diesel	3.69991E-05	0.000378574	5.34216E-05	4.1176BE-05	0.000384647	0.069006543	7.6769E-06	7.06TE-06	108.26	1.54634E-09	2244.56	2965.23	8.98889	0

OFFROAD 2025

	Equipment Type	Horsepower HP			Gas			Diesel				Natural Gas			
			Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	
Air Compressors25	Air Compressors	25	27883.78654	98.54468339	0	0	2605.269635	4.937018868	0	0	0	0	0	0	0
Air Compressors50	Air Compressors	50	13804.3	12.62	6110.1	2.259259259	23648.35	28.48	23162.8	1.020958084	0	0	0	0	0
Air Compressors75	Air Compressors	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors100	Air Compressors	100	74627.9	40.95	19790.3	3.770933235	0	0	0	0	0	0	0	0	0
Air Compressors175	Air Compressors	175	8143.25	2.74	1324.95	6.903826446	0	0	0	0	0	0	0	0	0
Air Compressors300	Air Compressors	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors600	Air Compressors	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors750	Air Compressors	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors9999	Air Compressors	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Aerial Lifts25	Aerial Lifts	25	2478.918532	14.68958914	0	0	19.42308716	9.055437565	0	0	0	0	0	0	0
Aerial Lifts50	Aerial Lifts	50	6973.51	12.14	4376.35	1.592994162	9577.465106	50.01638426	11759.00217	0.814479746	0	0	0	0	0
Aerial Lifts75	Aerial Lifts	75	0	0	0	0	19040.43157	54.53499051	16043.91658	1.186769544	0	0	0	0	0
Aerial Lifts100	Aerial Lifts	100	12493.95	12.14	4376.35	2.854879066	9739.189893	9.415346346	2674.121287	1.398287322	0	0	0	0	0
Aerial Lifts175	Aerial Lifts	175	0	0	0	0	5564.073838	6.666976775	2992.82911	1.859135164	0	0	0	0	0
Aerial Lifts300	Aerial Lifts	300	0	0	0	0	118.681446	0.07898693	32.41080763	3.661786135	0	0	0	0	0
Aerial Lifts600	Aerial Lifts	600	0	0	0	0	69.93412696	0.031594772	11.88709438	5.882355506	0	0	0	0	0
Bore/Drill rigs25	Bore/Drill rigs	25	427.5468722	4.806957962	0	0	23.87338918	3.755762258	0	0	0	0	0	0	0
Bore/Drill rigs50	Bore/Drill rigs	50	237.25	0.88	87.6	2.708333333	1417.012604	2.689915946	1272.356142	1.113691802	0	0	0	0	0
Bore/Drill rigs75	Bore/Drill rigs	75	0	0	0	0	5469.817334	6.265823789	3051.463009	1.792522904	0	0	0	0	0
Bore/Drill rigs100	Bore/Drill rigs	100	2733.85	3.99	427.05	6.401709402	4181.81124	3.1338831	1693.883216	2.468771873	0	0	0	0	0
Bore/Drill rigs175	Bore/Drill rigs	175	949	0.97	102.2	9.285714286	30025.41397	13.127827	8536.743393	3.51719767	0	0	0	0	0
Bore/Drill rigs300	Bore/Drill rigs	300	0	0	0	0	35708.34015	10.27144717	6291.824268	5.673156609	0	0	0	0	0
Bore/Drill rigs600	Bore/Drill rigs	600	0	0	0	0	51361.47686	8.82752752	9277.072009	10.11635779	0	0	0	0	0
Bore/Drill rigs750	Bore/Drill rigs	750	0	0	0	0	21339.99233	2.29626971	1294.807052	16.48123421	0	0	0	0	0
Bore/Drill rigs9999	Bore/Drill rigs	9999	0	0	0	0	7010.13032	0.553665501	325.9331238	21.50784784	0	0	0	0	0
Cement and Mortar Mixers25	Cement and Mortar Mixers	25	195.2408112	2.825857014	0	0	6.942369383	2.683739061	0	0	0	0	0	0	0
Cement and Mortar Mixers50	Cement and Mortar Mixers	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers75	Cement and Mortar Mixers	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers100	Cement and Mortar Mixers	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers175	Cement and Mortar Mixers	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers300	Cement and Mortar Mixers	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers600	Cement and Mortar Mixers	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers750	Cement and Mortar Mixers	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers9999	Cement and Mortar Mixers	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws25	Concrete/Industrial Saws	25	6464.028348	30.98450728	0	0	4.762085968	0.995936402	0	0	0	0	0	0	0
Concrete/Industrial Saws50	Concrete/Industrial Saws	50	5482.3	3.24	1981.95	2.76611418	1657.1	2.07	1197.2	1.384146341	0	0	0	0	0
Concrete/Industrial Saws75	Concrete/Industrial Saws	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws100	Concrete/Industrial Saws	100	5347.25	1.86	1135.15	4.710610932	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws175	Concrete/Industrial Saws	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws300	Concrete/Industrial Saws	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws600	Concrete/Industrial Saws	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws750	Concrete/Industrial Saws	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws9999	Concrete/Industrial Saws	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes25	Cranes	25	0	0	0	0	3.899640987	0.065607708	11.0244202	0.353727535	0	0	0	0	0
Cranes50	Cranes	50	810.3	0.97	405.15	2	164.9295447	0.853398284	166.5568417	0.99022978	0	0	0	0	0
Cranes75	Cranes	75	0	0	0	0	641.0229774	2.527563397	459.2425115	1.395826739	0	0	0	0	0
Cranes100	Cranes	100	2719.25	1.97	824.9	3.296460177	1938.629381	4.959105852	956.5619679	2.026663664	0	0	0	0	0
Cranes175	Cranes	175	182.5	0.07	32.85	5.555555556	14522.60282	22.29793567	5841.537933	2.486093359	0	0	0	0	0
Cranes300	Cranes	300	0	0	0	0	46984.11872	10.15456854	12755.00091	3.683584114	0	0	0	0	0
Cranes600	Cranes	600	0	0	0	0	65473.26374	40.08003548	10494.95246	6.23854791	0	0	0	0	0
Cranes750	Cranes	750	0	0	0	0	10209.68312	4.625343273	1086.647455	9.395579936	0	0	0	0	0
Cranes9999	Cranes	9999	0	0	0	0	3477.982663	1.082527349	262.6027591	13.24427312	0	0	0	0	0
Crawler Tractors25	Crawler Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawler Tractors50	Crawler Tractors	50	0	0	0	0	827.8194738	2.823070986	771.0750174	1.073593356	0	0	0	0	0
Crawler Tractors75	Crawler Tractors	75	0	0	0	0	5644.820598	11.1899888	3287.398248	1.717108842	0	0	0	0	0
Crawler Tractors100	Crawler Tractors	100	0	0	0	0	21743.85399	28.15526114	9876.120921	2.201659352	0	0	0	0	0
Crawler Tractors175	Crawler Tractors	175	0	0	0	0	78567.30596	57.81180342	26593.31829	2.954400241	0	0	0	0	0
Crawler Tractors300	Crawler Tractors	300	0	0	0	0	97263.48369	46.83035913	20321.823271	4.786159312	0	0	0	0	0
Crawler Tractors600	Crawler Tractors	600	0	0	0	0	170517.443	46.78821676	20508.39819	8.314517859	0	0	0	0	0
Crawler Tractors750	Crawler Tractors	750	0	0	0	0	10822.94102	2.1388119	832.7465081	12.99668136	0	0	0	0	0
Crawler Tractors9999	Crawler Tractors	9999	0	0	0	0	17867.00168	2.529821728	1014.522783	17.61123575	0	0	0	0	0
Crushing/Proc. Equipment25	Crushing/Proc. Equipment	25	77.8554933	0.391894286	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment50	Crushing/Proc. Equipment	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment75	Crushing/Proc. Equipment	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment100	Crushing/Proc. Equipment	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment175	Crushing/Proc. Equipment	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment300	Crushing/Proc. Equipment	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment600	Crushing/Proc. Equipment	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment750	Crushing/Proc. Equipment	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment9999	Crushing/Proc. Equipment	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Dumpers/Tenders25	Dumpers/Tenders	25	479.5739174	8.051980262	0	0	3.426887552	1.38512744	0	0	0	0	0	0	0
Dumpers/Tenders100	Dumpers/Tenders	100	229.95	0.74	87.6	2.625	0	0	0	0	0	0	0	0	0
Excavators25	Excavators	25	0	0	0	0	26.81160389	2.208659203	13.69110071	1.958323254	0	0	0	0	0
Excavators50	Excavators	50	0	0	0	0	876[43.76775	245.1434516	115823.5849	0.756700527	0	0	0	0	0
Excavators75	Excavators	75	0	0	0	0	69580.56324	101.3986198	52792.47043	1.318001652	0	0	0	0	0
Excavators100	Excavators	100	0	0	0	0	54101.40697	53.3751394	28204.96907	1.918513615	0	0	0	0	0
Excavators175	Excavators	175	0	0	0	0	305270.4008	151.6617364	108626.5927	2.810273186	0	0	0	0	0
Excavators300	Excavators	300	0	0	0	0	326611.2342	112.993498	72516.89928	4.503932703	0	0	0	0	0
Excavators600	Excavators	600	0	0	0	0	377062.4474	78.77122173	52376.72871	7.199045392	0	0	0	0	0
Excavators750	Excavators	750	0	0	0	0	11054.81521	1.64067348	869.0428684	12.72067882	0	0	0	0	0
Excavators9999	Excavators	9999	0	0	0	0	53292.48442	3.052514412	1763.569755	30.21852936	0	0	0	0	0
Forklifts25	Forklifts	25	47.14137707	0.113082522	0	0	0.073507717	0.015797386	5.463185577	0.013459312	0	0	0	0	0
Forklifts50	Forklifts	50	118873.2	41.25	73178.85	1.624420171	12415.52585	36.45823645	18726.60341	0.662988657	178463.1	74.15	133597.3	1.335828645	
Forklifts75	Forklifts	75	0	0	0	0	126080.4372	247.5352615	98683.24559	1.277627589	0	0	0	0	0
Forklifts100	Forklifts	100	562972.35	153.12	260307.05	2.162724175	72293.58422	126.8939851	54346.95173	1.330223551	1117713.95	260.28	468911.85	2.383633404	
Forklifts175	Forklifts	175	38982	5.49	9468.1	4.117193524	280556.1231	274.3633097	147057.568	1.907797912	83840.5	9.53	17151.35	4.888274107	
Forklifts300	Forklifts	300	0	0	0	0	9093.826519	7.702441897	3825.453094	2.377189393	0	0	0	0	0
Forklifts600	Forklifts	600	0	0	0	0	2733.6013	1.428283415	705.720232	3.873491472	0	0	0	0	0
Forklifts750	Forklifts	750	0	0	0	0	327.1777776	0.080218627	35.56627878	9.199089385	0	0	0	0	0
Forklifts9999	Forklifts	9999	0	0	0	0	3197.639069	0.31594772	156.3576851	20.45079567	0	0	0	0	0
Generator Sets25	Generator Sets	25	41775.814	412.2849084	0	0	47931.59409	179.462253	0	0	4298.7	5.95	682.55	6.299465241	
Generator Sets50	Generator Sets	50	106317.3	415.61	47731.05	2.227422192	65159.8	138.16	46643.35	1.396979419	6201.35	4.91	565.75	10.96129032	
Generator Sets75	Generator Sets	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets100	Generator Sets	100	47888	80.29	9230.85	5.187821277	0	0	0	0	4298.7	5.95	682.55	6.299465241	
Generator Sets175	Generator Sets	175	7829.25	7.59	872.35	8.974895397	0	0	0	0	6201.35	4.91	565.75	10.96129032	
Generator Sets300	Generator Sets	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets600	Generator Sets	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets750	Generator Sets	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets9999	Generator Sets	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Graders25	Graders	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Graders50	Graders	50	0	0	0	0	274.6928605	1.213915532	307.5930355	0.893039922	0	0	0	0	0
Graders75	Graders	75	0	0	0	0	1051.444434	2.331627499	572.3321618	1.837122748	0	0	0	0	0
Graders100	Graders	100	0	0	0	0	2239.285835	4.03658556	1065.075677	2.102466411	0	0	0	0	0
Graders175	Graders	175	0	0	0	0	35785.99233	34.38998308	11218.16185	3.190004994	0	0	0	0	0
Graders300	Graders	300	0	0	0	0	118190.2515	64.32142278	24979.50753	4.731488455	0	0	0	0	0
Graders600	Graders	600	0	0	0	0	285[5.36786	9.516647944	4021.377586	7.103865403	0	0	0	0	0
Graders750	Graders	750	0	0	0	0	1088.91727	0.196823118	74.57025096	14.60256778	0	0	0	0	0
Graders9999	Graders	9999	0	0	0	0	782.8129626	0.131215412	50.39839459	15.5324979	0	0	0	0	0
Off-Highway Tractors25	Off-Highway Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Tractors50	Off-Highway Tractors	50	0	0	0	0	14760.39183	26.37809918	16018.2685	0.92147237	0	0	0	0	0
Off-Highway Tractors75	Off-Highway Tractors	75	0	0	0	0	12936.60399	14.24331584	8707.002816	1.485720048	0	0	0	0	0
Off-Highway Tractors100	Off-Highway Tractors	100	0	0	0	0	12345.19076	9.415334402	5951.667039	2.074240827	0	0	0	0	0
Off-Highway Tractors175	Off-Highway Tractors	175	0	0	0	0	67107.18484	20.83227654	21121.13347	3.177253008	0	0	0	0	0
Off-Highway Tractors300	Off-Highway Tractors	300	0	0	0	0	30096.25184	8.137701603	6420.408021	4.687591776	0	0	0	0	0
Off-Highway Tractors600	Off-Highway Tractors	600	0	0	0	0	79404.43442	10.5695656	9715.703118	8.17279341	0	0	0	0	0
Off-Highway Tractors750	Off-Highway Tractors	750	0	0	0	0	6489.016733	0.688959864	507.764008	12.77959176	0	0	0	0	0
Off-Highway Tractors9999	Off-Highway Tractors	9999	0	0	0	0	5773.837278	0.230305544	182.6857674	31.60529134	0	0	0	0	0
Off-Highway Trucks25	Off-Highway Trucks	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Trucks50	Off-Highway Trucks	50	0	0	0	0	631.6244388	1.705800356	1054.204318	0.599148029	0	0	0	0	0
Off-Highway Trucks75	Off-Highway Trucks	75	0	0	0	0	706.1647749	0.853475903	455.6765463	1.549706213	0	0	0	0	0
Off-Highway Trucks100	Off-Highway Trucks	100	0	0	0	0	335.2931844	0.295234677	184.2682082	1.819593231	0	0	0	0	0
Off-Highway Trucks175	Off-Highway Trucks	175	0	0	0	0	17289.61415	6.364415187	5719.636391	3.022851973	0	0	0	0	0
Off-Highway Trucks300	Off-Highway Trucks	300	0	0	0	0	40484.09601	12.63405941	9230.267932	4.386015261	0	0	0	0	0
Off-Highway Trucks600	Off-Highway Trucks	600	0	0	0	0	29776.3916	43.34354977	36007.55822	8.269830178	0	0	0	0	0
Off-Highway Trucks750	Off-Highway Trucks	750	0	0	0	0	36751.98565	5.629847799	3236.321346	11.35609902	0	0	0	0	0
Off-Highway Trucks9999	Off-Highway Trucks	9999	0	0	0	0	1410[2.6788	9.82222113	6572.35228	21.46152135	0	0	0	0	0
Pavers25	Pavers	25	1401.490717	4.803546076	0	0	6.433766965	0.856782691	0	0	0	0	0	0	0
Pavers50	Pavers	50	2573.25	2.8	1098.65	2.342192691	1367.066644	4.363106399	1545.612107	0.88448236	0	0	0	0	0
Pavers75	Pavers	75	0	0	0	0	0960.143687	11.13833258	4407.427422	1.570185094	0	0	0	0	0
Pavers100	Pavers	100	2303.15	1.54	594.95	3.871165644	7524.082533	8.693777602	3783.038619	1.988899219	0	0	0	0	0
Pavers175	Pavers	175	0	0	0	0	25313.17334	15.38586655	8533.351503	2.966381185	0	0	0	0	0
Pavers300	Pavers	300	0	0	0	0	30737.17319	11.38345771	6368.006701	4.826812319	0	0	0	0	0
Pavers600	Pavers	600	0	0	0	0	5443.646569	1.181376401	684.9936251	7.947003256	0	0	0	0	0
Pavers750	Pavers	750	0	0	0	0	223.8804781	0.032803853	16.77292774	13.34772805	0	0	0	0	0
Pavers9999	Pavers	9999	0	0	0	0	5129.770573	0.229626971	124.6052859	41.16816182	0	0	0	0	0
Paving Equipment25	Paving Equipment	25	1397.039207	10.56823043	0	0	10.93467477	2.130950253	0	0	0	0	0	0	0
Paving Equipment50	Paving Equipment	50	2996.65	7.65	1339.55	2.237057221	3529.855693	12.07232309	4671.046161	0.755689463	0	0	0	0	0
Paving Equipment75	Paving Equipment	75	0	0	0	0	2564.683422	4.756558685	1940.044791	1.321971242	0	0	0	0	0
Paving Equipment100	Paving Equipment	100	1233.7	1.95	346.75	3.557894737	4280.17136	5.415527557	2311.533623	1.851658707	0	0	0	0	0
Paving Equipment175	Paving Equipment	175	0	0	0	0	28102.95124	17.48643469	11423.81999	2.460030994	0	0	0	0	0
Paving Equipment300	Paving Equipment	300	0	0	0	0	12658.56482	5.545429063	2975.551624	4.25419096	0	0	0	0	0
Paving Equipment600	Paving Equipment	600	0	0	0	0	30002.13016	8.007369944	4662.694758	6.434504448	0	0	0	0	0
Paving Equipment750	Paving Equipment	750	0	0	0	0	6511.924956	1.082527149	563.5660026	11.55485768	0	0	0	0	0
Paving Equipment9999	Paving Equipment	9999	0	0	0	0	4081.728443	0.424500899	225.019072	18.13947772	0	0	0	0	0
Rollers25	Rollers	25	4281.99836	23.11268267	0	0	76.74756998	16.88455609	0	0	0	0	0	0	0
Rollers50	Rollers	50	3376.25	1.97	1219.1	2.769461078	34112.7385	122.6961344	44397.46613	0.76834877	0	0	0	0	0
Rollers75	Rollers	75	0	0	0	0	13559.74689	24.93196003	9360.136821	1.448669731	0	0	0	0	0
Rollers100	Rollers	100	10471.85	3.7	2314.1	4.525236593	21136.03256	29.59738009	11175.22773	1.891329024	0	0	0	0	0
Rollers175	Rollers	175	0	0	0	0	121507.7275	80.18106035	47618.76545	2.551677398	0	0	0	0	0
Rollers300	Rollers	300	0	0	0	0	10457.7437	5.321397783	2390.324457	4.375031042	0	0	0	0	0
Rollers600	Rollers	600	0	0	0	0	8450.551114	2.299104534	1135.743082	7.448472501	0	0	0	0	0
Rollers750	Rollers	750	0	0	0	0	204.4700364	0.032803853	14.87679614	13.7442252	0	0	0	0	0
Rollers9999	Rollers	9999	0	0	0	0	9192.882796	0.426450089	205.3807941	44.7645464	0	0	0	0	0
Rough Terrain Forklifts25	Rough Terrain Forklifts	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Rough Terrain Forklifts50	Rough Terrain Forklifts	50	1116.9	0.8	328.5	3.4	1087.325463	4.067677772	1097.608367	0.990631536	0	0	0	0	0
Rough Terrain Forklifts75	Rough Terrain Forklifts	75	0	0	0	0	43196.69267	83.09469664	27212.26008	1.5873882	0	0	0	0	0
Rough Terrain Forklifts100	Rough Terrain Forklifts	100	23644.7	11.2	4642.8	5.092767296	30238.31262	47.57571415	15166.59565	1.993744234	0	0	0	0	0
Rough Terrain Forklifts175	Rough Terrain Forklifts	175	1335.9	0.3	116.8	11.4375	194378.309	166.9081798	79562.51515	2.443089043	0	0	0	0	0
Rough Terrain Forklifts300	Rough Terrain Forklifts	300	0	0	0	0	1659.633898	1.017343001	387.0735444	4.287644873	0	0	0	0	0
Rough Terrain Forklifts600	Rough Terrain Forklifts	600	0	0	0	0	472.9152522	0.164041883	69.38339743	6.815971395	0	0	0	0	0
Rough Terrain Forklifts750	Rough Terrain Forklifts	750	0	0	0	0	154.8506958	0.032826469	12.27444973	12.61569351	0	0	0	0	0
Rough Terrain Forklifts9999	Rough Terrain Forklifts	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubber Tired Dozers25	Rubber Tired Dozers	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubber Tired Dozers50	Rubber Tired Dozers	50	0	0	0	0	321.0634018	0.59171062	223.797357	1.434616593	0	0	0	0	0
Rubber Tired Dozers75	Rubber Tired Dozers	75	0	0	0	0	706.0056842	0.985006124	454.3882216	1.553749967	0	0	0	0	0
Rubber Tired Dozers100	Rubber Tired Dozers	100	0	0	0	0	1476.130467	1.641212998	720.4028175	2.049034833	0	0	0	0	0
Rubber Tired Dozers175	Rubber Tired Dozers	175	0	0	0	0	4594.042122	2.723773885	1591.775139	2.886112498	0	0	0	0	0
Rubber Tired Dozers300	Rubber Tired Dozers	300	0	0	0	0	5750.983865	2.199871728	1250.685288	4.598266194	0	0	0	0	0
Rubber Tired Dozers600	Rubber Tired Dozers	600	0	0	0	0	30441.25975	8.035381647	4305.292144	7.07066065	0	0	0	0	0
Rubber Tired Dozers750	Rubber Tired Dozers	750	0	0	0	0	1069.703062	0.164277716	84.02191232	12.73123753	0	0	0	0	0
Rubber Tired Dozers9999	Rubber Tired Dozers	9999	0	0	0	0	2587.369974	0.164013265	97.95997995	26.41252045	0	0	0	0	0
Scrapers25	Scrapers	25	0	0	0	0	0	0	0

Sweepers/Scrubbers175	Sweepers/Scrubbers		175	251.85	0.06	29.2	8.625	691.823068	0.632135314	252.1832092	2.751265916	0	0	0	0			
Sweepers/Scrubbers300	Sweepers/Scrubbers		300	0	0	0	0	954.3283606	0.458124154	188.1322727	5.072545681	0	0	0	0			
Sweepers/Scrubbers600	Sweepers/Scrubbers		600	0	0	0	0	149.8534866	0.047392158	20.04436435	7.476090685	0	0	0	0			
Sweepers/Scrubbers750	Sweepers/Scrubbers		750	0	0	0	0	0	0	0	0	0	0	0	0			
Sweepers/Scrubbers9999	Sweepers/Scrubbers		9999	0	0	0	0	300.9157894	0.015797386	5.894499752	51.05026755	0	0	0	0			
Tractors/Loaders/Backhoes25	Tractors/Loaders/Backhoes		25	0	0.162889838	0	0	125.0033635	16.05670614	16.49746378	7.57712611	0	0	0	0			
Tractors/Loaders/Backhoes50	Tractors/Loaders/Backhoes		50	0	0	0	0	34265.59565	105.9728814	41921.85606	0.817368286	0	0	0	0			
Tractors/Loaders/Backhoes75	Tractors/Loaders/Backhoes		75	0	0	0	0	15565.51884	250.2955839	111131.6784	1.400619433	0	0	0	0			
Tractors/Loaders/Backhoes100	Tractors/Loaders/Backhoes		100	8862.2	3.48	3033.15	2.921780987	364084.791	415.5263466	199080.2611	1.828834205	0	0	0	0			
Tractors/Loaders/Backhoes175	Tractors/Loaders/Backhoes		175	0	0	0	0	385786.6514	246.525457	162866.2975	2.36873225	0	0	0	0			
Tractors/Loaders/Backhoes300	Tractors/Loaders/Backhoes		300	0	0	0	0	180601.6985	67.85341807	42035.91508	4.206414106	0	0	0	0			
Tractors/Loaders/Backhoes600	Tractors/Loaders/Backhoes		600	0	0	0	0	124532.7555	28.90738673	17177.12294	7.249919222	0	0	0	0			
Tractors/Loaders/Backhoes750	Tractors/Loaders/Backhoes		750	0	0	0	0	5727.787535	0.853398284	446.8376825	12.81849709	0	0	0	0			
Tractors/Loaders/Backhoes9999	Tractors/Loaders/Backhoes		9999	0	0	0	0	23102.97164	1.148134853	633.2891744	36.48091989	0	0	0	0			
Trenchers25	Trenchers		25	8683.006372	28.43642314	0	0	113.7757815	11.40994351	0	0	0	0	0	0			
Trenchers50	Trenchers		50	16045.4	17.97	7230.65	2.219081272	10515.67781	28.47541849	8852.863601	1.187827838	0	0	0	0			
Trenchers75	Trenchers		75	0	0	0	0	3170.616903	6.23446474	1858.523783	1.818441568	0	0	0	0			
Trenchers100	Trenchers		100	9942.6	5.98	2401.7	4.139817629	4075.296694	5.118262937	1631.978026	2.497151842	0	0	0	0			
Trenchers175	Trenchers		175	0	0	0	0	6652.784809	5.118834449	2097.914547	3.171141941	0	0	0	0			
Trenchers300	Trenchers		300	0	0	0	0	3997.656201	1.968920624	706.2865188	5.660152281	0	0	0	0			
Trenchers600	Trenchers		600	0	0	0	0	6489.621981	1.740288784	594.7261224	10.91195045	0	0	0	0			
Trenchers750	Trenchers		750	0	0	0	0	244.6468419	0.098885243	19.06071049	12.8351376	0	0	0	0			
Trenchers9999	Trenchers		9999	0	0	0	0	8356.5195	0.885704031	385.8063766	21.60388247	0	0	0	0			
Welders25	Welders		25	0	0	0	0	23853.78267	73.33533526	0	0	0	0	0	0			
Welders50	Welders		50	33215	66	13709.4	2.422790202	10856.1.95	142.26	91370.45	1.18815164	0	0	0	0			
Welders75	Welders		75	0	0	0	0	0	0	0	0	0	0	0	0			
Welders100	Welders		100	46504.65	67.35	13994.1	3.323161189	0	0	0	0	0	0	0	0			
Welders175	Welders		175	5803.5	4.64	963.8	6.022727273	0	0	0	0	0	0	0	0			
Welders300	Welders		300	0	0	0	0	0	0	0	0	0	0	0	0			
Welders600	Welders		600	0	0	0	0	0	0	0	0	0	0	0	0			
Welders750	Welders		750	0	0	0	0	0	0	0	0	0	0	0	0			
Welders9999	Welders		9999	0	0	0	0	0	0	0	0	0	0	0	0			

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2025
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bi Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total_Activity	Total_Population	Horsepower_Hours_hhpy
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	100 Gasoline	2.45E-07	2.97E-07	3.53E-07	3.66E-06	9.20E-07	0.000119382	8.98E-09	8.26E-09	1.08E-09	9.73E-10	3.86906299	20.68330492	0.016587114	103.2549551
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	100 Diesel	0.011385749	0.013776756	0.016395478	0.099701582	0.100674668	16.10402582	0.007295965	0.006712287	0.000146961	0.000131775	523811.9541	3081.217875	271.7392294	18722854.13
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	175 Gasoline	7.04E-07	8.52E-07	1.01E-06	1.11E-05	5.22E-06	0.000636289	4.79E-08	4.40E-08	5.78E-09	5.19E-09	20.62146654	57.18007428	0.047915605	550.3318458
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	175 Diesel	0.007836359	0.009661494	0.011500357	0.089579665	0.077845702	15.91341511	0.003699246	0.003403306	0.000137453	0.000123178	489638.9805	39964.09987	175.6693443	194565089.1
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	25 Gasoline	6.01E-06	7.27E-06	8.65E-06	7.02E-05	1.14E-06	0.000186921	1.26E-07	1.16E-07	1.52E-08	1.52E-09	6.057913547	211.6055773	0.084884257	161.6695254
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	25 Diesel	0.000604904	0.000731934	0.000871062	0.002336135	0.001705209	0.215672339	0.000102478	9.43E-05	1.95E-06	1.76E-06	7015.124699	4868.434015	2.180459	250744.862
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	300 Diesel	0.004288271	0.005188808	0.00617511	0.028398853	0.036026768	12.63660517	0.001640243	0.001509024	0.000015457	0.000103402	41107.958	26338.60461	59.1795313	16332854.24
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	50 Gasoline	5.39E-06	6.52E-06	7.76E-06	0.000172727	1.46E-05	0.003734896	2.81E-07	2.58E-07	3.39E-08	3.05E-08	121.0441495	404.3420411	0.426328832	3230.344908
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	50 Diesel	0.01249472	0.015118612	0.017992397	0.051032493	0.039535346	4.873050951	0.002326897	0.002977945	4.42E-05	3.99E-05	158504.6105	26283.53987	209.3116892	566553.9342
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	600 Diesel	0.005659127	0.006847544	0.008149143	0.044721428	0.048247168	16.85412704	0.001319312	0.001696247	0.000053993	0.000137912	548210.3243	22028.89022	45.71494859	217840515.3
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	75 Gasoline	1.89E-07	2.28E-07	2.72E-07	2.96E-06	7.21E-07	9.49E-05	7.14E-09	6.57E-09	8.59E-10	7.74E-10	3.075942276	63.22524652	0.01358277	82.08868072
Sacramento		2025 Agricultural - Agricultural Tractors	Aggregate	75 Diesel	0.000301651	0.000364997	0.011954377	0.045217654	0.069439343	6.455230394	0.003448017	0.003400176	5.88E-05	5.28E-05	209967.7984	30593.9767	184.9069711	75049076.584
Sacramento		2025 Agricultural - ATVs	Aggregate	750 Diesel	0.000176176	0.000213173	0.000263694	0.001556648	0.001779036	0.379515228	8.18E-05	7.52E-05	5.47E-06	3.11E-06	12344.40477	284.2430115	0.785386185	490524.6965
Sacramento		2025 Agricultural - ATVs	Aggregate	100 Gasoline	6.91E-05	8.36E-05	9.94E-05	0.002677912	0.000267728	0.175464392	1.32E-05	1.21E-05	1.60E-06	1.43E-06	568.621552	299.3247208	7.044949142	182112.8817
Sacramento		2025 Agricultural - ATVs	Aggregate	175 Gasoline	6.98E-05	8.44E-05	0.000100447	0.003163913	0.000375895	0.244560938	1.84E-05	1.69E-05	2.23E-06	1.99E-06	792.5619955	478.0463063	5.979816233	253827.5544
Sacramento		2025 Agricultural - ATVs	Aggregate	175 Diesel	7.67E-06	9.28E-06	1.10E-05	0.000154215	7.58E-05	0.02804811	3.01E-06	2.76E-06	2.56E-07	2.30E-07	912.3209475	787.2723675	0.43922857	45603.04059
Sacramento		2025 Agricultural - ATVs	Aggregate	25 Gasoline	0.009594396	0.01160922	0.013815931	0.118674316	0.004647515	0.44377429	0.000386278	0.000355376	3.76E-06	3.62E-06	14382.27111	3375.033061	80.89478556	460589.2621
Sacramento		2025 Agricultural - ATVs	Aggregate	25 Diesel	0.000255128	0.000308705	0.000367385	0.001583673	0.001358812	0.198870592	6.31E-05	5.80E-05	1.81E-06	1.63E-06	6468.618547	8504.871289	18.01583788	273452.8897
Sacramento		2025 Agricultural - ATVs	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	5064.841211	0	61004.98996
Sacramento		2025 Agricultural - ATVs	Aggregate	50 Gasoline	0.000208435	0.000252206	0.000300146	0.010830058	0.000535528	0.338586709	2.55E-05	2.34E-05	3.08E-06	2.76E-06	10973.24907	2808.680858	37.73732095	351416.0365
Sacramento		2025 Agricultural - ATVs	Aggregate	50 Diesel	0.000290139	0.000472069	0.000563804	0.001538554	0.002654463	0.443111177	0.000210505	0.000192397	4.04E-06	3.63E-06	1441.247563	8037.280155	26.50376832	618203.6205
Sacramento		2025 Agricultural - ATVs	Aggregate	75 Gasoline	6.78E-05	8.21E-05	9.77E-05	0.003398542	0.00018432	0.123654905	9.30E-06	8.56E-06	1.12E-06	1.01E-06	4007.529049	1105.927152	7.449802083	128340.2908
Sacramento		2025 Agricultural - Bale Wagons (Self Propelled)	Aggregate	175 Diesel	0.000236946	0.000286705	0.000341202	0.002178452	0.002386436	0.356776321	0.000115456	0.000106212	3.26E-06	2.92E-06	1160478155	5900.059299	3.351184442	442689.1983
Sacramento		2025 Agricultural - Bale Wagons (Self Propelled)	Aggregate	300 Diesel	2.78E-05	3.36E-05	4.00E-05	0.000153778	0.000281607	0.056089519	1.29E-05	1.18E-05	3.20E-07	4.66E-07	1850.692554	2302.167588	0.465732282	70598.62319
Sacramento		2025 Agricultural - Combine Harvesters	Aggregate	75 Diesel	1.04E-05	1.26E-05	1.50E-05	7.73E-05	9.55E-05	0.01471281	4.80E-06	4.41E-06	1.14E-07	1.02E-07	405.6505072	397.3880839	0.233421197	13919.38032
Sacramento		2025 Agricultural - Combine Harvesters	Aggregate	175 Diesel	0.000112924	0.000136638	0.000162611	0.001106091	0.00111264	0.187588898	5.11E-05	4.70E-05	1.71E-06	1.53E-06	6101.661068	655.1140824	2.2707238	262277.4746
Sacramento		2025 Agricultural - Combine Harvesters	Aggregate	300 Diesel	0.000170997	0.000206618	0.000245571	0.000929146	0.001647251	0.340045238	7.78E-05	7.16E-05	3.11E-06	2.78E-06	11065.57312	3278.497539	2.060745512	475434.3694
Sacramento		2025 Agricultural - Combine Harvesters	Aggregate	600 Diesel	0.000468216	0.000566542	0.000674231	0.003809411	0.004871824	1.033038919	0.000203012	0.000186771	9.44E-06	8.45E-06	33601.41997	8613.24679	4.092698898	1444345.683
Sacramento		2025 Agricultural - Combine Harvesters	Aggregate	750 Diesel	0.000627931	0.000759797	0.000904221	0.00490789	0.006951967	1.395523516	0.000288171	0.000265117	1.27E-05	1.14E-05	45391.8733	2214.384824	3.800816297	1951151.635
Sacramento		2025 Agricultural - Combine Harvesters	Aggregate	9999 Diesel	1.48E-05	1.79E-05	2.13E-05	0.000114807	0.000209385	0.027639883	5.92E-06	5.44E-06	1.52E-07	2.26E-07	894.7417748	1644.855051	0.05229165	38632.09817
Sacramento		2025 Agricultural - Construction Equipment	Aggregate	100 Diesel	0.000263757	0.000319146	0.00037981	0.002064995	0.002302419	0.323844222	0.000169576	0.00015601	2.95E-06	2.65E-06	10533.60671	5418.293679	0.963511311	451809.1193
Sacramento		2025 Agricultural - Construction Equipment	Aggregate	175 Diesel	0.000698059	0.000844651	0.001005205	0.007615857	0.007859596	1.3244243	0.000335776	0.000308913	1.21E-05	1.08E-05	43079.24543	7878.60742	27.69185704	2054187.369
Sacramento		2025 Agricultural - Construction Equipment	Aggregate	300 Diesel	0.000185161	0.000224045	0.000266232	0.001893456	0.001894536	0.318809436	0.000089144	0.000081955	2.84E-06	2.54E-06	10109.53157	4404.705037	2.449138864	402061.3522
Sacramento		2025 Agricultural - Construction Equipment	Aggregate	50 Diesel	4.06E-05	4.91E-05	5.85E-05	0.000192195	0.000151449	0.022183884	9.58E-06	8.81E-06	2.02E-07	1.82E-07	721.5701139	1177.257784	0.723474968	30949.69921
Sacramento		2025 Agricultural - Construction Equipment	Aggregate	600 Diesel	0.000128014	0.000154897	0.000184341	0.001053982	0.001304093	0.220120501	6.00E-05	5.52E-05	2.01E-06	1.80E-06	7159.809046	3638.130249	1.141927918	341407.7752
Sacramento		2025 Agricultural - Construction Equipment	Aggregate	75 Diesel	8.22E-05	9.95E-05	0.000118414	0.000708192	0.000751696	0.098156281	3.77E-05	3.47E-05	8.95E-07	8.03E-07	3192.706829	2983.043946	2.657327336	168942.2839
Sacramento		2025 Agricultural - Cotton Pickers	Aggregate	600 Diesel	5.38E-05	6.51E-05	7.75E-05	0.000422801	0.000575117	0.119487665	2.35E-05	2.16E-05	1.09E-06	9.78E-07	3886.547888	2794.547082	0.526947556	167061.7182
Sacramento		2025 Agricultural - Forage & Silage Harvesters	Aggregate	600 Diesel	0.000108335	0.000131085	0.000156002	0.000960307	0.001047791	0.23414096	4.63E-05	4.26E-05	2.14E-06	1.92E-06	7615.849288	285.7339651	0.618993382	327364.258
Sacramento		2025 Agricultural - Forage & Silage Harvesters	Aggregate	750 Diesel	0.000393998	0.000367837	0.000437757	0.002483613	0.002251169	0.538166994	0.000502168	0.000461882	4.91E-06	4.42E-06	17504.83261	4658.661348	1.133754026	752438.2788
Sacramento		2025 Agricultural - Forage & Silage Harvesters	Aggregate	9999 Diesel	0.000178057	0.000215449	0.000256402	0.001442682	0.002430696	0.283802329	8.41E-05	7.74E-05	2.59E-06	2.32E-06	9231.173249	2267.324175	0.52644232	396798.3152
Sacramento		2025 Agricultural - Forklifts	Aggregate	100 Diesel	0.000334969	0.000405313	0.000482356	0.002723004	0.002678393	0.43803286	0.000194759	0.000179178	4.06E-06	3.58E-06	14247.79438	10395.174	8.872220393	611118.6395
Sacramento		2025 Agricultural - Forklifts	Aggregate	175 Diesel	7.48E-05	9.05E-05	0.000107768	0.000735602	0.000731861	0.124209448	3.39E-05	3.12E-05	1.13E-06	1.02E-06	404319564	3114.620965	1.959568096	134788.9408
Sacramento		2025 Agricultural - Forklifts	Aggregate	50 Diesel	0.000379042	0.00045864	0.00054582	0.00185139	0.001496274	0.213672697	9.45E-05	8.70E-05	1.94E-06	1.75E-06	6950.082814	9156.906867	9.059551605	298104.0484
Sacramento		2025 Agricultural - Forklifts	Aggregate	75 Diesel	0.000103636	0.000125428	0.000149261	0.000771411	0.000504244	1.24449016	0.000479675	0.000441301	1.14E-05	1.02E-05	40479.24599	15344.18678	31.73956523	1736242.209
Sacramento		2025 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	175 Diesel	5.01E-05	6.07E-05	7.22E-05	0.000503782	0.000477997	0.083587629	2.30E-05	2.11E-05	7.63E-07	6.84E-07	2718.835631	2587.901323	1.111052	123471.1865
Sacramento		2025 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	300 Diesel	0.000121551	0.000147076	0.000175033	0.000669079	0.001226612	0.249178109	5.63E-05	5.18E-05	2.28E-06	2.04E-06	8104.959195	1924.247996	2.085236569	368072.6108
Sacramento		2025 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel	7.04E-06	8.52E-06	1.01E-05	5.52E-05	7.53E-05	0.015705255	3.07E-06	2.82E-06	1.43E-07	1.29E-07	510.841242	397.3880612	0.077470733	23198.96579
Sacramento		2025 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	75 Diesel	4.15E-06	5.02E-06	5.97E-06	3.07E-05	3.79E-05	0.004949508	1.90E-06	1.75E-06	4.51E-08	4.05E-08	160.9915041	1503.557199	0.109807143	6576.45444
Sacramento		2025 Agricultural - Nut Harvester	Aggregate	100 Diesel	0.001310972	0.001586276	0.0018878	0.009996527	0.010721804	1.562901379	0.000808674	0.00074398	1.43E-05	1.28E-05	50836.13468	17600.16051	26.24514922	1965582.888
Sacramento		2025 Agricultural - Nut Harvester	Aggregate	175 Diesel	0.000771625	0.000933666	0.001111139	0.007288053	0.007707155	1.21180995	0.00036499	0.000335791	1.11E-05	9.92E-06	39416.2643	13319.46591	16.21570555	1694292.454
Sacramento		2025 Agricultural - Nut Harvester	Aggregate	300 Diesel	8.61E-05	0.000104241	0.000124056	0.000407697	0.000844353	0.147057936	1.76E-05	1.62E-05	4.28E-07	3.85E-07	1530.641442	311.3930177	3.773000837	59182.36282
Sacramento		2025 Agricultural - Nut Harvester	Aggregate	600 Diesel	0.000430149	0.00052048	0.000619414	0.002135201	0.004248557	0.674886602	0.00020956	0.000192795	6.16E-06	5.52E-06	21951.88169	3536.991027	4.376110498	943592.9141
Sacramento		2025 Agricultural - Nut Harvester	Aggregate	50 Diesel	0.000503605	0.000609362	0.000725191	0.002340113	0.001821152	0.253457306	0.000125536	0.000115493	2.30E-06	2.07E-06	8244.147651	5525.411886	9.502560944	318760.5786
Sacramento		2025 Agricultural - Nut Harvester	Aggregate	75 Diesel	0.000139205	0.000168438	0.000200455	0.001010533	0.001281566	0.168600564	5.44E-05	4.91E-05	1.54E-06	1.38E-06	5484.025358	3743.606774	3.169257979	213005.3449
Sacramento		2025 Agricultural - Other Harvesters	Aggregate	100 Diesel	0.000649377	0.000785747	0.000935103	0.005046878	0.00520977	0.800386505	0.000386689	0.000355753	7.30E-06	6.55E-06	26033.98826	11007.50902	12.83872619	1006606.076
Sacramento		2025 Agricultural - Other Harvesters	Aggregate	175 Diesel	0.000706488	0.000924547	0.001100287	0.007285612	0.00761077	1.217639993	0.000357615	0.000329005	1.11E-05	9.96E-06	39605.89676	12967.36853	15.92101922	1702443.742
Sacramento		2025 Agricultural - Other Harvesters	Aggregate	300 Diesel	0.000205627	0.000248809	0.000296103	0.001126768	0.002067979	0.416168856	5.44E-05	5.00E-05	1.80E-06	1.61E-06	6406.133666	1082.576414	2.485892885	581866.7541
Sacramento		2025 Agricultural - Other Harvesters	Aggregate	600 Diesel	0.000217044	0.000262624	0.000312544	0.001703244	0.002321764	0.484305407	9.45E-05	8.70E-05	4.42E-06	3.96E-06	15752.89089	2298.333338	1.949794949	677131.7534
Sacramento		2025 Agricultural - Other Harvesters	Aggregate	75 Diesel	0.000103293	0.000124984	0.000148741	0.000763954	0.000944211	0.123294873	4.74E-05	4.36E-05	1.12E-06	1.01E-06	400.1384038	3406.783975	2.581148189	155061.7946
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	750 Diesel	1.86E-05	2.25E-05	2.68E-05	0.000145336	0.000201866	0.04132518	8.53E-06	7.85E-06	1.77E-07	3.38E-07	1344.174667	1503.557156	0.109807144	57778.84415
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	100 Diesel	9.95E-05	0.000120384	0.000143267	0.000771202	0.000799711	0.122123201	5.95E-05	5.47E-05	1.11E-06	9.99E-07	3972.273545	1628.734895	2.188739408	162266.0702
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	175 Diesel	0.000410515	0.000496723	0.000591142	0.003913284	0.004083982	0.654088345	0.000191913	0.00017656	5.97E-06	5.35E-06	21275.38155	11276.00933	8.224076043	966184.4075
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	25 Diesel	3.50E-06	4.24E-06	5.04E-06	1.66E-05	1.40E-05	0.001912146	7.15E-07	6.58E-07	1.74E-08	1.56E-08	62.20242157	994.3161605	0.184655983	2540.948604
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	300 Diesel	0.000489457	0.000592243	0.000704818	0.002471176	0.004875827	0.80492848	0.000236616	0.000217686	7.35E-06	6.59E-06	26181.72403	9019.553058	5.743163597	1188097.42
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	50 Diesel	0.000162693	0.000196857	0.000234276	0.000776069	0.00061335	0.088447932	3.88E-05	3.57E-05	8.13E-07	7.32E-07	2909.452354	6400.761305	3.825696238	118850.18
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	600 Diesel	0.000616479	0.00074594	0.00088773	0.005123088	0.006241198	1.092256923	0.000358748	0.000330288	8.94E-06	8.23E-06	31527.5904	3821.234035	5.161496655	1613423.663
Sacramento		2025 Agricultural - Sprayers/Spray Rigs	Aggregate	75 Diesel	0.000166853	0.00201447	0.002397386	0.011207994	0.014593648	1.698019373	0.000889211	0.000818074	1.55E-05	1.39E-05	55231.08668	5964.077249	49.52631724	2256171.876
Sacramento		2025 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	100 Diesel	0.000239303	0.000289556	0.000344596	0.00194486	0.001892419	0.312523222	0.000138976	0.000127858	2.85E-06	2.56E-06	10165.37114	3266.874298	4.504439267	363345.5857
Sacramento		2025 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	175 Diesel	5.89E-05	7.13E-05	8.49E-05	0.000555329	0.000588635	0.092230447	2.79E-05	2.57E-05	8.42E-07	7.55E-07	2999.957458	2637.596521	0.993447822	137268.1143
Sacramento		2025 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	300 Diesel	0.000111189	0.000135387	0.000161121	0.000612278	0.001119199	0.225636731	5.13E-05	4.72E-05	2.06E-06	1.85E-06	7339.234195	2703.349948	1.466624309	291636.2265
Sacramento		2025 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	50 Diesel	0.000137665	0.000166575	0.000198238	0.000655449	0.000551337	0.075197284	3.25E-05	2.99E-05	6.84E-07	6.15E-07	2445.924797	655.1140824	2.270728311	87425.82639
Sacramento		2025 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	75 Diesel	8.92E-05	0.000107927	0.000128443	0.000661808	0.000815975	0.108616678	4.10E-05	3.78E-05	9.73E-07	8.72E-07	3467.896229	1965.272744	2.404048685	123954.6265
Sacramento		2025 Airport Ground Support - A/C Tug Narrow Body	Aggregate	100 Diesel	3.78E-05	4.57E-05	5.44E-05	0.000497791	0.000359363	0.084096398	2.61E-05	2.40E-05	7.97E-07	0	2732.727112	1049.85294	2.085138578	47994.50225
Sacramento		2025 Airport Ground Support - A/C Tug Narrow Body	Aggregate	175 Diesel	9.67E-05	0.000117058	0.000139309	0.001533959	0.000816452	0.261536217	3.84E-05	3.53E-05	2.51E-06	0	8622.991523	2577.736958	3.515262304	176984.8148
Sacramento		2025 Airport Ground Support - A/C Tug Narrow Body	Aggregate	300 Diesel	3.03E-05	3.66E-05	4.36E-05	0.000239734	0.000279925	0.114737796	1.03E-05	9.46E-06	1.09E-06	0	3728.424686	636.6573113	1.057263006	77143.41957
Sacramento		2025 Airport Ground Support - A/C Tug Narrow Body	Aggregate	50 Diesel	1.65E-05	1.99E-05	2.37E-05	0.000140442	0.0001131	0.019731449	4.82E-06	4.43E-06	1.87E-07	0	641.1768761	551.3036655	1.305155121	9791.455887
Sacramento		2025 Airport Ground Support - A/C Tug Narrow Body	Aggregate	600 Diesel	2.47E-05	2.99E-05	3.56E-05	0.000208071	0.000140316	0.102268959	6.57E-06	6.04E-06	9.69E-07	0	3323.247675	369.9579281	0.559680677	69724.16113
Sacramento		2025 Airport Ground Support - A/C Tug Wide Body	Aggregate	75 Diesel	7.53E-05	9.11E-05	0.000108448	0.001811119	0.001031946	0.198405555	1.51E-05	1.38E-05	1.88E-06	0	6447.222978	3092.64783	5.990913	114963.7924
Sacramento		2025 Airport Ground Support - A/C Tug Wide Body	Aggregate	100 Diesel	2.97E-06	3.60E-06	4.28E-06	4.37E-05	3.60E-05	0.007289752	3.05E-06	2.81E-06	6.91E-08	0	236.8817626	96.95070654

Sacramento	2025 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Gasoline	4.91E-05	4.51E-05	5.40E-05	0.004636012	0.000478321	0.140352295	1.01E-05	7.60E-06	1.24E-06	1.96E-06	5595.45	835.85	4.45	104564.835
Sacramento	2025 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Nat Gas	0	0	9.00E-09	9.42E-06	1.02E-06	0.000383544	0	0	0	0	3.65	0	0.17	0
Sacramento	2025 Airport Ground Support - Misc - Service Truck	Aggregate	300 Gasoline	0.000858368	0.000789527	0.000944582	0.052431812	0.005281966	1.261005637	9.30E-05	7.03E-05	1.29E-05	1.78E-05	50950.35	15844.65	18.8	2852037
Sacramento	2025 Airport Ground Support - Misc - Service Truck	Aggregate	300 Nat Gas	0	0	1.07E-05	0.006181352	0.000532303	0.176062487	0	0	0	0	9636	2401.7	1.85	432306
Sacramento	2025 Airport Ground Support - Misc - Sweeper	Aggregate	100 Gasoline	6.83E-06	6.28E-06	7.51E-06	0.000395344	3.55E-05	0.009882095	6.89E-07	5.21E-07	8.16E-08	1.36E-07	3866.9	149.65	0.42	7976.345
Sacramento	2025 Airport Ground Support - Misc - Sweeper	Aggregate	50 Nat Gas	0	0	9.15E-08	2.51E-05	7.20E-06	0.002094717	0	0	0	0	102.2	51.1	0.15	2299.5
Sacramento	2025 Airport Ground Support - Misc - Water Truck	Aggregate	175 Gasoline	1.43E-05	1.32E-05	1.57E-05	0.001211173	0.000123803	0.035055122	2.51E-06	1.90E-06	3.48E-07	4.87E-07	1390.65	507.35	1.66	76102.5
Sacramento	2025 Airport Ground Support - Other	Aggregate	100 Diesel	7.72E-06	9.34E-06	1.11E-05	0.000106625	8.18E-05	0.017982983	5.79E-06	5.33E-06	1.70E-07	0	584.3601826	349.4980342	0.719443	10420.03091
Sacramento	2025 Airport Ground Support - Other	Aggregate	175 Diesel	2.75E-05	3.32E-05	3.95E-05	0.000432211	0.000234545	0.073289482	9.59E-06	8.82E-06	6.94E-07	0	2381.55452	1075.401498	1.521009	47210.98208
Sacramento	2025 Airport Ground Support - Other	Aggregate	300 Diesel	4.58E-05	5.54E-05	6.60E-05	0.000303674	0.000452863	0.134136927	1.90E-05	1.75E-05	1.27E-06	0	4358.802852	1308.852554	1.831890338	86686.33761
Sacramento	2025 Airport Ground Support - Other	Aggregate	300 Gasoline	3.06E-05	3.70E-05	4.41E-05	0.000253336	0.000221411	0.031425144	1.08E-05	9.31E-06	2.98E-07	0	1021.16554	1583.53829	3.600929233	17993.56106
Sacramento	2025 Airport Ground Support - Other	Aggregate	600 Diesel	3.07E-05	3.71E-05	4.42E-05	0.000220122	0.000211007	0.113526242	9.29E-06	8.55E-06	1.08E-06	0	3689.055049	622.3971475	0.93123	73130.34561
Sacramento	2025 Airport Ground Support - Other	Aggregate	75 Diesel	2.63E-05	3.18E-05	3.79E-05	0.000294739	0.000302933	0.050226955	1.18E-05	1.09E-05	4.76E-07	0	1632.133667	1288.520898	2.795403073	27362.87048
Sacramento	2025 Airport Ground Support - Other	Aggregate	750 Diesel	3.39E-06	4.10E-06	4.89E-06	2.17E-05	3.36E-05	0.011541093	1.32E-06	1.21E-06	1.09E-07	0	375.0398165	34.70793863	0.062082	7434.446455
Sacramento	2025 Airport Ground Support - Other	Aggregate	9999 Diesel	1.63E-05	1.97E-05	2.35E-05	0.000154583	0.000356041	0.078851258	8.24E-06	7.58E-06	7.47E-07	0	2562.285381	54.65607921	0.093123	50793.71627
Sacramento	2025 Airport Ground Support - Passenger Stand	Aggregate	175 Diesel	8.39E-07	1.01E-06	1.21E-06	1.47E-05	6.93E-06	0.002342111	3.41E-07	3.13E-07	2.22E-08	0	76.10731033	32.94150114	0.062082	1508.720752
Sacramento	2025 Airport Ground Support - Passenger Stand	Aggregate	300 Diesel	9.60E-07	1.16E-06	1.38E-06	6.34E-06	1.34E-05	0.001265456	4.35E-07	4.00E-07	3.09E-08	0	106.1180125	19.12401006	0.031041	2103.641107
Sacramento	2025 Airport Ground Support - Passenger Stand	Aggregate	50 Diesel	5.28E-06	6.39E-06	7.61E-06	3.91E-05	3.37E-05	0.004987809	1.42E-06	1.31E-06	4.72E-08	0	162.0797279	186.248013	0.465615	2890.128083
Sacramento	2025 Airport Ground Support - Passenger Stand	Aggregate	75 Diesel	8.49E-06	1.03E-05	1.22E-05	7.20E-05	8.08E-05	0.011920183	3.00E-06	2.76E-06	1.13E-07	0	387.3444415	319.7438473	0.62082	6907.011898
Sacramento	2025 Cargo Handling Equipment - Port Forklift	Aggregate	175 Diesel	0.0000748	0.00022116	0.000257783	0.001727988	0.000486095	0.25587386	0.00001184	0.00001091	0.000002428	5.72E-09	8322.75034	3623.151698	0	0
Sacramento	2025 Cargo Handling Equipment - Port Tractors/Loaders/Backhoes	Aggregate	300 Diesel	0.00001718	0.000207908	0.000247428	0.001214888	0.00011332	0.528107521	0.00002114	0.00001118	0.000005	1.18E-08	17177.63221	2121.452842	0	0
Sacramento	2025 Commercial Harbor Craft - AE - Commercial Fishing	Aggregate	75 Diesel	0.000153014	0.000185147	0.000220341	0.000505323	0.001330027	0.085521195	6.00E-05	5.73E-05	0	0	2895.576035	1880.540816	1.583453988	49420.61304
Sacramento	2025 Commercial Harbor Craft - AE - Excursion	Aggregate	75 Diesel	8.08E-06	9.78E-06	1.16E-05	4.66E-05	0.000202067	0.014862017	4.46E-06	4.45E-06	0	0	1180.357916	963.4008189	5.102426052	20965.52788
Sacramento	2025 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	100 Diesel	6.74E-06	8.15E-06	9.70E-06	2.58E-05	0.000133785	0.0125824	5.51E-06	5.27E-06	0	0	426.0148095	235.4687796	1.541667	7579.740468
Sacramento	2025 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	175 Diesel	6.38E-06	7.72E-06	9.19E-06	2.88E-05	0.000133793	0.014472345	4.14E-06	3.95E-06	0	0	489.6715839	235.4687809	1.541667001	8712.345112
Sacramento	2025 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	50 Diesel	0.000135012	0.000163364	0.000194417	0.000516369	0.002313825	0.214649666	0.000123437	0.000117987	0	0	7251.540378	8882.677015	7.708332963	113826.9887
Sacramento	2025 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	300 Diesel	0.000242503	0.000293429	0.000349205	0.000964535	0.002710753	0.169773767	9.19E-05	8.79E-05	0	0	5748.199023	1578.696555	1.583453982	106562.0203
Sacramento	2025 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	50 Diesel	7.28E-06	8.81E-06	1.05E-05	6.97E-05	0.000141172	0.020404793	6.02E-06	5.75E-06	0	0	690.8653452	1578.696555	1.583454013	11508.69941
Sacramento	2025 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	600 Diesel	0.000305405	0.000127554	0.000151783	0.000533478	0.002974943	0.288910438	5.11E-05	4.89E-05	0	0	9781.92759	1578.696555	1.583454013	181155.4404
Sacramento	2025 Commercial Harbor Craft - ME - Excursion	Aggregate	600 Diesel	2.99E-05	3.61E-05	4.30E-05	0.000130411	0.000814777	0.131200518	8.83E-06	8.44E-06	0	0	4442.186216	1039.186056	5.102426169	82707.39844
Sacramento	2025 Commercial Harbor Craft - ME - Excursion	Aggregate	800 Diesel	0.000344065	0.000416319	0.000495454	0.001505446	0.009019546	1.454991659	0.000106738	0.000102042	0	0	49263.09753	5461.563942	5.102425999	914812.0001
Sacramento	2025 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	600 Diesel	0.000858269	0.001038506	0.001235958	0.003278305	0.017459779	1.470210467	0.000375884	0.000359349	0	0	49777.23459	7876.983949	9.249999946	924362.3093
Sacramento	2025 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	800 Diesel	5.06E-05	6.12E-05	7.29E-05	0.000260253	0.001049246	0.181610363	2.83E-05	2.70E-05	0	0	6147.590479	471.4464404	3.083332969	114160.7551
Sacramento	2025 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	9999 Diesel	0.000240925	0.000291519	0.000346932	0.002278244	0.005298756	1.61136196	0.000183871	0.00017578	0	0	54557.48202	2489.793787	3.083333042	1081068.467
Sacramento	2025 Commercial Harbor Craft - ME - Work Boat	Aggregate	300 Diesel	0.000188061	0.000227554	0.000270808	0.000598653	0.003247741	0.23945038	1.17E-05	6.85E-05	0	0	8107.324553	1960.344748	3.068023	150142.7947
Sacramento	2025 Commercial Harbor Craft - ME - Work Boat	Aggregate	600 Diesel	0.000653214	0.000790388	0.000940628	0.001988313	0.010637158	0.739174294	0.000246895	0.000236032	0	0	25026.95788	3920.688978	6.136045	463484.2713
Sacramento	2025 Commercial Harbor Craft - ME - Work Boat	Aggregate	9999 Diesel	0.000162973	0.000747197	0.000874681	0.026363057	0.052666479	8.758853399	0.002280647	0.002180298	0	0	296557.1955	11762.07079	18.40814081	5816402.512
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	100 Diesel	6.81E-05	8.24E-05	9.80E-05	0.000585033	0.000702591	0.128690223	5.20E-05	4.78E-05	1.22E-06	0	4181.81124	1693.883216	3.3133833	74372.21174
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	175 Diesel	0.000372252	0.000450425	0.000536043	0.005424809	0.003539397	0.923996084	0.000162433	0.000149438	8.75E-06	0	30025.41397	8536.743393	13.127827	597388.3296
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	300 Diesel	0.000435513	0.000526971	0.000627139	0.002592914	0.004633784	1.098881318	0.000199999	0.000183991	1.04E-05	0	35708.34015	6291.824268	10.27144717	711158.0747
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	50 Diesel	4.50E-05	5.44E-05	6.48E-05	0.000372767	0.000303981	0.043606828	1.63E-05	1.50E-05	4.13E-07	0	1417.012604	1272.356142	2.689019046	25267.49012
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	600 Diesel	0.000574882	0.000695607	0.00082783	0.004757897	0.005636862	1.58058782	0.000242829	0.000228426	1.50E-05	0	51361.47696	5077.072009	8.827523752	1030996.56
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	75 Diesel	7.91E-05	9.57E-05	0.000113893	0.001010095	0.000981095	0.168327065	3.21E-05	2.95E-05	1.59E-06	0	5469.817334	3051.463009	6.265823785	97085.71431
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	750 Diesel	0.000208246	0.000251978	0.000299871	0.002722382	0.002115679	0.656723538	8.57E-05	8.58E-05	6.22E-06	0	21339.99239	1294.807052	2.2962871	423035.4382
Sacramento	2025 Construction and Mining - Bore/Drill Rigs	Aggregate	9999 Diesel	6.49E-05	7.86E-05	9.35E-05	0.000403257	0.00108147	0.215728348	2.44E-05	2.25E-05	2.04E-06	0	7010.13032	325.9331238	0.557665501	138966.0079
Sacramento	2025 Construction and Mining - Bucket	Aggregate	100 Diesel	5.34E-06	6.46E-06	7.69E-06	6.06E-05	5.23E-05	0.009952594	3.80E-06	3.50E-06	9.43E-08	0	323.4112706	184.8823121	0.360842383	5766.914887
Sacramento	2025 Construction and Mining - Bucket	Aggregate	175 Diesel	5.40E-06	6.53E-06	7.78E-06	9.65E-05	4.48E-05	0.016152079	1.81E-06	1.67E-06	1.53E-07	0	524.8646281	213.1848724	0.360842383	10404.70558
Sacramento	2025 Construction and Mining - Bucket	Aggregate	300 Diesel	1.30E-05	1.58E-05	1.88E-05	9.15E-05	7.60E-05	0.042018393	3.68E-06	3.39E-06	3.98E-07	0	1365.395002	289.6476835	0.426450089	27067.04211
Sacramento	2025 Construction and Mining - Bucket	Aggregate	50 Diesel	2.55E-06	3.09E-06	3.68E-06	2.60E-05	2.32E-05	0.003436786	9.10E-07	8.37E-07	3.26E-08	0	111.6789599	128.8847486	0.295234677	1991.405726
Sacramento	2025 Construction and Mining - Bucket	Aggregate	75 Diesel	3.89E-06	4.71E-06	5.60E-06	3.80E-05	5.34E-05	0.007769456	1.14E-06	1.05E-06	9.25E-08	0	317.3789334	218.779006	0.426450089	5659.349119
Sacramento	2025 Construction and Mining - Bucket	Aggregate	750 Diesel	7.55E-06	9.13E-06	1.09E-05	6.50E-05	5.14E-05	0.033241387	2.92E-06	2.69E-06	3.15E-07	0	1080.184684	75.53671273	0.131215412	21413.14732
Sacramento	2025 Construction and Mining - Compactor	Aggregate	100 Diesel	1.10E-06	1.33E-06	1.58E-06	2.76E-05	1.64E-05	0.004716821	1.30E-06	1.20E-06	4.47E-08	0	153.2739295	89.55253326	0.196823118	2733.107303
Sacramento	2025 Construction and Mining - Compactor	Aggregate	175 Diesel	2.22E-05	2.69E-05	3.20E-05	0.000480266	0.000169673	0.081286569	6.63E-06	6.10E-06	7.9E-07	0	2641.421255	1066.013131	1.574584944	52362.47405
Sacramento	2025 Construction and Mining - Compactor	Aggregate	300 Diesel	5.62E-06	6.80E-06	8.09E-06	4.17E-05	3.57E-05	0.020728671	1.63E-06	1.50E-06	1.96E-07	0	673.5817717	157.255031	0.262430824	13352.8145
Sacramento	2025 Construction and Mining - Compactor	Aggregate	50 Diesel	3.19E-06	3.86E-06	4.59E-06	3.50E-05	2.95E-05	0.005019939	7.73E-07	7.11E-07	4.76E-08	0	163.1237935	240.8101034	0.557665502	2908.745361
Sacramento	2025 Construction and Mining - Compactor	Aggregate	600 Diesel	1.31E-05	1.58E-05	1.89E-05	0.000320052	0.000102049	0.053055134	3.56E-06	3.27E-06	5.07E-07	0	1738.658572	217.2530869	0.360842383	34466.46921
Sacramento	2025 Construction and Mining - Compactor	Aggregate	75 Diesel	2.03E-06	2.46E-06	2.92E-06	3.15E-05	2.81E-05	0.005392039	4.62E-07	4.25E-07	5.11E-08	0	175.2152425	128.7220779	0.295234677	3124.354288
Sacramento	2025 Construction and Mining - Compactor	Aggregate	9999 Diesel	2.65E-06	3.20E-06	3.81E-06	2.97E-05	5.14E-05	0.015637862	9.11E-07	8.38E-07	1.48E-07	0	508.1550661	17.77301747	0.052803853	10073.46193
Sacramento	2025 Construction and Mining - Concrete Mixer	Aggregate	175 Diesel	1.30E-05	1.57E-05	1.87E-05	2.85E-05	9.66E-06	0.004614973	4.33E-07	3.98E-07	1.27E-08	0	149.9642538	62.77378101	0.098415559	2972.835468
Sacramento	2025 Construction and Mining - Concrete Mixer	Aggregate	300 Diesel	1.23E-06	1.48E-06	1.77E-06	1.13E-05	6.70E-06	0.005513214	2.86E-07	2.63E-07	5.22E-08	0	179.1528406	42.70627654	0.065607706	3551.453957
Sacramento	2025 Construction and Mining - Concrete Mixer	Aggregate	50 Diesel	8.11E-07	9.81E-07	1.17E-06	1.38E-05	1.17E-05	0.002190678	1.27E-07	1.17E-07	2.18E-08	0	74.7609915	135.5443073	0.393683853	1333.101441
Sacramento	2025 Construction and Mining - Concrete Mixer	Aggregate	600 Diesel	1.21E-06	1.46E-06	1.74E-06	7.89E-06	1.37E-05	0.004145483	4.22E-07	3.88E-07	3.95E-08	0	135.3288354	22.24464743	0.052803853	2682.704479
Sacramento	2025 Construction and Mining - Concrete Mixer	Aggregate	75 Diesel	3.61E-07	4.37E-07	5.20E-07	4.24E-06	3.31E-06	0.000643186	6.20E-08	5.70E-08	6.09E-09	0	20.90042947	17.54644296	0.052803853	372.6864485
Sacramento	2025 Construction and Mining - Concrete Pump	Aggregate	100 Diesel	1.88E-06	2.28E-06	2.71E-06	2.46E-05	1.09E-05	0.004025361	1.29E-06	1.19E-06	5.81E-08	0	130.8015565	70.18647934	0.131215412	2332.39071
Sacramento	2025 Construction and Mining - Concrete Pump	Aggregate	175 Diesel	2.00E-05	2.42E-05	2.87E-05	0.000425632	0.000143063	0.07063607	5.09E-06	4.68E-06	6.69E-07	0	2295.331451	842.8272887	1.049723296	45501.72839
Sacramento	2025 Construction and Mining - Concrete Pump	Aggregate	300 Diesel	6.85E-06	8.29E-06	9.86E-06	6.14E-05	2.62E-05	0.0284183	1.58E-06	1.46E-06	2.69E-07	0	923.4576195	245.6200737	0.393646236	18306.25295
Sacramento	2025 Construction and Mining - Concrete Pump	Aggregate	50 Diesel	3.30E-07	3.99E-07	4.75E-07	2.72E-06	2.36E-06	0.000383022	8.49E-08	7.81E-08	6.63E-09	0	12.44636321	21.58149591	0.033803853	221.9378879
Sacramento	2025 Construction and Mining - Concrete Pump	Aggregate	600 Diesel	2.21E-05	2.68E-05	3.18E-05	0.000123831	0.000299458	0.065705222	8.96E-06	8.24E-06	6.22E-07	0	2135.102667	334.9360266	0.590469354	42325.41772
Sacramento	2025 Construction and Mining - Concrete Pump	Aggregate	75 Diesel	2.35E-06	2.84E-06	3.38E-06	2.83E-05	2.75E-05	0.004689866	8.91E-07	8.19E-07	4.44E-08	0	152.3979986	114.4663268	0.229626971	2717.488124
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	100 Diesel	2.00E-06	2.42E-06	2.88E-06	3.58E-05	7.95E-06	0.00650674	1.87E-06	1.72E-06	6.16E-08	0	211.4376096	143.4470174	0.688880913	3770.354921
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	175 Diesel	1.58E-05	1.91E-05	2.27E-05	0.000250863	0.000182653	0.104765164	8.33E-06	7.66E-06	4.34E-07	0	1487.146862	687.8004838	2.46180591	26793.96839
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	300 Diesel	3.01E-06	3.64E-06	4.34E-06	2.27E-05	3.91E-05	0.012366695	1.35E-06	1.24E-06	1.17E-07	0	401.8579153	118.2444876	0.426450088	7966.269911
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	50 Diesel	1.04E-06	1.26E-06	1.50E-06	1.99E-05	1.98E-05	0.003559948	4.77E-07	4.38E-07	5.37E-08	0	115.6851925	188.537801	1.115931003	2082.770552
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	600 Diesel	2.68E-06	3.25E-06	3.86E-06	3.10E-05	1.04E-05	0.004958922	1.37E-06	1.26E-06	9.08E-08	0	311.5936007	57.51506431	0.229626971	6176.908175
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	75 Diesel	1.96E-06	2.37E-06	2.82E-06	3.64E-05	3.29E-05	0.006828119	7.07E-07	6.51E-07	6.47E-08	0	221.8809274	169.8626982	0.787550923	3465.496073
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	750 Diesel	3.25E-07	3.90E-07	4.65E-07	1.69E-06	3.68E-06	0.000711667	2.06E-07	1.89E-07	2.01E-08	0	68.78832817	7.797761217	0.033803853	574.6631824
Sacramento	2025 Construction and Mining - Crane less than 35ton	Aggregate	9999 Diesel	3.99E-06	4.83E-06	5.74E-06	5.43E-05	5.71E-05	0.00251535	2.86E-06	2.64E-06	2.38E-08	0	81.73674476	5.587297929	0.033803853	1620.316399
Sacramento	2025 Construction and Mining - Cranes	Aggregate	100 Diesel	3.02E-05	3.65E-05	4.34E-05	0.000313013	0.000317812	0.059658993	2.85E-05	2.01E-05	5.65E-07	0	1938.629383	956.5619679	4.95910582	23742.04596
Sacramento	2025 Construction and Mining - Cranes	Aggregate	175 Diesel	0.000198586	0.000240029	0.000285964	0.002455411	0.002340818	0.446015675	0.000116981	0.000107626	4.23E-06	0	14522.60282	5841.537933	22.29793567	246255.3635
Sacramento	2025 Construction and Mining - Cranes	Aggregate	25 Diesel	6.17E-07	7.47E-07	8.89E-07	1.95E-06	1.33E-06	0.000120007	1.14E-07	1.05E-07	1.14E-09	0	3.899640987	11.0244202	0.065607706	69.53653044
Sacramento	2025 Construction and Mining - Cranes	Aggregate	300 Diesel	0.000453624	0.000548885	0.000653218	0.003662204	0.005094446	1.445879873	0.000242997	0.000223557	1.37E-05	0	4698413.187	12755.00091	50.15456856	883224.901
Sacramento	2025 Construction and Mining - Cranes	Aggregate	50 Diesel	4.25E-06	5.14E-06	6.12E-06	1.94E-05	2.62E-05	0.005075509	1.40E-06	1.29E-06	4.81E-08	0	164.9295447	166.5568417	0.853938284	1933.043915
Sacramento	2025 Construction and Mining - Cranes	Aggregate	600 Diesel	0.000505945	0.000612198	0.000728566	0.005482637	0.005749348	2.014861124	0.000237728	0.000217871	1.91E-05	0	65473.26374	10494.95246	40.08003548	1270601.948
Sacramento	2025 Construction and Mining - Cranes	Aggregate	75 Diesel	1.39E-05	1.69E-05	2.01E-05	0.000108251	0.000158527	0.019726713	9.46E-06	8.71E-06	1.87E-06	0	641.0229774	459.2425115	2.52756397	8168.143988
Sacramento	2025 Construction and Mining - Cranes	Aggregate	750 Diesel	6.70E-05	8.10E-05	9.64E-05	0.000652156	0.000841109	0.314190746	3.39E-05	3.12E-05	2.98E-06	0	10209.68312	1086.647465	4.625342373	202392.6576
Sacramento	2025 Construction and Mining - Cranes	Aggregate	9999 Diesel	2.21E-05	2.68E-05	3.19E-05	0.000191033	0.000530287	0.107030743	1.16E-05	1.07E-05	1.01E-06	0	3477.982663	262.6027591	1.082527149	68946.13142
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	100 Diesel	0.000386835	0.000468071	0.000557043	0.003974194	0.003910224	0.669141014	0.000285481	0.000262643	6.34E-06	0	21743.85399	9876.120921	28.15526114	373230.4917
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	175 Diesel	0.000959927	0.001161511	0.001382295	0.012278582	0.010032341	2.417814567	0.001376088	0.001243848	2.29E-05	0	78567.30996	26693.31829	57.81180342	1547294.329
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	300 Diesel	0.000127329	0.000143068	0.000174954	0.000730567	0.01027985	2.993166994	0.000486994	0.000448034	2.84E-05	0	97263.48369	20321.82327	46.83035913	1919002.579
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	50 Diesel	3.97E-05	4.81E-05	5.72E-05	0.000215471	0.000178294	0.025475151	1.34E-05	1.23E-05	2.41E-07	0	827.8194738	771.0750174	2.823070986	12982.88099
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	600 Diesel	0.001592628	0.001926969	0.002293241	0.014351128	0.016013866	3.247406688	0.000668084	0.000613437	4.97E-05	0	170517.443	20608.39819	46.78821676	3437397.882
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	75 Diesel	0.000147912	0.000178973	0.000212993	0.001089663	0.001632746	0.17371258	9.67E-05	8.90E-05	1.65E-06	0	5644.820598	3287.398248	11.18998888	94125.49142
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	750 Diesel	9.09E-05	0.000110001	0.000130902	0.0008592	0.000941337	0.333063022	4.12E-05	3.79E-05	3.16E-06	0	10822.94102	832.7465081	2.1388119	231096.0027
Sacramento	2025 Construction and Mining - Crawler Tractors	Aggregate	9999 Diesel	0.000144189	0.000174468	0.000207632	0.001417678	0.002708236	0.548835536	7.43E-05	6.83E-05	5.21E-06	0	17867.00168	1034.522783	2.529821729	371677.5198
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	100 Diesel	2.17E-06	2.63E-06	3.13E-06	5.25E-05	2.85E-05	0.00903443	1.97E-06	1.81E-06	8.56E-08	0	293.5753824	169.3820199	0.32803853	5234.895619
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	175 Diesel	3.08E-05	3.73E-05	4.44E-05	0.000766244	0.000214618	0.129020187	7.43E-06	6.83E-06	1.22E-06	0	4192.533477	1770.865251	2.591504387	83111.09975
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	300 Diesel	1.57E-05	1.90E-05	2.26E-05	0.000227593	8.66E-05	0.061378502	3.96E-06	3.64E-06	5.08E-07	0	2052.996441	511.9660583	0.885704031	40697.77688
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	50 Diesel	1.12E-06	1.35E-06	1.61E-06	1.75E-05	1.60E-05	0.002822531	3.72E-07	3.42E-07	2.67E-08	0	91.71863452	109.6621017	0.295234677	1635.482764
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	600 Diesel	7.62E-05	9.22E-05	0.000109783	0.000677663	0.000290376	0.349229176	1.66E-05	1.53E-05	3.31E-06	0	11348.263	1636.847914	2.788337505	224963.4079
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	75 Diesel	4.62E-06	5.59E-06	6.65E-06	3.20E-05	7.09E-05	0.034099683	7.00E-07	6.44E-07	1.34E-07	0	458.1714565	333.9118326	0.754488619	8369.897351
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	750 Diesel	8.28E-06	1.00E-05	1.19E-05	6.35E-05	6.43E-05	0.032902621	2.88E-06	2.65E-06	3.12E-07	0	1069.176396	84.91726741	0.164019265	21194.92346
Sacramento	2025 Construction and Mining - Crushing/Processing Equipment	Aggregate	9999 Diesel	1.33E-05	1.61E-05	1.91E-05	0.000137687	0.000247244	0.071440194	5.87E-06	5.40E-06	6.77E-07	0	2321.461552	137.5220482	0.262430824	46019.72142
Sacramento	2025 Construction and Mining - Excav

ITEM 11.1.

ATTACHMENT 3

Sacramento	2025 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.162889838	0
Sacramento	2025 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.162889838	0
Sacramento	2025 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.162889838	0
Sacramento	2025 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Diesel	0.00032773	0.000394187	0.000471117	0.001345417	0.002490953	0.003601035	8.38E-05	6.33E-05	3.42E-08	2.94E-08	117.1300354	0	15.99109843	0
Sacramento	2025 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.162889838	0
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	100 Gasoline	0.00024514	0.00022548	0.000269762	0.011074095	0.000642515	0.244522496	1.70E-05	1.29E-05	2.36E-06	3.48E-06	9942.6	2401.7	5.98	158512.2	
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	15 Gasoline	0.002479522	0.002504316	0.002728562	0.080272418	0.001849696	3.17E-06	0.001027396	0.000776256	1.28E-06	1.77E-06	5027.624918	0	36.68919432	0	
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	9.35E-05	0.000112488	0.000134441	0.009590047	0.000707444	0.001350421	2.48E-05	0.000018738	1.28E-08	1.10E-08	43.92483901	0	13.50962435	0	
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.044524872	0
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	25 Gasoline	0.00426244	0.004305064	0.004690554	0.138679482	0.002784032	5.16E-06	0.001672224	0.001263458	2.21E-06	3.05E-06	8683.006372	0	28.43642314	0	
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	0.000318345	0.000382898	0.000457625	0.031368688	0.002410962	0.003497731	8.14E-05	6.15E-05	3.32E-08	2.86E-08	113.7757851	0	11.40994351	0	
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0.044524872	0
Sacramento	2025 Construction and Mining - Misc - Trenchers	Aggregate	50 Gasoline	0.000701459	0.000645202	0.000771913	0.025455334	0.000993638	0.33871722	2.34E-05	1.76E-05	4.12E-06	5.62E-06	16045.4	7230.65	17.97	216919.5	
Sacramento	2025 Construction and Mining - Nurse Rig Other	Aggregate	175 Diesel	4.23E-07	5.12E-07	6.09E-07	6.01E-06	4.46E-06	0.000102649	3.33E-07	3.66E-07	9.77E-09	0	33.35367035	18.36638236	0.032803853	661.1897648	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	100 Diesel	0.00020697	0.000250433	0.000298036	0.002357075	0.00205673	0.379908431	0.000146811	0.000135067	3.60E-06	0	12345.19076	5951.667039	9.415334402	219631.5684	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000732576	0.000874317	0.001040509	0.012789194	0.00535756	2.06514308	0.000245049	0.000225445	1.96E-05	0	67107.18484	21121.13347	20.83227654	1332383.762	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000353238	0.000427418	0.000508643	0.002216652	0.003155397	0.926176103	0.000141935	0.000130594	8.77E-06	0	30096.25184	6420.408021	8.137701602	600511.4144	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	0.000558346	0.000675599	0.000804018	0.003999132	0.003284187	0.454233346	0.00017772	0.000163502	4.30E-06	0	14760.39183	16018.2685	26.37809918	256863.2359	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.000762979	0.000923205	0.00109869	0.005346128	0.004758584	2.443576184	0.000216123	0.000198833	2.31E-05	0	79404.43442	9715.703118	10.56959656	1606821.201	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	0.000256916	0.000310869	0.000369806	0.001844938	0.002656067	0.198108464	0.000121925	0.000112115	3.77E-06	0	12936.60399	8707.002816	14.24331584	222592.0248	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	6.09E-05	7.37E-05	8.77E-05	0.000448387	0.000395027	0.199691703	2.08E-05	1.91E-05	1.89E-06	0	6489.016733	507.764008	0.688958964	128981.9916	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	9999 Diesel	4.62E-05	5.59E-05	6.65E-05	0.000353835	0.000738534	0.177682914	1.76E-05	1.62E-05	1.68E-06	0	5773.837278	182.6857674	0.230305544	126782.9287	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	100 Gasoline	5.52E-06	6.68E-06	7.95E-06	2.26E-05	5.09E-05	0.010318245	3.22E-06	2.56E-06	9.77E-08	0	335.2918444	184.2682082	0.295234677	5078.787483	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000219133	0.000265151	0.000315551	0.003164406	0.002031107	0.532067128	0.000105443	9.70E-05	5.04E-06	0	17289.61415	5719.636391	6.364415187	342966.0377	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000152827	0.000639206	0.000760708	0.003253042	0.005201238	1.245849474	0.000252659	0.000232446	1.18E-05	0	40484.09601	9230.267932	12.63405941	805912.0204	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	1.88E-05	2.27E-05	2.70E-05	0.000166913	0.000142819	0.039437484	3.90E-06	3.63E-06	1.84E-07	0	631.6244388	1054.204318	1.705800356	11262.83449	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.002710439	0.003279631	0.003903032	0.019617412	0.017766443	9.16371112	0.000760355	0.000699526	8.68E-05	0	297776.3916	36007.55822	43.34354977	5938089.439	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	1.40E-05	1.70E-05	2.02E-05	0.000133243	0.000115588	0.021731374	6.93E-06	6.38E-06	2.06E-07	0	706.1647749	455.6765463	0.853475903	11745.16846	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	0.000335477	0.000425272	0.000510869	0.002732025	0.003409049	1.130998256	0.000147209	0.000135431	1.07E-05	0	36751.98565	3236.321346	5.629847799	846513.2974	
Sacramento	2025 Construction and Mining - Off-Highway Tractors	Aggregate	9999 Diesel	0.001267197	0.001533309	0.001824764	0.008727023	0.021156439	4.340726925	0.000516192	0.000474897	4.11E-05	0	141052.6788	6572.35228	9.82222133	2971863.204	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	100 Diesel	0.000167625	0.000202827	0.00024138	0.002079906	0.001797347	0.360289599	0.000125276	0.000115254	3.41E-06	0	11707.67339	5522.715175	17.03156334	198620.1811	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	175 Diesel	0.000418638	0.000506552	0.000602838	0.005192588	0.004627897	0.904222261	0.000315771	0.000291874	8.60E-06	0	37668.85174	13373.02285	29.99250863	736454.097	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	300 Diesel	0.00037521	0.000454004	0.000540302	0.002688585	0.004106638	1.103205158	0.000182999	0.000168351	1.05E-05	0	35848.84409	7166.998332	18.65204091	698876.2468	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	50 Diesel	0.000229828	0.000278092	0.000330952	0.001959964	0.001777455	0.273625786	8.56E-05	7.50E-05	2.59E-06	0	8891.517662	9287.337681	30.05178778	151981.2656	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	600 Diesel	0.000933018	0.001128951	0.001343544	0.008273609	0.008796614	1.483668729	0.000372024	0.000342562	3.30E-05	0	113202.423	13326.86479	32.10995214	2260498.199	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	75 Diesel	0.000216765	0.000262283	0.000312139	0.002667807	0.00284984	0.462675629	9.91E-05	9.12E-05	4.38E-06	0	15034.72529	9449.939916	29.00478744	257633.896	
Sacramento	2025 Construction and Mining - Other Construction Equipment	Aggregate	750 Diesel	0.000118397	0.00014326	0.000170491	0.001081298	0.001167698	0.551800034	4.86E-05	4.47E-05	5.23E-06	0	17930.83837	1324.112361	3.511878961	359602.3128	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	0.000162146	0.000196196	0.000233569	0.002130796	0.003390345	0.737050381	7.73E-05	7.11E-05	6.88E-06	0	23951.0584	979.5942819	2.559477945	349661.9511	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	100 Diesel	6.13E-05	7.42E-05	8.83E-05	0.000687961	0.000632442	0.115380832	4.43E-05	4.07E-05	1.09E-06	0	3749.320279	1867.499082	4.790017553	65898.81105	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	175 Diesel	0.000318265	0.000221006	0.000263015	0.002805168	0.001851304	0.480268267	8.52E-05	7.84E-05	4.55E-06	0	15606.40112	5958.557566	11.64676087	308300.2254	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	300 Diesel	0.000160694	0.000201998	0.000240304	0.001553011	0.001614497	0.494946805	7.43E-05	6.83E-05	4.70E-06	0	16132.87293	3418.375705	7.284198107	319303.1676	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	50 Diesel	3.86E-05	4.67E-05	5.56E-05	0.00037248	0.000332197	0.053406686	1.39E-05	1.28E-05	5.06E-07	0	1735.459586	2114.89128	6.102691526	28684.82983	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	600 Diesel	0.000226823	0.000274456	0.000326626	0.001852884	0.001811137	0.879034351	7.59E-05	6.98E-05	8.31E-06	0	28564.3746	3580.958038	7.021261929	567865.8317	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	75 Diesel	3.06E-05	3.70E-05	4.40E-05	0.000184746	0.000401183	0.064792929	1.36E-05	1.25E-05	6.14E-07	0	2105.457542	1453.431855	3.838058801	17543.51053	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	750 Diesel	3.20E-05	3.88E-05	4.61E-05	0.00033101	0.000311103	0.095890553	1.69E-05	1.56E-05	9.08E-07	0	3115.98025	225.5233006	0.623273207	61769.94097	
Sacramento	2025 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	7.21E-05	8.72E-05	0.000103799	0.000617512	0.00142541	0.324894503	3.36E-05	3.09E-05	1.03E-06	0	10557.50355	540.2889343	1.148134855	209287.7101	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	100 Diesel	0.000111127	0.000134464	0.000160023	0.001374008	0.001181095	0.231144632	7.98E-05	7.34E-05	2.19E-06	0	7524.082553	3783.038619	8.693779602	133083.9717	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	175 Diesel	0.000209281	0.00015124	0.000418004	0.004611184	0.00269035	0.778982534	0.000116544	0.000107222	7.38E-06	0	25313.17334	8533.351503	15.38586655	501498.2851	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	300 Diesel	0.000261008	0.000315819	0.000375851	0.001900626	0.002160052	0.94589962	8.31E-05	7.64E-05	8.96E-06	0	30757.17319	6368.006701	11.38345771	609263.201	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	50 Diesel	6.03E-05	7.29E-05	8.68E-05	0.000360668	0.000301738	0.042069835	1.81E-05	1.67E-05	1.99E-07	0	1367.066464	1545.612107	4.363106396	24021.3239	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	600 Diesel	4.43E-05	5.36E-05	6.37E-05	0.000323312	0.000357244	0.167521691	1.42E-05	1.30E-05	1.59E-06	0	5443.646569	684.9936251	1.181376401	108803.6111	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	75 Diesel	0.000126393	0.000152935	0.000182305	0.001285168	0.001444816	0.21419007	6.03E-05	5.54E-05	2.03E-06	0	6960.143687	4407.427422	11.31833258	122490.123	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	750 Diesel	1.25E-06	1.51E-06	1.79E-06	1.32E-05	5.08E-06	0.004889653	1.69E-07	1.39E-07	6.53E-08	0	223.8804781	16.77292774	0.032803853	4488.14679	
Sacramento	2025 Construction and Mining - Pavers	Aggregate	9999 Diesel	4.22E-05	5.10E-05	6.08E-05	0.000304351	0.000795659	0.157862534	1.87E-05	1.72E-05	1.50E-06	0	5129.770573	124.6052859	0.229626971	101690.5115	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	100 Diesel	5.67E-05	6.86E-05	8.17E-05	0.000754875	0.000605163	0.131717197	4.09E-05	3.76E-05	1.25E-06	0	4280.17136	2311.533629	5.415527557	73831.20846	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	175 Diesel	0.000206643	0.00023238	0.000383659	0.005007676	0.002189152	0.364834601	9.57E-05	8.81E-05	8.19E-06	0	28102.95124	11423.81999	17.48643469	555369.5974	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	300 Diesel	0.000115879	0.000140214	0.000166866	0.000818526	0.001052071	0.389552142	4.30E-05	3.96E-05	3.69E-06	0	12658.56482	2975.551624	5.544529063	250238.6583	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	50 Diesel	7.57E-05	9.16E-05	0.000109021	0.000777443	0.00066272	0.108627073	2.41E-05	2.22E-05	1.03E-06	0	3529.855693	4671.046161	12.07232309	61971.50209	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	600 Diesel	0.000225747	0.000273154	0.000325075	0.001824445	0.001311888	0.923279153	6.48E-05	5.96E-05	8.75E-06	0	30002.13016	4662.694758	8.007369944	597707.1791	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	75 Diesel	4.23E-05	5.12E-05	6.09E-05	0.000474231	0.00051269	0.078925055	1.85E-05	1.70E-05	7.48E-07	0	2564.683421	1940.044791	4.756558685	45732.20648	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	750 Diesel	4.23E-05	5.12E-05	6.09E-05	0.000387998	0.000310911	0.100396676	1.64E-05	1.51E-05	1.90E-06	0	6511.924956	563.5660034	1.682527148	129088.7849	
Sacramento	2025 Construction and Mining - Paving Equipment	Aggregate	9999 Diesel	3.32E-05	4.02E-05	4.79E-05	0.000239351	0.00057758	0.125610295	1.44E-05	1.33E-05	1.19E-06	0	4081.728443	225.0109072	0.426450089	80914.54526	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	100 Diesel	0.000342346	0.000414239	0.000492979	0.003855355	0.003545082	0.650436039	0.000252012	0.000231851	6.16E-06	0	21136.03256	11175.32773	29.5978009	364236.839	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	175 Diesel	0.001220123	0.001476349	0.001756973	0.01525151	0.010750626	1.739754505	0.000664069	0.000428943	1.54E-05	0	121507.7275	47618.76545	80.18106033	2401937.584	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	300 Diesel	0.000117255	0.000141879	0.000168848	0.000858528	0.001281168	0.323182453	5.82E-05	5.35E-05	3.05E-06	0	10457.7437	2390.324457	5.321197783	203016.8019	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	50 Diesel	0.000960641	0.001162376	0.001383323	0.007844071	0.006714935	1.049778592	0.000304947	0.00028	9.94E-06	0	34112.7385	44397.46613	122.6961344	589665.0453	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	600 Diesel	8.05E-05	9.74E-05	0.000115962	0.00072492	0.000787659	0.260332534	3.33E-05	3.07E-05	1.24E-06	0	8450.551114	1135.743882	2.299994554	171843.4967	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	75 Diesel	0.000226333	0.000261716	0.000311516	0.002492249	0.002725968	0.417284939	6.76E-05	6.88E-05	3.95E-06	0	13559.74689	9360.136821	24.93196003	240150.4689	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	750 Diesel	1.71E-06	2.07E-06	2.46E-06	1.16E-05	1.67E-05	0.00629232	6.76E-07	6.22E-07	5.96E-08	0	204.4700364	14.87679614	0.032803853	4053.331877	
Sacramento	2025 Construction and Mining - Rollers	Aggregate	9999 Diesel	6.50E-05	7.87E-05	9.36E-05	0.000537481	0.001913973	0.282899937	2.81E-05	2.58E-05	2.68E-06	0	9192.882796	205.3607941	0.426450089	182236.0163	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	100 Diesel	0.000327896	0.000396754	0.00047217	0.005241333	0.003797811	0.985047785	0.000253	0.00023276	8.81E-06	0	30238.31262	15166.59565	47.57574415	522474.2483	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	175 Diesel	0.001658282	0.002006528	0.002387934	0.034107297	0.015382626	5.981759207	0.000612728	0.000565371	5.67E-05	0	194378.309	79562.51515	166.9081798	3850770.153	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	300 Diesel	1.46E-05	1.76E-05	2.10E-05	0.000137042	0.000147291	0.051073542	6.55E-06	6.02E-06	4.94E-07	0	1659.631898	387.0739444	1.017543035	32352.21292	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	50 Diesel	2.07E-05	2.50E-05	2.98E-05	0.0002165	0.000196269	0.033461136	8.82E-06	8.27E-06	3.17E-07	0	1087.325463	1097.608367	4.067677772	19388.66691	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	600 Diesel	2.89E-06	3.50E-06	4.16E-06	2.71E-05	2.42E-05	0.014553399	7.85E-07	7.23E-07	1.38E-07	0	472.9152522	69.38339743	0.164041881	9356.699292	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	75 Diesel	0.000430277	0.000508772	0.000605411	0.007570707	0.002681658	1.329263881	9.65E-05	8.88E-05	1.26E-05	0	27212.26093	27212.26093	81.09406664	503930.3235	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	750 Diesel	6.45E-07	7.81E-07	9.29E-07	8.95E-06	1.58E-06	0.004765344	1.26E-07	1.16E-07	4.51E-08	0	154.8560958	12.27444973	0.032826469	3068.614233	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	100 Diesel	2.72E-05	3.30E-05	3.92E-05	0.000271891	0.000265899	0.045426144	2.17E-05	2.00E-05	4.30E-07	0	1476.130467	720.4028175	1.641229998	24978.74388	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	175 Diesel	6.61E-05	7.99E-05	9.51E-05	0.000854452	0.000688463	0.141376133	3.33E-05	3.07E-05	1.34E-06	0	4594.042123	1591.775139	2.723773883	60862.02158	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	300 Diesel	6.85E-05	8.29E-05	9.86E-05	0.000486093	0.000611627	0.176979627	3.26E-05	3.00E-05	1.68E-06	0	5750.983865	1250.685285	2.199871728	113902.9546	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	50 Diesel	7.30E-06	8.83E-06	1.05E-05	5.74E-05	4.28E-05	0.009880341	1.95E-06	1.80E-06	9.36E-08	0	321.0634018	223.797357	0.59171062	3482.600709	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	600 Diesel	0.000960417	0.001083104	0.00129319	0.010150444	0.003573219	0.000744291	0.000174035	0.000160177	4.87E-06	0	30441.25975	4305.292144	8.035381647	210093.3979	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	75 Diesel	1.34E-05	1.62E-05	1.93E-05	0.000126833	0.000155402	0.021726478	7.09E-06	6.52E-06	2.06E-07	0	706.0058842	454.3882216	0.985006124	11227.37461	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	750 Diesel	1.70E-05	2.06E-05	2.45E-05	0.000190989	0.00002682	0.032918828	9.89E-06	9.10E-06	3.12E-07	0	1069.703062	84.0219232	0.164277716	22452.35684	
Sacramento	2025 Construction and Mining - Rubber Tired Dozers	Aggregate	9999 Diesel	1.87E-05	2.26E-05	2.69E-05	0.000159523	0.00004129	0.078623806	1.02E-05	9.36E-06	7.54E-07	0	2587.369974	97.85997995	0.164019265	51280.98317	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	100 Diesel	0.000377099	0.00045629	0.000543023	0.004832576	0.003844512	0.806560001	0.000275375	0.000253345	7.64E-06	0	26209.30796	14697.6791	27.36632399	456799.7616	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	175 Diesel	0.002504593	0.003030557	0.003606613	0.036731322	0.023439691	6.117143862	0.001115929	0.001026655	5.79E-05	0	198777.657	74122.518	102.2293023	3933167.177	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	300 Diesel	0.003643742	0.004408928	0.005246984	0.026227724	0.032265348	8.419738996	0.001247406	0.001147613	0.000108913	0	373609.6926	91351.54291	128.3915353	7413055.404	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	50 Diesel	7.79E-05	9.43E-05	0.000112241	0.000540852	0.00043147	0.06384463	2.50E-05	2.30E-05	6.05E-07	0	2074.642399	2469.705056	5.052849294	35041.54538	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	600 Diesel	0.002635138	0.003188517	0.003794599	0.020561304	0.019283525	8.866005546	0.000839037	0.000771914	8.40E-05	0	288167.3874	41701.28597	57.49360955	5758997.137	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	75 Diesel	0.000277315	0.000335551	0.000399334	0.004288576	0.001514508	0.494011233	0.000122172	0.000112982	4.68E-06	0	16052.58121	11630.10745	22.54157032	278127.0288	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	750 Diesel	7.40E-05	8.96E-05	0.0001066	0.000715575	0.00074995	0.224166834	3.41E-05	3.14E-05	2.12E-06	0	7284.340391	773.3117378	1.584939877	189702.7833	
Sacramento	2025 Construction and Mining - Rubber Tired Loaders	Aggregate	9999 Diesel	0.000020726	0.000250785	0.000298454	0.001489156	0.003810428	0.774999594	8.82E-05	8.11E-05	7.34E-06	0	25183.747	1470.998118	2.329571669	502797.5714	
Sacramento	2025 Construction and Mining - Scrapers	Aggregate	100 Diesel	9.71E-06	1.17E-05	1.40E-05	0.000132946	0.000108552	0.02432176	8.84E-06	8.24E-06	2.30E-07	0	790.3988317	315.6570041	1.017915655	12403.40413	
Sacramento	2025 Construction and Mining - Scrapers	Aggregate	175 Diesel	0.000138194	0.000167214	0.000198999	0.001291299	0.001660522	0.196700701	9.33E-05	8.59E-05	1.86E-06	0	6391.823598	1727.12503	6.169959894	123935.7363	
Sacramento	2025 Construction and Mining - Scrapers	Aggregate	300 Diesel	0.001079951	0.001306741	0.001555513	0.008018701	0.012627824	2.876229807	0.000601493	0.000553374	2.72E-05	0	93463.58938	15544.6403	48.72147692	1783441.158	
Sacramento	2025 Construction and Mining - Scrapers	Aggregate	600 Diesel	0.003643742	0.004408928	0.005246984	0.026227724	0.032265348	8.419738996	0.001247406	0.001147613	0.000108913	0	373609.6926	91351.54291	128.3915353	7413055.404	
Sacramento	2025 Construction and Mining - Scrapers	Aggregate	750 Diesel	7.79E-05	9.43E-05	0.000112241	0.000540852	0.00043147	0.06384463	2.50E-05	2.30E-05	6.05E-07	0	2074.642399	2469.705056	5.052849294	35041.54538	
Sacramento	2025 Construction and Mining - Skid Steer Loaders	Aggregate	100 Diesel	0.000277504	0.000330335	0.000393126	0.006441377	0.001953672	0.108412486	6.33E-05	5.82E-05	1.03E-05	0	35228.826	16831.90329	25.42394067	697500.9372	
Sacramento	2025 Construction and Mining - Skid Steer Loaders	Aggregate	300 Diesel	3.11E-05	3.76E-05	4.48E-05	0.000268844	0.000226682	0.088684123	1.24E-05	1.14E-05	4.68E-06	0	1605.278321	742.3674318	1.377761826	57127.89479	
Sacramento	2025 Construction and Mining - Skid Steer Loaders	Aggregate	50 Diesel	0.000917765	0.001104445	0.001314381	0.007630558	0.006472251	1.022370722	0.000280808	0.000257671	9.68E-06	0	33222.11498	37324.33774	96.51573503	579774.6713	
Sacramento	2025 Construction and Mining - Skid Steer Loaders	Aggregate	600 Diesel	1.57E-05	1.90E-05	2.26E-05	0.000117876	0.000100439	0.061602494	4.46E-06	4.10E-06	5.84E-07	0	2001.783801	226.9841086	0.393646236	39682.55808	
Sacramento	2025 Construction and Mining - Skid Steer Loaders	Aggregate	75 Diesel	0.000203054	0.000246846	0.000439599	0.043408419	0.039813853	7.267358174	0.000862988	0.000799359	6.88E-05	0	230134.0783	169356.8111	376.0045244	4200210.081	
Sacramento	2025 Construction and Mining - Skid Steer Loaders	Aggregate	750 Diesel	2.16E-06

Sacramento	2025 Industrial - Boom	Aggregate	175 Diesel	1.66E-05	2.01E-05	2.40E-05	0.000316803	0.00013275	0.053176324	5.47E-06	5.03E-06	5.04E-07	0	1727.973931	885.1748719	1.137411792	34254.66118
Sacramento	2025 Industrial - Boom	Aggregate	300 Diesel	2.13E-06	2.58E-06	3.07E-06	1.66E-05	1.52E-05	0.008089516	5.76E-07	5.30E-07	7.62E-08	0	261.3454718	71.9381172	0.110706164	5361.798308
Sacramento	2025 Industrial - Boom	Aggregate	50 Diesel	0.000160481	0.000194182	0.000231092	0.002462951	0.002098523	0.384262324	4.83E-05	4.45E-05	3.64E-06	0	12486.67126	13717.79284	33.68002695	222656.3417
Sacramento	2025 Industrial - Boom	Aggregate	600 Diesel	3.14E-06	3.80E-06	4.52E-06	1.86E-05	2.78E-05	0.00762885	1.47E-06	1.36E-06	7.23E-08	0	247.9007987	38.81217215	0.063189544	4914.285867
Sacramento	2025 Industrial - Boom	Aggregate	75 Diesel	0.000234517	0.000283765	0.000337704	0.003826644	0.003304352	0.646066939	6.33E-05	3.98E-05	6.12E-06	0	20994.05789	16288.61187	31.21563474	374355.9856
Sacramento	2025 Industrial - Boom	Aggregate	9999 Diesel	9.57E-07	1.16E-06	1.38E-06	1.01E-05	1.75E-05	0.005275444	3.16E-07	2.90E-07	5.00E-08	0	171.4264891	9.994970201	0.015797386	3398.289868
Sacramento	2025 Industrial - Forklifts	Aggregate	100 Diesel	0.000328898	0.000397966	0.000473613	0.004985735	0.003663757	0.855741742	0.000256704	0.000236168	8.11E-06	0	27807.47722	28785.18208	70.44605059	485098.2566
Sacramento	2025 Industrial - Forklifts	Aggregate	175 Diesel	0.000816023	0.000987387	0.001175072	0.014873831	0.007138774	2.527598506	0.000302571	0.000278365	2.39E-05	0	82134.75443	64380.42785	106.0955618	1626183.397
Sacramento	2025 Industrial - Forklifts	Aggregate	25 Diesel	9.62E-09	1.16E-08	1.39E-08	3.13E-08	2.50E-08	2.26E-06	2.14E-09	1.97E-09	2.14E-11	0	0.073530717	5.463185577	0.015797386	1.31116E+09
Sacramento	2025 Industrial - Forklifts	Aggregate	300 Diesel	7.54E-05	9.13E-05	0.000108636	0.00053331	0.000676156	0.228778357	3.05E-05	2.80E-05	2.17E-06	0	7434.192621	3438.37955	6.685098896	147554.8357
Sacramento	2025 Industrial - Forklifts	Aggregate	50 Diesel	0.000106277	0.000128474	0.000152894	0.000955583	0.000804984	0.134731308	3.32E-05	3.06E-05	1.28E-06	0	4378.115737	3472.088172	21.29460707	71737.07144
Sacramento	2025 Industrial - Forklifts	Aggregate	600 Diesel	2.29E-05	2.77E-05	3.30E-05	0.000210046	0.000217913	0.0695699	9.72E-06	8.95E-06	6.59E-07	0	2260.686048	636.3368346	1.262414534	45214.82453
Sacramento	2025 Industrial - Forklifts	Aggregate	75 Diesel	0.000509373	0.000616342	0.000733498	0.007637697	0.007110558	1.304947556	0.000152273	0.000140091	1.24E-05	0	42404.49852	56126.79873	132.7009996	745708.6777
Sacramento	2025 Industrial - Forklifts	Aggregate	750 Diesel	9.78E-07	1.18E-06	1.41E-06	1.42E-05	4.92E-06	0.001303167	1.25E-07	2.99E-07	5.02E-08	0	172.3266818	23.29328005	0.047392158	3436.134927
Sacramento	2025 Industrial - Forklifts	Aggregate	9999 Diesel	2.50E-05	3.03E-05	3.60E-05	0.000186139	0.000478534	0.098403505	1.12E-05	1.03E-05	9.32E-07	0	3197.639069	156.3576851	0.31594772	63388.7126
Sacramento	2025 Industrial - Garbage Refuse	Aggregate	175 Diesel	2.31E-07	2.80E-07	3.33E-07	3.36E-06	3.07E-06	0.000583544	1.41E-07	1.30E-07	5.53E-09	0	18.96238001	8.892885295	0.015797386	375.9026053
Sacramento	2025 Industrial - Garbage Refuse	Aggregate	300 Diesel	6.98E-07	8.44E-07	1.00E-06	5.43E-06	4.76E-06	0.002794144	1.85E-07	1.70E-07	2.65E-08	0	90.81648574	20.07481643	0.031594772	1800.309538
Sacramento	2025 Industrial - Garbage Refuse	Aggregate	50 Diesel	3.76E-08	4.55E-08	5.42E-08	6.42E-07	6.45E-07	0.000100226	1.71E-08	1.58E-08	9.49E-10	0	3.256871748	0.113155496	0.015797386	58.07497721
Sacramento	2025 Industrial - Garbage Refuse	Aggregate	600 Diesel	1.04E-05	1.26E-05	1.50E-05	8.04E-05	6.14E-05	0.041648925	2.48E-06	2.28E-06	3.95E-07	0	1353.389096	145.0435592	0.205366018	26829.04187
Sacramento	2025 Industrial - Garbage Refuse	Aggregate	75 Diesel	2.04E-07	2.47E-07	2.94E-07	2.70E-06	2.25E-06	0.000426783	6.80E-08	6.26E-08	4.04E-09	0	13.86838837	8.784255315	0.015797386	247.2944595
Sacramento	2025 Industrial - Garbage Refuse	Aggregate	9999 Diesel	1.99E-06	2.41E-06	2.87E-06	2.03E-05	3.54E-05	0.010488673	8.21E-07	7.55E-07	9.94E-08	0	340.8312499	18.82505867	0.031594772	6756.501807
Sacramento	2025 Industrial - Garbage Transfer	Aggregate	300 Diesel	9.77E-07	1.18E-06	1.41E-06	6.10E-06	9.00E-06	0.002941775	3.12E-07	2.87E-07	2.79E-08	0	95.59350128	21.72450877	0.031594772	1895.007175
Sacramento	2025 Industrial - Garbage Transfer	Aggregate	600 Diesel	1.58E-06	1.91E-06	2.27E-06	9.83E-06	5.01E-06	0.007226523	3.95E-07	2.71E-07	6.85E-08	0	234.8271142	22.79127733	0.031594772	4655.118395
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	100 Gasoline	0.000115858	0.000146117	0.000174813	0.008841188	0.000404247	0.315810859	2.20E-05	1.66E-05	3.05E-06	4.38E-06	12493.95	4376.35	12.14	293215.45
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	15 Gasoline	0.000026674	2.69E-05	0.000029353	0.000757044	1.99E-05	2.99E-08	9.69E-06	7.32E-06	1.22E-08	1.68E-08	47.843355	0	0.441971674	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	15 Diesel	2.89E-05	3.47E-05	4.15E-05	0.000182233	0.000217547	0.004417038	7.65E-06	5.78E-06	3.96E-09	3.41E-09	13.56489821	0	6.321496524	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	15 Electric	3.19E-06	2.89E-07	3.16E-06	0.000112804	3.08E-06	1.04E-08	2.88E-07	2.17E-07	2.36E-10	2.12E-09	6.070276527	0	0.153181123	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.140696392	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	25 Gasoline	0.001468332	0.001483016	0.001615581	0.039033422	0.000958752	1.45E-06	0.000470657	0.000355621	6.31E-07	8.71E-07	2478.918532	0	14.68958914	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	25 Diesel	5.44E-05	6.54E-05	7.82E-05	0.000222962	0.000414418	0.000597142	1.44E-05	1.09E-05	5.67E-09	4.88E-09	19.42308716	0	9.055437565	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	25 Electric	0.000267608	2.42E-05	0.000264904	0.006841308	0.000188036	6.02E-07	1.84E-05	1.39E-05	1.46E-08	1.31E-07	375.6958364	0	6.090198567	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.140696392	0
Sacramento	2025 Industrial - Misc - Aerial Lifts	Aggregate	50 Gasoline	0.000201427	0.000185272	0.000221658	0.016626567	0.00030616	0.157315999	1.08E-05	8.19E-06	1.91E-06	2.44E-06	6971.5	4376.35	12.14	144419.55
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	100 Gasoline	0.010969666	0.010088899	0.012071448	1.053541215	0.054792979	12.55810426	0.008875581	0.000665155	0.000121329	0.000188939	539327.65	255664.25	141.92	17896497.5
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	100 Nat Gas	0	0	0.001995397	0.922201234	0.093091492	20.06302649	0.017842797	0	0	0	1117713.95	468911.85	260.28	32823829.5
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	175 Gasoline	0.000573664	0.000527656	0.000631283	0.039435637	0.003359952	0.931015731	6.67E-05	5.04E-05	9.25E-06	1.32E-05	37646.1	9351.3	5.19	1365289.8
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	175 Nat Gas	0	0	9.11E-05	0.053869755	0.004567421	1.533344424	0.000136188	0	0	0	83840.5	17151.35	9.53	2504097.1
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	25 Gasoline	9.38E-09	9.47E-09	1.03E-08	0.000783162	5.25E-06	2.12E-07	1.90E-08	1.43E-08	1.20E-08	1.65E-08	47.14137708	0	0.113082522	0
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	25 Electric	4.95E-05	4.48E-06	4.90E-05	0.00071204	1.99E-05	5.51E-08	2.20E-06	1.66E-06	1.61E-09	1.45E-08	41.30409693	0	0.211698385	0
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	50 Gasoline	0.005199936	0.004782901	0.005722213	0.618572841	0.012264237	2.119801927	0.000146137	0.000110415	2.58E-05	4.13E-05	117756.3	72850.35	40.45	2968684.35
Sacramento	2025 Industrial - Misc - Forklifts	Aggregate	50 Nat Gas	0	0	0.000368886	0.335702053	0.016477366	3.348218593	0.029770967	0	0	0	179463.1	133597.3	74.15	5477489.3
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	100 Gasoline	4.95E-05	4.56E-05	5.45E-05	0.003658717	0.000295688	0.090624745	6.32E-06	4.77E-06	8.76E-07	1.28E-06	3650	908.85	1.28	71799.15
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	15 Gasoline	0.000305917	0.000308976	0.000336643	0.018113246	0.000158174	7.12E-06	1.52E-06	1.15E-06	2.82E-07	3.89E-07	1101.707771	0	15.29737981	0
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	15 Diesel	1.65E-05	1.99E-05	2.38E-05	0.000237738	0.000116941	0.000139613	4.91E-06	3.71E-06	2.45E-09	2.11E-09	8.406070496	0	1.536839953	0
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	175 Gasoline	6.96E-06	6.40E-06	7.66E-06	0.000664411	5.92E-05	0.018786518	1.35E-06	1.02E-06	1.87E-07	2.62E-07	748.25	80.3	0.11	13972.2
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.013518403	0
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	25 Gasoline	0.00027125	0.000273964	0.000298496	0.023936717	0.000151823	6.47E-06	5.79E-07	4.38E-07	3.66E-07	5.05E-07	1438.458199	0	5.133871724	0
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	25 Diesel	4.78E-05	5.75E-05	6.88E-05	0.000196382	0.000363588	0.00052562	0.000012227	9.24E-06	4.99E-09	4.30E-09	17.09671547	0	1.594659071	0
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.013518403	0
Sacramento	2025 Industrial - Misc - Other Material Handling Equipment	Aggregate	50 Gasoline	0.000160193	0.000147345	0.000176282	0.015555113	0.000361867	0.10591346	7.30E-06	5.52E-06	1.29E-06	1.74E-06	4953.05	2763.05	3.87	82891.5
Sacramento	2025 Industrial - Misc - Other Material Handling Equipment	Aggregate	100 Gasoline	0.000104389	9.60E-05	0.000114874	0.005686028	0.00040397	0.125289202	8.74E-06	6.60E-06	1.21E-06	1.78E-06	5088.1	1868.8	4.82	100915.2
Sacramento	2025 Industrial - Misc - Other Material Handling Equipment	Aggregate	50 Gasoline	4.13E-06	3.80E-06	4.55E-06	0.000345847	8.66E-06	0.002174188	1.50E-07	1.13E-07	2.64E-08	3.58E-08	102.2	14.6	0.04	598.6
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	100 Gasoline	0.000260341	0.000239462	0.000286849	0.016480448	0.001657525	0.549109398	3.83E-05	2.89E-05	5.31E-06	7.64E-06	21808.75	4865.45	9.42	330850.6
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	15 Gasoline	0.000123663	0.000124899	0.000136083	0.0076356	6.23E-05	3.14E-06	3.36E-07	2.39E-07	1.18E-07	1.63E-07	463.7384436	0	6.783910606	0
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	15 Diesel	6.68E-06	8.04E-06	9.61E-06	4.73E-05	5.65E-05	0.000104595	1.99E-06	1.50E-06	9.93E-10	8.55E-10	3.402510387	0	0.730454148	0
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	175 Gasoline	2.01E-06	1.84E-06	2.22E-06	0.000216707	1.95E-05	0.006392448	4.58E-07	3.46E-07	6.35E-08	8.82E-08	251.85	29.2	0.06	4088
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009517172	0
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	25 Gasoline	0.000271922	0.000274642	0.000299234	0.025983234	0.000152197	7.03E-06	6.29E-07	4.75E-07	3.96E-07	5.47E-07	1558.487249	0	6.750048346	0
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	25 Diesel	9.62E-06	1.16E-05	1.38E-05	3.95E-05	7.31E-05	0.000105722	2.46E-06	1.86E-06	1.00E-09	8.64E-10	0.343794003	0	0.150310124	0
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009517172	0
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	50 Gasoline	0.000445644	0.000410676	0.000491128	0.03931062	0.000987916	0.34234458	2.56E-05	1.78E-05	4.16E-06	5.38E-06	15359.2	5821.75	11.28	203761.35
Sacramento	2025 Industrial - Misc - Sweepers/Scrubbers	Aggregate	50 Nat Gas	0	0	0.000491128	0.039310062	0.000987916	0.342344458	2.56E-05	1.78E-05	4.16E-06	5.38E-06	15359.2	5821.75	11.28	203761.35
Sacramento	2025 Industrial - Misc - Mower	Aggregate	100 Diesel	2.77E-05	3.35E-05	3.98E-05	0.000517891	0.000356272	0.086170818	2.46E-05	2.27E-05	8.16E-07	0	2800.13575	1459.638995	2.622518272	49930.33013
Sacramento	2025 Industrial - Misc - Mower	Aggregate	175 Diesel	7.29E-06	8.82E-06	1.05E-05	0.000159851	5.67E-05	0.026473282	2.03E-06	1.87E-06	2.51E-07	0	860.2539157	369.8146825	0.584743156	17212.70115
Sacramento	2025 Industrial - Misc - Mower	Aggregate	300 Diesel	4.24E-07	5.13E-07	6.11E-07	2.13E-06	6.04E-06	0.001073992	1.94E-07	1.78E-07	1.02E-08	0	34.89722383	10.40283532	0.015797386	661698.8874
Sacramento	2025 Industrial - Misc - Mower	Aggregate	50 Diesel	0.000206057	0.000249329	0.000296722	0.002200166	0.001826367	0.279318275	7.35E-05	6.76E-05	2.65E-06	0	9076.496087	12113.92468	25.08051869	161698.8874
Sacramento	2025 Industrial - Misc - Mower	Aggregate	75 Diesel	8.16E-05	9.88E-05	0.000117533	0.001137771	0.000995585	0.187069254	2.23E-05	2.06E-05	1.77E-06	0	6078.848042	4938.545323	9.525823758	108395.107
Sacramento	2025 Industrial - Misc - Mower	Aggregate	9999 Diesel	1.53E-05	1.85E-05	2.20E-05	9.82E-05	0.000258443	0.04979407	7.30E-06	6.71E-06	4.72E-07	0	1618.066984	58.41506271	0.126370988	32075.91001
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	100 Diesel	3.81E-05	4.61E-05	5.49E-05	0.000443052	0.000393433	0.073827788	2.34E-05	2.61E-05	6.99E-07	0	2399.046856	1458.474287	3.618423929	42601.17451
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	175 Diesel	8.52E-05	0.000103084	0.000122679	0.001375321	0.000801226	0.232488061	3.83E-05	3.52E-05	2.20E-06	0	7554.740105	3385.297642	5.92533526	150505.7252
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	300 Diesel	5.77E-05	6.98E-05	8.31E-05	0.000376806	0.000652442	0.154605512	2.59E-05	2.38E-05	1.46E-06	0	5019.919072	1259.881805	2.654623949	100371.6348
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	50 Diesel	0.000195402	0.000236436	0.000281379	0.001539581	0.003350477	0.188198291	6.70E-05	6.16E-05	3.78E-06	0	6115.536309	9194.422733	23.2545851	258539.3647
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	600 Diesel	0.000153309	0.000185503	0.000220764	0.001191488	0.001412734	0.490241453	6.01E-05	5.53E-05	4.64E-06	0	15930.48155	2425.494442	4.761332052	331465.3091
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	75 Diesel	5.18E-05	6.27E-05	7.46E-05	0.000213758	0.000424767	0.10209067	2.51E-05	2.31E-05	1.78E-07	0	3344.057669	2897.812924	6.809615909	59235.0881
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	750 Diesel	3.26E-05	3.94E-05	4.69E-05	0.000234844	0.00031725	0.114551569	1.35E-05	1.24E-05	1.08E-06	0	3709.375143	323.7963881	0.71088237	73533.16299
Sacramento	2025 Industrial - Misc - Other General Industrial Equipment	Aggregate	9999 Diesel	4.94E-05	5.97E-05	7.11E-05	0.000365695	0.000925375	0.186432365	2.28E-05	2.10E-05	1.77E-06	0	6058.152231	326.4383329	0.63189544	120094.3766
Sacramento	2025 Industrial - Misc - Other Material Handling Equipment	Aggregate	100 Diesel	2.57E-05	3.11E-05	3.70E-05	4.43E-05	1.09E-05	0.010619894	2.46E-06	2.26E-06	1.01E-07	0	345.0819091	211.5856929	0.31594772	6153.108549
Sacramento	2025 Industrial - Other Truck	Aggregate	175 Diesel	2.72E-05	3.29E-05	3.91E-05	0.000526414	0.000182992	0.084869967	7.00E-06	6.44E-06	8.04E-07	0	2757.864378	952.3608855	1.011243484	55097.48783
Sacramento	2025 Industrial - Other Truck	Aggregate	300 Diesel	5.53E-05	6.69E-05	7.96E-05	0.000345287	0.000494183	0.15409827	2.02E-05	1.86E-05	1.46E-06	0	5007.450179	1122.288011	1.437562126	99265.68115
Sacramento	2025 Industrial - Other Truck	Aggregate	50 Diesel	6.12E-06	7.41E-06	8.82E-06	4.85E-05	5.44E-05	0.008720487	1.87E-06	1.72E-06	8.26E-08	0	283.3737367	471.0206578	1.805666686	5052.984758
Sacramento	2025 Industrial - Other Truck	Aggregate	600 Diesel	0.000176866	0.000214008	0.000254687	0.001179918	0.001076569	0.562855783	5.00E-05	4.60E-05	5.33E-06	0	18290.09685	2306.183348	3.682170685	365349.2553
Sacramento	2025 Industrial - Other Truck	Aggregate	75 Diesel	1.07E-05	1.29E-05	1.54E-05	0.000118934	0.000123208	0.019427891	4.70E-06	4.32E-06	1.84E-07	0	631.3127027	449.62839	0.71088237	11257.26576
Sacramento	2025 Industrial - Other Truck	Aggregate	750 Diesel	1.63E-05	1.98E-05	2.35E-05	2.39E-05	0.000157355	0.042480736	6.37E-06	5.86E-06	4.06E-07	0	1392.442136	100.2907012	0.179137264	27603.21364
Sacramento	2025 Industrial - Other Truck	Aggregate	9999 Diesel	1.41E-05	1.71E-05	2.03E-05	9.61E-05	0.000240995	0.048809313	5.63E-06	5.18E-06	4.62E-07	0	1586.067133	38.63106135	0.063189544	31441.55781
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	100 Diesel	5.01E-07	6.06E-07	7.21E-07	5.84E-06	4.11E-06	0.000983229	2.38E-07	2.19E-07	9.31E-09	0	31.95019427	16.45060119	0.031594772	569.7205624
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	175 Diesel	9.05E-06	1.09E-05	1.30E-05	0.000150328	7.85E-05	0.025532659	3.55E-06	3.26E-06	2.42E-07	0	826.6882145	295.6705658	0.505621008	19011.00177
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	300 Diesel	7.48E-06	9.05E-06	1.08E-05	5.64E-05	4.25E-05	0.027656545	1.82E-06	1.67E-06	2.62E-07	0	898.7042497	212.1425082	0.31594772	17815.55209
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	50 Diesel	2.50E-07	3.03E-07	3.60E-07	1.37E-06	1.11E-06	0.000170182	4.42E-08	4.06E-08	1.61E-09	0	5.530823329	8.238076824	0.015797386	98.60977959
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	600 Diesel	2.42E-06	2.93E-06	3.49E-06	2.19E-05	7.72E-06	0.011138633	4.64E-07	4.27E-07	1.08E-07	0	370.0007661	61.17383226	0.094784316	7334.74658
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	75 Diesel	4.49E-07	5.43E-07	6.46E-07	8.36E-06	7.02E-06	0.001475907	5.84E-08	5.37E-08	1.40E-08	0	47.9598654	41.38489153	0.079111392	814.620205
Sacramento	2025 Industrial - Railcars or Track Cars	Aggregate	9999 Diesel	1.40E-06	1.69E-06	2.02E-06	1.02E-05	3.02E-05	0.00487468	8.30E-07	7.64E-07	4.62E-08	0	158.4035671	10.75976114	0.015797386	3140.128692
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	100 Diesel	3.86E-05	4.68E-05	5.56E-05	0.000503959	0.000424393	0.092827333	2.96E-05	2.72E-05	8.79E-07	0	3016.44038	1400.181969	4.598928883	53268.4092
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	175 Diesel	8.16E-06	9.87E-06	1.17E-05	0.000123158	9.07E-05	0.023151572	4.31E-06	3.97E-06	2.02E-07	0	693.823068	252.1832092	0.632135314	13807.21383
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	300 Diesel	7.23E-06	8.75E-06	1.04E-05	5.98E-05	6.29E-05	0.02936831	2.65E-06	2.44E-06	2.78E-07	0	954.3283606	188.1322727	0.458124194	18918.22212
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	50 Diesel	5.88E-05	7.12E-05	8.47E-05	0.000532178	0.000494465	0.079036804	1.93E-05	1.77E-05	7.49E-07	0	2568.314743	2925.996022	11.07563434	44793.12536
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	600 Diesel	1.37E-06	1.66E-06	1.98E-06	1.55E-05	1.26E-05	0.004611561	6.50E-07	5.98E-07	4.37E-08	0	149.8534856	20.44436435	0.047392158	2970.635311
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	75 Diesel	2.83E-05	3.43E-05	4.08E-05	0.000410857	0.000407835	0.071655656	1.02E-05	9.43E-06	6.79E-07	0	2328.463059	1309.440568	4.281759307	41268.26802
Sacramento	2025 Industrial - Sweepers/Scrubbers	Aggregate	9999 Diesel	1.47E-06	1.77E-06	2.11E-06	1.75E-05	3.11E-05	0.005060322	7.18E-07	6.61E-07	8.77E-08	0	300.9157894	5.894499752	0.015797386	5965.233749
Sacramento	2025 Industrial - Tow Tractor	Aggregate	600 Diesel	5.60E-07	6.78E-07	8.07E-07	3.87E-06	7.79E-06	0.002067858	2.13E-07	1.96E-07	1.96E-08	0	67.19539054	8.372435158	0.015797386	1332.054434
Sacramento	2025 Industrial - Yard Goat	Aggregate	100 Diesel	5.72E-06	6.92E-06	8.24E-06	6.49E-05	5.29E-05	0.01063577	3.20E-06	2.94E-06	1.01E-07	0	345.611198	178.7469415	0.189568632	6162.773361
Sacramento	2025 Industrial - Yard Goat	Aggregate	175 Diesel	0.000532981	0.000644907	0.000767493	0.009280071	0.008305153	1.463936594	0.000160998	0.000147751	1.39E-05	0	47715.80352	34936.57666	11.83262242	944881.8043
Sacramento	2025 Industrial - Yard Goat	Aggregate	300 Diesel	0.000315335	0.000381555	0.000454082	0.00200781	0.001920315	0.912748848	8.58E-05	7.90E-05	8.65E-06	0	29659.93306	7619.018433	6.935292328	588521.106
Sacramento	2025 Industrial - Yard Goat	Aggregate	50 Diesel	2.09E-06	2.53E-06	3.02E-06	2.38E-05	1.88E-05	0.002550219	8.28E-07	7.62E-07	2.42E-08	0	82.86982408	12.76833667	0.221163404	1477.695014
Sacramento	2025 Industrial - Yard Goat	Aggregate	600 Diesel	2.64E-05	3.19E-05	3.79E-05	0.000115384	0.000131321	0.076164471	6.99E-06	6.43E-06	7.21E-07	0	2473.418006	340.8588777	0.316130074	50202.3738
Sacramento	2025 Industrial - Yard Goat	Aggregate	75 Diesel	2.87E-06	3.47E-06	4.13E-06	2.91E-05	3.12E-05	0.004535194	1.18E-06	1

Sacramento	2025 Light Commercial - Misc - Pressure Washers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	63618.04801	0
Sacramento	2025 Light Commercial - Misc - Pressure Washers	Aggregate	50 Gasoline	2.85E-05	2.62E-05	3.14E-05	0.001992878	4.79E-05	0.024879357	1.72E-06	1.30E-06	3.02E-07	3.73E-07	1065.4	423.4	3.7	12278.6	
Sacramento	2025 Light Commercial - Misc - Pressure Washers	Aggregate	50 Diesel	3.85E-06	4.58E-06	5.55E-06	5.37E-05	5.73E-05	0.009650512	1.49E-06	1.37E-06	1.21E-07	7.90E-08	313.9	481.8	3.34	18308.4	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	100 Gasoline	0.000757281	0.000696547	0.000833341	0.038238453	0.002035926	1.394760381	9.72E-05	7.35E-05	1.35E-05	1.93E-05	55144.2	9300.2	42.12	864918.6	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	15 Gasoline	0.012386172	0.012510033	0.013630226	0.800934793	0.006990116	1.82661243	2.47E-05	3.26E-05	2.98E-05	4.11E-05	116684.5421	0	2980.994215	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	15 Diesel	0.000753688	0.000906521	0.001083439	0.004631726	0.00567575	0.761972497	0.000165131	0.000218555	7.23E-06	6.23E-06	24784.50463	0	184.2962203	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	175 Gasoline	2.78E-05	2.55E-05	3.05E-05	0.002110871	0.000101131	0.063320143	4.54E-06	3.43E-06	6.29E-07	8.82E-07	2518.5	277.4	1.28	39945.6	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	2 Gasoline	0.005723863	0.005781101	0.006298762	0.353573003	0.003404421	0.158545053	1.58E-06	2.10E-06	2.59E-06	3.57E-06	9798.220715	0	1080.523543	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	855221.26618	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	25 Gasoline	9.21E-05	9.31E-05	0.000101405	0.006599065	6.60E-05	0.015042442	2.10E-07	2.78E-07	2.44E-07	3.37E-07	959.817269	0	9.926720643	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	25 Diesel	0.000613767	0.000738227	0.000882301	0.003471877	0.004581567	0.595678788	0.000125612	0.000166251	5.65E-06	4.87E-06	19375.50732	0	55.04362567	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	5 Gasoline	0.009517528	0.009612704	0.010473459	0.424132494	0.003184315	0.988894845	1.24E-05	1.64E-05	1.63E-05	2.24E-05	62980.85037	0	3272.839803	0	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	50 Gasoline	0.000489765	0.000450486	0.000538957	0.037096225	0.000772467	0.37097608	2.56E-05	1.93E-05	4.51E-06	5.73E-06	16362.95	7329.2	33.21	227205.2	
Sacramento	2025 Light Commercial - Misc - Pumps	Aggregate	50 Diesel	0.000743966	0.000885381	0.001071311	0.00800951	0.00738569	1.173439368	0.000239599	0.000220431	1.48E-05	9.60E-06	38168.05	2452.8	60.5	901053.6	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	100 Gasoline	0.000879597	0.000809053	0.000967943	0.036493691	0.002543253	1.168495052	8.15E-05	6.16E-05	1.13E-05	1.63E-05	46504.65	13994.1	67.35	979587	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	15 Gasoline	0.063779298	0.06441709	0.070185226	3.692220738	0.228803695	6.635944859	0.000145531	0.000192614	0.000120584	0.000166645	472209.6075	0	9759.561205	0	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	15 Diesel	0.000445413	0.000546679	0.000653369	0.002793361	0.003422856	0.459551133	9.96E-05	0.000131758	4.36E-06	3.76E-06	14947.71755	0	83.31493317	0	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	41598.86095	0	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	175 Gasoline	7.87E-05	7.24E-05	8.66E-05	0.00400132	0.000352767	0.14548634	1.04E-05	7.88E-06	1.45E-06	2.03E-06	5803.5	963.6	4.64	125268	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	25 Diesel	0.000755732	0.000908979	0.001088277	0.003043436	0.005643104	0.733358474	0.000154673	0.000204714	6.95E-06	6.00E-06	23853.78267	0	73.33533226	0	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	50 Gasoline	0.001196885	0.001100894	0.001317099	0.081958477	0.001887942	0.744348561	5.13E-05	3.88E-05	9.05E-06	1.16E-05	33215	13709.4	66	616923	
Sacramento	2025 Light Commercial - Misc - Welders	Aggregate	50 Diesel	0.002598532	0.003092468	0.003741886	0.026397405	0.021858016	3.337618457	0.000773623	0.000711733	4.20E-05	2.73E-05	108561.95	91370.45	142.26	4203040.7	
Sacramento	2025 Locomotive - Line Haul	Aggregate	0 Diesel	0.03082	0.037	0.044	0.213	0.882	0	0.02	0.03	0.001	0.001	0	0	0	0	
Sacramento	2025 Locomotive - Passenger	Aggregate	0 Diesel	0.003919232	0.00000387	0.00000461	0.015254983	0.07944523	0	0.001701135	0.001565045	0.0000602	0.0000532	0	0	0	0	
Sacramento	2025 Locomotive - Short Line	Aggregate	0 Diesel	0.000242451	4.87E-09	5.80E-09	0.000646535	0.006566368	0	0.000113387	0.000102476	0.00000313	0.00000277	0	0	0	0	
Sacramento	2025 Locomotive - Switcher	Aggregate	0 Diesel	0.001649679	0.000000102	1.21E-07	0.004419655	0.025821533	0	0.000553541	0.000509258	0.0000149	0.0000132	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - A/C Unit	Aggregate	100 Diesel	3.04E-06	3.62E-06	4.38E-06	6.19E-05	4.10E-05	0.01088488	1.62E-06	1.49E-06	1.25E-07	8.91E-08	354.05	98.55	0.33	9953.55	
Sacramento	2025 Military Tactical Support - Misc - A/C Unit	Aggregate	300 Diesel	1.60E-06	1.90E-06	2.30E-06	1.60E-05	1.67E-05	0.009201651	4.69E-07	4.32E-07	1.03E-07	7.53E-08	299.3	54.75	0.16	11388	
Sacramento	2025 Military Tactical Support - Misc - A/C Unit	Aggregate	600 Diesel	9.33E-07	1.11E-06	1.34E-06	9.39E-06	9.29E-06	0.005349848	2.74E-07	2.52E-07	5.37E-08	4.50E-08	178.85	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Aircraft Support	Aggregate	100 Diesel	5.56E-07	6.62E-07	8.01E-07	1.13E-05	7.50E-06	0.001795444	2.96E-07	2.72E-07	2.28E-08	1.47E-08	58.4	0	0.09	0	
Sacramento	2025 Military Tactical Support - Misc - Aircraft Support	Aggregate	175 Diesel	1.24E-06	1.48E-06	1.79E-06	2.93E-05	1.32E-05	0.005835193	5.38E-07	4.95E-07	6.44E-08	4.77E-08	189.8	51.1	0.16	7154	
Sacramento	2025 Military Tactical Support - Misc - Cart	Aggregate	100 Diesel	2.84E-07	3.38E-07	4.09E-07	5.79E-06	3.83E-06	0.000897722	1.51E-07	1.39E-07	1.16E-08	7.55E-09	29.2	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Cart	Aggregate	175 Diesel	1.02E-07	1.21E-07	1.47E-07	2.40E-06	1.08E-06	0	4.41E-08	4.06E-08	5.27E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Cart	Aggregate	300 Diesel	3.52E-07	4.19E-07	5.07E-07	3.52E-06	3.69E-06	0.001795444	1.03E-07	9.51E-08	2.26E-08	1.47E-08	58.4	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Communications	Aggregate	100 Diesel	1.40E-07	1.67E-07	2.02E-07	2.86E-06	1.89E-06	0	7.47E-08	6.87E-08	5.75E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Communications	Aggregate	50 Diesel	8.25E-08	9.82E-08	1.19E-07	1.05E-06	1.00E-06	0	2.66E-08	2.44E-08	2.11E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Compressor	Aggregate	100 Diesel	3.13E-06	3.73E-06	4.51E-06	6.38E-05	4.22E-05	0.011109311	1.67E-06	1.53E-06	1.28E-07	9.09E-08	361.35	138.7	0.49	9847.7	
Sacramento	2025 Military Tactical Support - Misc - Compressor	Aggregate	175 Diesel	1.48E-07	1.77E-07	2.14E-07	3.49E-06	1.57E-06	0	6.42E-08	5.91E-08	7.68E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Compressor	Aggregate	300 Diesel	3.19E-07	3.80E-07	4.59E-07	3.19E-06	3.34E-06	0.001795444	9.36E-08	8.61E-08	2.05E-08	1.47E-08	58.4	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Compressor	Aggregate	50 Diesel	1.01E-07	1.20E-07	1.46E-07	1.29E-06	1.23E-06	0	3.25E-08	2.99E-08	2.59E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Compressor	Aggregate	600 Diesel	1.82E-06	2.16E-06	2.62E-06	1.83E-05	1.81E-05	0.01088488	5.33E-07	4.91E-07	1.05E-07	8.91E-08	354.05	0	0.09	0	
Sacramento	2025 Military Tactical Support - Misc - Crane	Aggregate	100 Diesel	2.59E-07	3.09E-07	3.74E-07	9.63E-06	4.35E-06	0.001683229	4.31E-08	3.96E-08	2.01E-08	1.38E-08	54.75	0	0.06	0	
Sacramento	2025 Military Tactical Support - Misc - Crane	Aggregate	175 Diesel	4.81E-08	5.73E-08	6.93E-08	2.14E-06	3.04E-07	0	9.07E-09	8.35E-09	4.86E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Crane	Aggregate	300 Diesel	4.68E-08	5.57E-08	6.73E-08	7.39E-07	2.49E-07	0	7.74E-09	7.12E-09	4.92E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Deicer	Aggregate	100 Diesel	1.29E-07	1.53E-07	1.85E-07	2.62E-06	1.73E-06	0	6.84E-08	6.30E-08	5.27E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Generator	Aggregate	100 Diesel	1.63E-05	1.94E-05	2.35E-05	0.000331974	0.000219734	0.058015289	8.68E-06	7.98E-06	6.68E-07	4.75E-07	1887.05	660.65	2.22	54833.95	
Sacramento	2025 Military Tactical Support - Misc - Generator	Aggregate	175 Diesel	1.77E-05	2.12E-05	2.54E-05	0.000415605	0.000187324	0.082702646	7.64E-06	7.03E-06	9.14E-07	6.77E-07	2690.05	532.9	1.79	78336.3	
Sacramento	2025 Military Tactical Support - Misc - Generator	Aggregate	300 Diesel	5.70E-06	6.79E-06	8.21E-06	5.69E-05	5.97E-05	0.033103501	1.67E-06	1.54E-06	3.66E-07	2.71E-07	1076.75	127.75	0.47	28488.25	
Sacramento	2025 Military Tactical Support - Misc - Generator	Aggregate	50 Diesel	5.29E-07	6.30E-07	7.62E-07	6.75E-06	6.43E-06	0.001234368	1.70E-07	1.57E-07	1.35E-08	1.01E-08	40.15	0	0.07	0	
Sacramento	2025 Military Tactical Support - Misc - Generator	Aggregate	600 Diesel	3.51E-06	4.18E-06	5.06E-06	3.54E-05	3.50E-05	0.020647608	1.03E-06	9.49E-07	2.02E-07	1.67E-07	671.6	58.4	0.16	20323.2	
Sacramento	2025 Military Tactical Support - Misc - Generator	Aggregate	750 Diesel	1.87E-07	2.23E-07	2.70E-07	1.87E-06	1.89E-06	0.001346583	5.52E-08	5.07E-08	1.10E-08	1.10E-08	43.8	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Hydraulic Unit	Aggregate	100 Diesel	1.86E-06	2.21E-06	2.68E-06	3.79E-05	2.51E-05	0.006508485	9.90E-07	9.11E-07	7.63E-08	5.33E-08	211.7	58.4	0.17	5548	
Sacramento	2025 Military Tactical Support - Misc - Lift	Aggregate	100 Diesel	5.55E-08	6.61E-08	7.99E-08	1.13E-06	7.49E-07	0	2.96E-08	2.72E-08	2.28E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Light	Aggregate	50 Diesel	1.29E-07	1.53E-07	1.86E-07	1.64E-06	1.57E-06	0	4.15E-08	3.82E-08	3.30E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	100 Diesel	3.68E-07	4.39E-07	5.31E-07	7.52E-06	4.98E-06	0.001683229	1.97E-07	1.81E-07	1.51E-08	1.38E-08	54.75	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	175 Diesel	5.26E-07	6.26E-07	7.58E-07	1.24E-05	5.58E-06	0.001907659	2.28E-07	2.09E-07	2.72E-08	1.56E-08	62.05	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	300 Diesel	2.34E-07	2.78E-07	3.37E-07	2.34E-06	2.45E-06	0.001683229	6.86E-08	6.31E-08	1.50E-08	1.38E-08	54.75	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	50 Diesel	2.58E-08	3.07E-08	3.71E-08	3.29E-07	3.13E-07	0	8.30E-09	7.64E-09	6.60E-10	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	600 Diesel	9.40E-08	1.12E-07	1.35E-07	9.47E-07	9.37E-07	0	2.76E-08	2.54E-08	5.41E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	750 Diesel	1.10E-07	1.31E-07	1.58E-07	1.10E-06	1.11E-06	0	3.23E-08	2.97E-08	6.43E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Pressure Washers	Aggregate	175 Diesel	1.01E-07	1.21E-07	1.46E-07	2.38E-06	1.07E-06	0	4.38E-08	4.03E-08	5.24E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Pump	Aggregate	100 Diesel	1.31E-06	1.56E-06	1.89E-06	2.68E-05	1.77E-05	0.00448861	7.00E-07	6.44E-07	5.39E-08	3.67E-08	146	54.75	0.16	5475	
Sacramento	2025 Military Tactical Support - Misc - Pump	Aggregate	50 Diesel	1.17E-06	1.39E-06	1.68E-06	1.49E-05	1.42E-05	0.001907659	3.76E-07	3.45E-07	2.99E-08	1.56E-08	62.05	58.4	0.16	2277.6	
Sacramento	2025 Military Tactical Support - Misc - Start Cart	Aggregate	100 Diesel	2.92E-08	3.48E-08	4.21E-08	5.95E-07	3.94E-07	0	1.56E-08	1.43E-08	1.20E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Start Cart	Aggregate	600 Diesel	4.93E-08	5.86E-08	7.10E-08	4.96E-07	4.91E-07	0	1.45E-08	1.33E-08	2.84E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Test Stand	Aggregate	100 Diesel	8.87E-07	1.06E-06	1.28E-06	1.81E-05	1.20E-05	0.003029812	4.72E-07	4.34E-07	3.64E-08	2.48E-08	98.55	29.2	0.14	2686.4	
Sacramento	2025 Military Tactical Support - Misc - Test Stand	Aggregate	175 Diesel	6.31E-08	7.51E-08	9.09E-08	1.48E-06	6.68E-07	0	2.73E-08	2.51E-08	3.26E-09	0	0	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Test Stand	Aggregate	300 Diesel	1.09E-06	1.30E-06	1.57E-06	1.09E-05	1.14E-05	0.00594709	3.20E-07	2.95E-07	7.02E-08	4.87E-08	193.45	14.6	0.13	2876.2	
Sacramento	2025 Military Tactical Support - Misc - Test Stand	Aggregate	600 Diesel	7.17E-07	8.53E-07	1.03E-06	7.22E-06	7.14E-06	0.003927534	2.10E-07	1.93E-07	4.13E-08	3.21E-08	127.75	0	0	0	
Sacramento	2025 Military Tactical Support - Misc - Welder	Aggregate	100 Diesel	1.05E-06	1.25E-06	1.51E-06	2.14E-05	1.42E-05	0.003703104	5.59E-07	5.15E-07	4.31E-08	3.03E-08	120.45	58.4	0.16	3620.8	
Sacramento	2025 Military Tactical Support - Misc - Welder	Aggregate	50 Diesel	3.79E-07	4.51E-07	5.46E-07	4.83E-06	4.61E-06	0	1.22E-07	1.12E-07	9.70E-09	0	0	0	0	0	
Sacramento	2025 Ocean Going Vessels - Bulk Cargo	Aggregate	0 Diesel	0.001065373	0.001319997	0.001577232	0.002500399	0.024149005	1.104534568	0.000337969	0.000310931	0.00070218	3.13E-05	35926.94255	841.451042	0	597102.6745	
Sacramento	2025 Ocean Going Vessels - General Cargo	Aggregate	0 Diesel	0.001376832	0.001773532	0.002117311	0.002374014	0.023452355	1.541678386	0.000461311	0.000424408	0.000951872	4.06E-05	50145.65652	897.5865943	0	822638.4742	
Sacramento	2025 Ocean Going Vessels - Tanker	Aggregate	Handysize 0 Diesel	0.000979312	0.001274304	0.001522658	0.002317062	0.023107901	1.055668988	0.000319344	0.000293796	0.000646805	3.03E-05	34337.50903	427.0042876	0	572876.1983	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	100 Diesel	1.59E-05	1.92E-05	2.29E-05	0.000276199	0.000183943	0.045720069	1.49E-05	1.37E-05	4.33E-07	0	1485.681609	588.9242141	1.119387066	26491.96292	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	175 Diesel	0.000168788	0.000202937	0.000242853	0.001211123	0.001622391	0.536651221	9.91E-05	9.26E-05	5.08E-06	0	17438.57506	4912.14755	7.259323933	342276.4263	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	300 Diesel	0.000333474	0.000403504	0.000480203	0.002227776	0.002915801	0.902655	0.000140028	0.000128826	8.55E-06	0	29331.9317	5011.295356	7.683131246	581464.4331	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	50 Diesel	1.76E-05	2.13E-05	2.54E-05	0.000217709	0.000179578	0.028493549	6.77E-06	6.23E-06	2.70E-07	0	925.9028343	721.4331102	1.698380376	16510.2559	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	600 Diesel	0.000688788	0.000833433	0.000991855	0.004588424	0.005367444	2.156207158	0.000295963	0.000268788	2.04E-05	0	70066.33332	6463.056488	10.81129051	1381785.746	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	75 Diesel	2.51E-05	3.04E-05	3.62E-05	0.000379006	0.000325671	0.064612934	4.97E-06	4.58E-06	6.12E-07	0	2099.608555	1135.156835	2.239002345	35861.80401	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	750 Diesel	8.84E-05	0.000106927	0.000127252	0.000647699	0.000796905	0.338046083	3.45E-05	3.17E-05	3.21E-06	0	11017.36163	652.2408205	1.119387066	218403.752	
Sacramento	2025 Oil Drilling - Drill Rig	Aggregate	9999 Diesel	7.01E-05	8.48E-05	0.000100905	0.000509318	0.001345224	0.313193139	3.26E-05	3.00E-05	2.95E-06	0	10155.67836	464.8053984	0.771991036	200925.6169	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	100 Diesel	1.45E-05	1.76E-05	2.09E-05	0.000200769	0.000165273	0.031671038	1.18E-05	1.08E-05	3.00E-07	0	1029.155909	435.3312267	0.771991038	18351.41528	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	175 Diesel	0.000232665	0.000281524	0.000335037	0.003719753	0.002144918	0.622206889	9.97E-05	9.17E-05	5.89E-06	0	20218.72143	5572.118804	8.609008922	393277.7373	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	300 Diesel	0.000237552	0.000287439	0.000342076	0.001687375	0.001969084	0.724819156	9.18E-05	8.45E-05	6.87E-06	0	23553.13493	3921.648427	6.256474411	448863.2423	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	50 Diesel	1.65E-05	2.00E-05	2.38E-05	0.000173633	0.000145973	0.023115426	6.07E-06	5.59E-06	2.19E-07	0	751.1398013	673.8134369	1.543982116	13393.9652	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	600 Diesel	0.000790447	0.000960797	0.001143428	0.003659934	0.005710298	2.363753132	0.000312821	0.000287795	2.24E-05	0	76772.22612	7184.527978	12.35669583	1507938.329	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	75 Diesel	2.65E-05	3.22E-05	3.81E-05	0.000347607	0.000334627	0.057145354	5.16E-06	4.82E-06	5.41E-07	0	1856.94825	1008.125941	1.960877254	33112.21186	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	750 Diesel	0.000150287	0.000181847	0.000216413	0.001254639	0.00153886	0.435223949	6.94E-05	6.38E-05	4.12E-06	0	14142.67816	852.5632302	1.544940149	279934.2372	
Sacramento	2025 Oil Drilling - Drill Rig (Mobile)	Aggregate	9999 Diesel	0.000117247	0.000141869	0.000168836	0.000688017	0.002017239	0.36548922	4.86E-05	4.47E-05	3.46E-06	0	11876.63598	615.641372	1.15798662	235437.6615	
Sacramento	2025 Oil Drilling - Misc - Compressors (Workover)	Aggregate	25 Diesel	4.22E-06	5.03E-06	6.08E-06	2.08E-05	3.86E-05	0.003815319	1.54E-06	1.42E-06	6.32E-08	3.12E-08	124.1	240.9	0.32	5781.6	
Sacramento	2025 Oil Drilling - Misc - Generator (Drilling)	Aggregate	50 Diesel	2.92E-06	3.47E-06	4.20E-06	3.03E-05	2.21E-05	0.003590888	6.97E-07	6.41E-07	4.17E-08	2.94E-08	116.8	116.8	0	3854.4	
Sacramento	2025 Oil Drilling - Workover Rig (Mobile)	Aggregate	100 Diesel	1.10E-05	1.33E-05	1.58E-05	0.000100433	0.000100402	0.015914425	1.01E-05	9.27E-06	1.51E-07	0	517.1420017	229.1038137	0.231597324	9221.428502	
Sacramento	2025 Oil Drilling - Workover Rig (Mobile)	Aggregate	175 Diesel	3.95E-06	4.78E-06	5.69E-06	6.12E-05	3.62E-05	0.010021719	1.99E-06	1.81E-06	9.46E-08	0	325.6572095	84.05962369	0.154398216	6455.763888	
Sacramento	2025 Oil Drilling - Workover Rig (Mobile)	Aggregate	300 Diesel	0.000109163	0.000132087	0.000157195	0.000725193	0.001004592	0.2387249	5.53E-05	5.08E-05	2.26E-06	0	7757.407275	1216.310792	1.816016742	144302.7921	
Sacramento	2025 Oil Drilling - Workover Rig (Mobile)	Aggregate	50 Diesel	4.52E-07	5.46E-07	6.50E-07	6.41E-06	4.84E-06	0.000927526	1.12E-07	1.03E-07	8.79E-09	0	30.14012774	21.93650297	0.038595554	537.4443229	
Sacramento	2025 Oil Drilling - Workover Rig (Mobile)	Aggregate	600 Diesel	0.001773802	0.002145695	0.002555354	0.017064936	0.010189613	5.590678671	0.000651804	0.000598956	5.38E-05	0	181670.0788	16882.56991	21.70149483	3540246.862	
Sacramento	2025 Oil Drilling - Workover Rig (Mobile)	Aggregate	750 Diesel	7.91E-05	9.57E-05	0.000113941	0.000649218	0.000827053	0.190737528	3.77E-05	3.46E-05	1.81E-06	0	6198.049254	378.2626531	0.656703991	123429.7832	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	120 Gasoline	0.379936628	0.383735993	0.418097081	1.270918239	0.025969094	4.221020937	0.019459597	0.014702809	7.20E-05	9.93E-05	28136B.4672	0	1468.016888	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	120 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	15 Gasoline	1.98E-06	2.00E-06	2.18E-06	4.96E-05	9.59E-07	0.000121829	9.80E-09	7.40E-09	2.18E-09	3.00E-09	7.710732283	0	0.340856421	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	15 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	175 Gasoline	0.129802401	0.131100426	0.142839626	1.234273807	0.07182045	6.507308795	0.011594988	0.008760588	8.46E-05	0.000116798	331941.8911	0	1381.349268	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2025 Pleasure Craft - Personal Water Craft	Aggregate	250 Gasoline	0.154348289	0.155891772	0.169850877	1.997809122	0.048166111	10.49802298	0.001047887	0.000791737	0.000134378	0.000185492	528731.4742	0	1773.665796

Sacramento	2025 Portable Equipment - Non-Rental Generator	Aggregate	75	Diesel	0.000841486	0.001018199	0.00121174	0.012505348	0.009023811	1.684491703	0.000210879	0.000194009	1.56E-05	1.38E-05	54791.07525	52913.9779	38.15602807	3426526.964
Sacramento	2025 Portable Equipment - Non-Rental Generator	Aggregate	750	Diesel	0.000614552	0.000743608	0.000884955	0.003760822	0.004039681	1.739934799	0.000250256	0.000230236	1.61E-05	1.42E-05	56594.46011	4960.685428	3.577127632	3539307.135
Sacramento	2025 Portable Equipment - Non-Rental Generator	Aggregate	9999	Diesel	0.003425806	0.004145226	0.004933161	0.023655792	0.048633155	11.11552536	0.001055445	0.000971009	0.000102928	9.10E-05	361552.1437	18189.1799	13.11613465	22610765.78
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	100	Diesel	0.000146523	0.000177293	0.000210994	0.005863749	0.002738527	0.919479971	0.000185326	0.0001705	8.52E-06	7.52E-06	29907.71411	20848.30619	64.38829737	1870370.099
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	175	Diesel	0.00016538	0.00074461	0.000886147	0.02207172	0.007765019	3.968612619	0.000306704	0.000282168	3.68E-05	3.25E-05	129086.1524	60614.51985	187.2030127	8072796.158
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	300	Diesel	0.000308162	0.000372876	0.000443753	0.002723753	0.003372694	1.300978493	0.000131431	0.000120916	1.20E-05	1.06E-05	42316.62903	11196.31258	34.57890044	2646399.431
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	600	Diesel	0.000320848	0.000388226	0.000462022	0.003153913	0.003304583	1.522567455	0.000125649	0.000115597	1.41E-05	1.25E-05	49524.20237	7335.515141	22.65514167	3097147.008
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	75	Diesel	0.000170466	0.000206263	0.00024547	0.004069877	0.003190473	0.638115292	6.40E-05	5.89E-05	5.91E-06	5.22E-06	20755.82675	19600.06096	60.81116974	1298029.104
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	750	Diesel	6.63E-05	8.02E-05	9.54E-05	0.000986434	0.000396849	0.527320811	2.35E-05	2.16E-05	4.89E-06	4.31E-06	17152.04308	1544.318977	4.769503509	1072655.315
Sacramento	2025 Portable Equipment - Non-Rental Other	Aggregate	9999	Diesel	0.00257733	0.003118569	0.003711354	0.028475517	0.050126357	14.56033656	0.00073977	0.000680589	0.000134884	0.000119143	473600.7275	9651.993607	29.80939693	29618065.63
Sacramento	2025 Portable Equipment - Non-Rental Pump	Aggregate	100	Diesel	0.000110264	0.00013342	0.00015878	0.003537626	0.001935411	0.557255214	0.000122203	0.000112427	5.16E-06	4.56E-06	18125.71253	13154.77351	40.54077982	1133546.703
Sacramento	2025 Portable Equipment - Non-Rental Pump	Aggregate	175	Diesel	0.000235718	0.000285218	0.000339433	0.007671071	0.003060654	1.372248119	0.000110341	0.000101514	1.27E-05	1.12E-05	44634.7998	22053.59088	67.965425	2791373.309
Sacramento	2025 Portable Equipment - Non-Rental Pump	Aggregate	300	Diesel	5.07E-05	6.14E-05	7.31E-05	0.000635794	0.000431273	0.331567806	1.40E-05	1.28E-05	3.07E-06	2.71E-06	10784.82998	3095.240825	9.539007018	674462.2287
Sacramento	2025 Portable Equipment - Non-Rental Pump	Aggregate	50	Diesel	1.62E-05	1.97E-05	2.34E-05	9.66E-05	8.53E-05	0.010604414	5.48E-06	5.04E-06	9.78E-08	8.68E-08	344.9275517	386.9051032	1.192375877	19403.40129
Sacramento	2025 Portable Equipment - Non-Rental Pump	Aggregate	600	Diesel	0.000269578	0.000326189	0.000388192	0.003332729	0.001367154	1.746931186	6.47E-05	5.96E-05	1.62E-05	1.43E-05	56822.02999	8125.007166	25.03989342	3553538.912
Sacramento	2025 Portable Equipment - Non-Rental Pump	Aggregate	75	Diesel	0.00015182	0.000183702	0.00021862	0.003639343	0.002923284	0.575760437	6.33E-05	5.83E-05	5.33E-06	4.71E-06	18727.62766	18184.53985	56.04166623	1171189.302
Sacramento	2025 Portable Equipment - Rental Compressor	Aggregate	100	Diesel	2.47E-05	2.98E-05	3.55E-05	0.000942339	0.00033539	0.137383183	2.56E-05	2.35E-05	1.27E-06	1.12E-06	4468.631272	3247.342973	5.963879386	279459.4827
Sacramento	2025 Portable Equipment - Rental Compressor	Aggregate	175	Diesel	0.000139761	0.000169111	0.000201256	0.007277221	0.000894987	1.339886332	2.19E-05	2.02E-05	1.24E-05	1.10E-05	43582.17539	20133.52643	36.96365219	2725544.232
Sacramento	2025 Portable Equipment - Rental Compressor	Aggregate	300	Diesel	0.000106255	0.000128569	0.000153007	0.001786828	0.000215007	0.955277469	1.58E-05	1.46E-05	8.85E-06	7.82E-06	31072.09111	7793.623135	14.30851053	1943187.965
Sacramento	2025 Portable Equipment - Rental Compressor	Aggregate	600	Diesel	0.000301467	0.000364775	0.000434112	0.003659926	0.000483249	1.88141305	3.43E-05	3.16E-05	1.74E-05	1.54E-05	61196.28073	7144.154541	13.11613465	3827096.645
Sacramento	2025 Portable Equipment - Rental Compressor	Aggregate	75	Diesel	2.34E-05	2.83E-05	3.37E-05	0.000551173	0.000418068	0.0861447	3.52E-06	3.24E-06	7.98E-07	7.05E-07	2802.008886	2597.874378	4.769503509	175232.1698
Sacramento	2025 Portable Equipment - Rental Compressor	Aggregate	750	Diesel	0.000158224	0.000191451	0.000227842	0.002093236	0.000324171	1.095222575	2.71E-05	2.49E-05	1.01E-05	8.96E-06	35624.0535	3247.342973	5.963879386	2227858.813
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	100	Diesel	0.000691519	0.000836738	0.000995788	0.019921438	0.00713612	2.721084532	0.000596281	0.000548579	2.52E-05	2.23E-05	88508.09242	58444.06279	39.34840395	5535123.445
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	175	Diesel	0.000815642	0.001030487	0.001226365	0.028279645	0.003748556	4.631781886	0.000108523	9.98E-05	4.29E-05	3.79E-05	150656.907	67299.22382	45.31028333	9421789.073
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	300	Diesel	0.000635963	0.000769515	0.000915786	0.005643807	0.00130536	2.506262069	6.61E-05	6.08E-05	2.32E-05	2.05E-05	81520.61144	24794.45088	16.69326228	5098140.015
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	600	Diesel	0.001247242	0.001509163	0.001796029	0.010772362	0.00288931	5.135654085	0.000373441	0.000159566	4.76E-05	4.20E-05	167046.2425	24794.45088	16.69326228	10446746.14
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	75	Diesel	0.000464043	0.000561492	0.000668222	0.008067975	0.005823343	1.155325685	4.89E-05	4.50E-05	1.07E-05	9.45E-06	37579.01357	35420.64412	23.84751754	2350118.202
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	750	Diesel	0.000496698	0.000601004	0.000715245	0.00261612	0.003809154	1.210341194	0.000190929	0.000175655	1.12E-05	9.90E-06	39368.4904	3542.064412	2.384751754	2462028.593
Sacramento	2025 Portable Equipment - Rental Generator	Aggregate	9999	Diesel	0.000573964	0.000694497	0.000826509	0.003176717	0.007349374	1.468700021	0.000199902	0.000183935	1.36E-05	1.20E-05	47804.59549	3542.064412	2.384751754	2989606.148
Sacramento	2025 Portable Equipment - Rental Other	Aggregate	100	Diesel	6.42E-05	7.77E-05	9.25E-05	0.001931989	0.000595627	0.256032466	5.27E-05	4.84E-05	2.37E-06	2.10E-06	8327.909308	6126.849427	4.769503509	520811.2027
Sacramento	2025 Portable Equipment - Rental Other	Aggregate	175	Diesel	0.000270859	0.000327739	0.000390037	0.006035371	0.001976375	0.92745684	6.39E-05	5.87E-05	8.59E-06	7.59E-06	30167.1759	12253.69885	9.539007018	1886596.333
Sacramento	2025 Portable Equipment - Rental Other	Aggregate	75	Diesel	0.000148992	0.000180281	0.000214549	0.00233574	0.001694603	0.322739914	2.70E-05	2.48E-05	2.98E-06	2.63E-06	10465.16037	10721.9865	8.34663114	654470.7149
Sacramento	2025 Portable Equipment - Rental Pump	Aggregate	100	Diesel	0.000260874	0.000315658	0.000375659	0.007864663	0.00226805	1.073513643	0.000208243	0.000191583	9.94E-06	8.78E-06	34917.93205	26288.37558	26.2322693	2183699.355
Sacramento	2025 Portable Equipment - Rental Pump	Aggregate	175	Diesel	0.000240112	0.000290535	0.000345761	0.005879154	0.002195178	0.939766334	7.57E-05	6.97E-05	8.70E-06	7.69E-06	30567.56401	15534.04011	15.5008864	1911635.824
Sacramento	2025 Portable Equipment - Rental Pump	Aggregate	300	Diesel	0.000357445	0.000432509	0.000514721	0.002475461	0.002302943	1.113578917	0.000505974	9.71E-05	1.03E-05	9.11E-06	36221.126	10754.33546	10.73138289	2265198.563
Sacramento	2025 Portable Equipment - Rental Pump	Aggregate	600	Diesel	9.06E-05	0.000109658	0.000130502	0.000827069	0.000144289	0.39476078	1.33E-05	1.22E-05	3.66E-06	3.23E-06	12840.29334	2389.852325	2.384751754	803006.8978
Sacramento	2025 Portable Equipment - Rental Pump	Aggregate	75	Diesel	0.000163089	0.000197338	0.000234848	0.003810927	0.003060969	0.594497951	7.92E-05	7.28E-05	5.51E-06	4.86E-06	19337.03848	16728.96628	16.69326228	1209304.418
Sacramento	2025 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	120	Gasoline	0.003516624	0.00355179	0.003869829	0.077696057	0.001857757	1.441408358	0.000183173	0.000138398	1.78E-05	2.08E-05	58772.73755	0	1790.359774	0
Sacramento	2025 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	15	Gasoline	0.002120403	0.002141608	0.002333375	0.025213266	0.000510364	0.361398946	5.94E-05	4.49E-05	5.08E-06	5.48E-06	15233.07656	0	716.3165844	0
Sacramento	2025 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	25	Gasoline	0.001364669	0.001378113	0.001501514	0.011291774	0.000207719	0.149878003	2.90E-05	2.19E-05	2.24E-06	2.33E-06	6429.499415	0	374.7632244	0
Sacramento	2025 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	50	Gasoline	0.009230166	0.009322467	0.010157233	0.172000165	0.003733328	2.970278522	0.000377905	0.000285529	3.66E-05	4.37E-05	122066.9166	0	4957.19688	0
Sacramento	2025 Recreational - Golf Carts	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Golf Carts	Aggregate	15	Gasoline	0.001863001	0.001881632	0.002050119	0.051334702	0.001437348	0.622787372	0.000139019	0.000105037	5.28E-06	9.32E-06	26479.77086	0	704.7405673	0
Sacramento	2025 Recreational - Golf Carts	Aggregate	25	Gasoline	0.000552001	0.00055752	0.000607444	0.015210282	0.000425881	0.184529591	4.12E-05	3.11E-05	1.57E-06	2.76E-06	7845.858024	0	117.4567612	0
Sacramento	2025 Recreational - Golf Carts	Aggregate	5	Gasoline	4.26E-05	4.31E-05	4.69E-05	0.001194051	3.33E-05	0.006590343	3.20E-06	2.42E-06	1.68E-07	1.14E-07	321.3390645	0	16.77953732	0
Sacramento	2025 Recreational - Golf Carts	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Minibikes	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Minibikes	Aggregate	15	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Minibikes	Aggregate	25	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Minibikes	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Minibikes	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Off-Road Motorcycles Active	Aggregate	120	Gasoline	0.006589725	0.006655622	0.00725159	0.033921971	0.000235024	0.257182446	9.52E-05	7.19E-05	4.59E-06	4.83E-06	12438.09296	0	419.4569619	0
Sacramento	2025 Recreational - Off-Road Motorcycles Active	Aggregate	15	Gasoline	0.000683617	0.000690454	0.000752279	0.00745665	8.98E-05	0.052153391	1.64E-05	1.24E-05	1.60E-06	1.10E-06	2471.208115	0	120.9870528	0
Sacramento	2025 Recreational - Off-Road Motorcycles Active	Aggregate	25	Gasoline	0.001847722	0.001866199	0.002033305	0.004534989	2.36E-05	0.021490386	2.25E-05	1.70E-05	8.57E-07	5.74E-07	1307.802656	0	55.98760952	0
Sacramento	2025 Recreational - Off-Road Motorcycles Active	Aggregate	5	Gasoline	0.002011521	0.002031637	0.002213556	0.013822038	6.39E-05	0.075502497	5.67E-05	4.29E-05	2.23E-06	1.74E-06	3887.968784	0	187.0848225	0
Sacramento	2025 Recreational - Off-Road Motorcycles Active	Aggregate	50	Gasoline	0.009334906	0.009428254	0.010272493	0.031084678	0.000253449	0.226195733	0.000118318	8.94E-05	6.11E-06	4.81E-06	11473.31749	0	405.1437403	0
Sacramento	2025 Recreational - Snowmobiles Active	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	1.25E-08	0	0	0	0
Sacramento	2025 Recreational - Snowmobiles Active	Aggregate	15	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Snowmobiles Active	Aggregate	25	Gasoline	0	0	0	0	0	0	0	0	0	1.04E-08	0	0	0	0
Sacramento	2025 Recreational - Snowmobiles Active	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2025 Recreational - Snowmobiles Active	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	8.15E-08	0	0	0	0
Sacramento	2025 Transport Refrigeration Unit - Instate Genset	Aggregate	25	Diesel	0.000192014	0.001959983	0.000276421	0.000213296	0.003227375	0.51556148	0.000103214	9.50E-05	809.28	1.15E-08	16769.55	35625.86	45.561	0
Sacramento	2025 Transport Refrigeration Unit - Instate Genset	Aggregate	50	Diesel	0.000188642	0.0019045	0.00026858	0.0002071	0.0018775	0.337269573	0.000040789	0.000037518	529.4	7.56E-09	10970.29	20911.2	26.7	0
Sacramento	2025 Transport Refrigeration Unit - Instate Trailer	Aggregate	25	Diesel	0.00403076	0.0411912	0.00580793	0.00448089	0.0432581	6.910854218	0.001370809	0.001261174	10849.13	1.55E-07	224787.77	342587.67	192.17	0
Sacramento	2025 Transport Refrigeration Unit - Instate Trailer	Aggregate	50	Diesel	0.00710709	0.07162222	0.010234771	0.007896771	0.06488474	11.75732489	0.00103408	0.000951758	18457.51	2.64E-07	382427.81	506232.31	284.03	0
Sacramento	2025 Transport Refrigeration Unit - Instate Truck	Aggregate	23	Diesel	0.0007955	0.0081176	0.00114512	0.0008834	0.0103544	1.653834349	0.000553607	0.000488818	2596.2	3.71E-08	53793.24	97100.17	101.91	0
Sacramento	2025 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	25	Diesel	0.000178969	0.001827391	0.000257843	0.00019896	0.002864163	0.45754865	9.97E-05	9.16E-05	718.26	1.03E-08	14882.58	31617.13	254.89558	0
Sacramento	2025 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	50	Diesel	0.00014185	0.0014496	0.00020431	0.00015759	0.0013646	0.223670529	0.000038675	0.000035574	351.05	5.02E-09	7275.28	13697.08	110.39	0
Sacramento	2025 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	25	Diesel	0.004204785	0.04292511	0.006051608	0.004670019	0.044551188	7.120268183	0.001514084	0.001394014	11177.89	1.60E-07	231599.33	352968.84	1297.59	0
Sacramento	2025 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	50	Diesel	0.0022453	0.022934	0.0032343	0.0024961	0.018678	3.170810013	0.00043239	0.00039784	4977.71	7.11E-08	103136.21	136842.85	503.02	0
Sacramento	2025 Transport Refrigeration Unit - Railcar TRU	Aggregate	25	Diesel	0.000214202	0.00218584	0.00030828	0.00023792	0.002082597	0.333070569	7.88E-05	7.25E-05	522.82	7.47E-09	10833.71	16511.12	50.34276	0
Sacramento	2025 Transport Refrigeration Unit - Railcar TRU	Aggregate	50	Diesel	3.43E-05	0.000350199	0.000049473	3.81E-05	0.000326091	0.064420167	3.49E-06	3.21E-06	101.07	1.45E-09	2095.38	2836.09	8.63534	0

OFFROAD 2026

		Equipment Type	Horsepower HP	Gas				Diesel				Natural Gas			
				Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr
Air Compressors25	Air Compressors25	Air Compressors	25	28372.3195	100.2377679		0	2619.101669	4.96362682		0	0	0	0	0
Air Compressors50	Air Compressors50	Air Compressors	50	13563.4	12.36	5967.75	2.272782875	23130.05	27.85	22659.2	1.020779699	0	0	0	0
Air Compressors75	Air Compressors75	Air Compressors	75	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors100	Air Compressors100	Air Compressors	100	73073	40.09	19385.15	3.769534938	0	0	0	0	0	0	0	0
Air Compressors175	Air Compressors175	Air Compressors	175	8949.8	2.68	1295.75	6.907042254	0	0	0	0	0	0	0	0
Air Compressors300	Air Compressors300	Air Compressors	300	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors600	Air Compressors600	Air Compressors	600	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors750	Air Compressors750	Air Compressors	750	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors9999	Air Compressors9999	Air Compressors	9999	0	0	0	0	0	0	0	0	0	0	0	0
Aerial Lifts25	Aerial Lifts25	Aerial Lifts	25	2434.618615	14.42543943		0	18.94689515	8.835596495		0	0	0	0	0
Aerial Lifts50	Aerial Lifts50	Aerial Lifts	50	6843.75	11.85	4288.75	1.595744681	9605.074668	50.0178787	11725.48796	0.819162043	0	0	0	0
Aerial Lifts75	Aerial Lifts75	Aerial Lifts	75	0	0	0	0	19301.86584	54.5394476	15998.00003	1.196151541	0	0	0	0
Aerial Lifts100	Aerial Lifts100	Aerial Lifts	100	12242.1	11.85	4288.75	2.854468085	3778.81372	0.416698294	2679.362405	1.410340052	0	0	0	0
Aerial Lifts175	Aerial Lifts175	Aerial Lifts	175	0	0	0	0	5559.172148	5.667421245	2990.503482	1.858843118	0	0	0	0
Aerial Lifts300	Aerial Lifts300	Aerial Lifts	300	0	0	0	0	1177.978853	0.67989499	32.21313827	1.662449638	0	0	0	0
Aerial Lifts600	Aerial Lifts600	Aerial Lifts	600	0	0	0	0	69.85402384	0.031594772	11.86862218	5.885605151	0	0	0	0
Bore/Drill rigs25	Bore/Drill rigs25	Bore/Drill rigs	25	421.1433896	4.73434922		0	24.31985519	3.828667005		0	0	0	0	0
Bore/Drill rigs50	Bore/Drill rigs50	Bore/Drill rigs	50	240.9	0.89	87.6	3.75	1415.679885	2.688915946	1271.123328	1.113723472	0	0	0	0
Bore/Drill rigs75	Bore/Drill rigs75	Bore/Drill rigs	75	0	0	0	0	5497.528507	6.266018857	3041.537803	1.799436122	0	0	0	0
Bore/Drill rigs100	Bore/Drill rigs100	Bore/Drill rigs	100	2719.25	1.96	423.4	6.422431789	4213.575624	3.311909864	1697.51883	2.482196692	0	0	0	0
Bore/Drill rigs175	Bore/Drill rigs175	Bore/Drill rigs	175	959.95	0.95	105.85	9.068965517	29856.50487	13.13133547	8529.030449	3.500578413	0	0	0	0
Bore/Drill rigs300	Bore/Drill rigs300	Bore/Drill rigs	300	0	0	0	0	35063.83826	10.27422449	8317.240285	5.629051098	0	0	0	0
Bore/Drill rigs600	Bore/Drill rigs600	Bore/Drill rigs	600	0	0	0	0	51555.32802	8.827003103	5085.717886	10.05585824	0	0	0	0
Bore/Drill rigs750	Bore/Drill rigs750	Bore/Drill rigs	750	0	0	0	0	21116.85473	2.209936085	1397.972468	16.26895629	0	0	0	0
Bore/Drill rigs9999	Bore/Drill rigs9999	Bore/Drill rigs	9999	0	0	0	0	6998.632724	0.557665591	325.3763032	21.50934987	0	0	0	0
Cement and Mortar Mixers25	Cement and Mortar Mixers25	Cement and Mortar Mixers	25	180.6129513	2.763127242		0	7.020993758	2.728079636		0	0	0	0	0
Cement and Mortar Mixers50	Cement and Mortar Mixers50	Cement and Mortar Mixers	50	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers75	Cement and Mortar Mixers75	Cement and Mortar Mixers	75	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers100	Cement and Mortar Mixers100	Cement and Mortar Mixers	100	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers175	Cement and Mortar Mixers175	Cement and Mortar Mixers	175	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers300	Cement and Mortar Mixers300	Cement and Mortar Mixers	300	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers600	Cement and Mortar Mixers600	Cement and Mortar Mixers	600	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers750	Cement and Mortar Mixers750	Cement and Mortar Mixers	750	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers9999	Cement and Mortar Mixers9999	Cement and Mortar Mixers	9999	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws25	Concrete/Industrial Saws25	Concrete/Industrial Saws	25	6333.274968	30.3563356		0	4.816233115	1.007258579		0	0	0	0	0
Concrete/Industrial Saws50	Concrete/Industrial Saws50	Concrete/Industrial Saws	50	1482.3	3.24	1981.95	2.766114181	1675	2.67	1213.8	1.380542186	0	0	0	0
Concrete/Industrial Saws75	Concrete/Industrial Saws75	Concrete/Industrial Saws	75	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws100	Concrete/Industrial Saws100	Concrete/Industrial Saws	100	5347.25	1.86	1135.15	4.710610932	0	0	0	0	0	0	0	0
Concrete/Industrial Saws175	Concrete/Industrial Saws175	Concrete/Industrial Saws	175	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws300	Concrete/Industrial Saws300	Concrete/Industrial Saws	300	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws600	Concrete/Industrial Saws600	Concrete/Industrial Saws	600	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws750	Concrete/Industrial Saws750	Concrete/Industrial Saws	750	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws9999	Concrete/Industrial Saws9999	Concrete/Industrial Saws	9999	0	0	0	0	0	0	0	0	0	0	0	0
Cranes25	Cranes25	Cranes	25	0	0	0	0	104.7298111	0.065607706	10.77005965	9.724162586	0	0	0	0
Cranes50	Cranes50	Cranes	50	806.63	0.95	401.5	2.009099869	1993.927867	0.855797944	167.4267481	1.19411664	0	0	0	0
Cranes75	Cranes75	Cranes	75	0	0	0	0	840.4617272	2.527483359	462.5795444	1.81690206	0	0	0	0
Cranes100	Cranes100	Cranes	100	2711.95	1.97	817.6	3.316964286	2992.890088	4.959829829	960.5749314	2.14759501	0	0	0	0
Cranes175	Cranes175	Cranes	175	182.5	0.05	32.85	5.555555556	15881.41923	22.30413794	5869.848543	2.702185434	0	0	0	0
Cranes300	Cranes300	Cranes	300	0	0	0	0	4847.53512	50.16379842	12791.31945	3.789550514	0	0	0	0
Cranes600	Cranes600	Cranes	600	0	0	0	0	66318.2309	40.08694627	10570.1331	6.2741.7508	0	0	0	0
Cranes750	Cranes750	Cranes	750	0	0	0	0	10241.49165	4.628783327	1089.093533	9.403684201	0	0	0	0
Cranes9999	Cranes9999	Cranes	9999	0	0	0	0	3451.372648	1.083178816	262.9460792	13.12578175	0	0	0	0
Crawler Tractors25	Crawler Tractors25	Crawler Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0
Crawler Tractors50	Crawler Tractors50	Crawler Tractors	50	0	0	0	0	960.3338652	2.822046802	771.607597	1.244588016	0	0	0	0
Crawler Tractors75	Crawler Tractors75	Crawler Tractors	75	0	0	0	0	5871.088817	11.19082786	3314.189404	1.771500992	0	0	0	0
Crawler Tractors100	Crawler Tractors100	Crawler Tractors	100	0	0	0	0	72300.36312	28.15975298	9908.404667	7.250651228	0	0	0	0
Crawler Tractors175	Crawler Tractors175	Crawler Tractors	175	0	0	0	0	79085.86279	57.81697986	26601.99919	2.972501758	0	0	0	0
Crawler Tractors300	Crawler Tractors300	Crawler Tractors	300	0	0	0	0	97443.4547	46.83883234	20364.97211	4.784855789	0	0	0	0
Crawler Tractors600	Crawler Tractors600	Crawler Tractors	600	0	0	0	0	169007.1848	40.80937604	20533.12679	8.230952194	0	0	0	0
Crawler Tractors750	Crawler Tractors750	Crawler Tractors	750	0	0	0	0	10835.60119	2.138792025	836.1823171	12.95512075	0	0	0	0
Crawler Tractors9999	Crawler Tractors9999	Crawler Tractors	9999	0	0	0	0	17271.72877	2.538481674	1010.334849	17.09505324	0	0	0	0
Crushing/Proc. Equipment25	Crushing/Proc. Equipment25	Crushing/Proc. Equipment	25	76.48978328	0.384998542		0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment50	Crushing/Proc. Equipment50	Crushing/Proc. Equipment	50	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment75	Crushing/Proc. Equipment75	Crushing/Proc. Equipment	75	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment100	Crushing/Proc. Equipment100	Crushing/Proc. Equipment	100	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment175	Crushing/Proc. Equipment175	Crushing/Proc. Equipment	175	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment300	Crushing/Proc. Equipment300	Crushing/Proc. Equipment	300	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment600	Crushing/Proc. Equipment600	Crushing/Proc. Equipment	600	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment750	Crushing/Proc. Equipment750	Crushing/Proc. Equipment	750	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment9999	Crushing/Proc. Equipment9999	Crushing/Proc. Equipment	9999	0	0	0	0	0	0	0	0	0	0	0	0
Dumpers/Tenders25	Dumpers/Tenders25	Dumpers/Tenders	25	869.2584388	7.382475121		0	3.476188891	1.4050547		0	0	0	0	0
Dumpers/Tenders100	Dumpers/Tenders100	Dumpers/Tenders	100	229.95	0.74	83.95	2.739130435	0	0	0	0	0	0	0	0
Excavators25	Excavators25	Excavators	25	0	0	0	0	27.11090881	2.230883163	13.43917716	2.017304221	0	0	0	0
Excavators50	Excavators50	Excavators	50	0	0	0	0	87740.46342	245.1482146	11509.2289	0.761574958	0	0	0	0
Excavators75	Excavators75	Excavators	75	0	0	0	0	60285.01603	101.4000506	52490.47016	1.120792505	0	0	0	0
Excavators100	Excavators100	Excavators	100	0	0	0	0	54236.87461	53.37866037	28111.24132	1.929866049	0	0	0	0
Excavators175	Excavators175	Excavators	175	0	0	0	0	30443.10911	151.6715105	108287.4868	2.811323807	0	0	0	0
Excavators300	Excavators300	Excavators	300	0	0	0	0	32549.95501	113.1105451	72461.55044	4.4327446	0	0	0	0
Excavators600	Excavators600	Excavators	600	0	0	0	0	37426.64278	78.77766509	52252.53578	7.16266422	0	0	0	0
Excavators750	Excavators750	Excavators	750	0	0	0	0	10399.29718	1.643375745	872.9208383	11.9132118	0	0	0	0
Excavators9999	Excavators9999	Excavators	9999	0	0	0	0	52526.19865	3.053212581	1756.389239	29.90612537	0	0	0	0
Forklifts25	Forklifts25	Forklifts	25	46.00928868	3.110393734		0	0.072777511	0.015797386	5.362660954	0.013493112	0	0	0	0
Forklifts50	Forklifts50	Forklifts	50	1180300.05	40.33	71631.25	1.647745223	12405.75797	36.33376927	18714.41401	0.662897845	174805.8	72.58	130775.85	1.336682576
Forklifts75	Forklifts75	Forklifts	75	0	0	0	0	125838.365	247.1586429	98291.89714	1.280260851	0	0	0	0
Forklifts100	Forklifts100	Forklifts	100	554566.4	150.09	254879.5	2.175798387	73421.84575	126.7814645	54460.35867	1.348767964	10395762.85	2054.78	458998.45	2.387290999
Forklifts175	Forklifts175	Forklifts	175	38233.75	5.41	9260.05	4.128892393	280768.7346	274.9684761	146802.1398	1.912560477	82157.85	9.34	16793.65	4.892197344
Forklifts300	Forklifts300	Forklifts	300	0	0	0	0	9055.880225	7.703283235	3820.008831	2.370609	0	0	0	0
Forklifts600	Forklifts600	Forklifts	600	0	0	0	0	2708.390917	1.428420785	705.7355213	3.837685416	0	0	0	0
Forklifts750	Forklifts750	Forklifts	750	0	0	0	0	1216.822196	0.088208132	15.48303499	9.2117855	0	0	0	0
Forklifts9999	Forklifts9999	Forklifts	9999	0	0	0	0	3082.906578	0.331616372	155.8370002	10.78289218	0	0	0	0
Generator Sets25	Generator Sets25	Generator Sets	25	42701.38624	420.9935901		0	48134.94624	180.232404		0	0	0	0	0
Generator Sets50	Generator Sets50	Generator Sets	50	10608.6	406.85	48730.95	2.226978652	63721.71	135.15	45617.7	1.396863498	0	0	0	0
Generator Sets75	Generator Sets75	Generator Sets	75	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets100	Generator Sets100	Generator Sets	100	46855.05	78.6	9030.1	5.188761317	0	0	0	0	4201.15	5.84	671.6	6.255434783
Generator Sets175	Generator Sets175	Generator Sets	175	7668.65	7.39	854.1	8.978632479	0	0	0	0	6069.95	4.86	558.49	10.86928189
Generator Sets300	Generator Sets300	Generator Sets	300	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets600	Generator Sets600	Generator Sets	600	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets750	Generator Sets750	Generator Sets	750	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets9999	Generator Sets9999	Generator Sets	9999	0	0	0	0	0	0	0	0	0	0	0	0
Graders25	Graders25	Graders	25	0	0	0	0	0	0	0	0	0	0	0	0
Graders50	Graders50	Graders	50	0	0	0	0	300.0965555	1.211835114	312.7340308	0.959569021	0	0	0	0
Graders75	Graders75	Graders	75	0	0	0	0	1053.141032	2.331553097	574.7499483	1.832346458	0	0	0	0
Graders100	Graders100	Graders	100	0	0	0	0	2510.960834	4.036904103	1075.386716	2.334917556	0	0	0	0
Graders175	Graders175	Graders	175	0	0	0	0	37247.83877	34.39721006	11306.54007	3.294402249	0	0	0	0
Graders300	Graders300	Graders	300	0	0	0	0	11867.10684	64.30582977	24995.01102	0.747790201	0	0	0	0
Graders600	Graders600	Graders	600	0	0	0	0	2651.24496	5.534978398	4011.474781	1.307822206	0	0	0	0
Graders750	Graders750	Graders	750	0	0	0	0	1083.275788	0.196823118	74.18975001	14.60142119	0	0	0	0
Graders9999	Graders9999	Graders	9999	0	0	0	0	775.1899987	0.113125412	49.90761899	15.53269701	0	0	0	0
Off-Highway Tractors25	Off-Highway Tractors25	Off-Highway Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Tractors50	Off-Highway Tractors50	Off-Highway Tractors	50	0	0	0	0	14990.48305	26.37972668	16087.27666	0.932082575	0	0	0	0
Off-Highway Tractors75	Off-Highway Tractors75	Off-Highway Tractors	75	0	0	0	0	13061.15235	14.24466499	8703.417807	1.50069233	0	0	0	0
Off-Highway Tractors100	Off-Highway Tractors100	Off-Highway Tractors	100	0	0	0	0	12363.85883	9.415613717	5951.454745	2.077417936	0	0	0	0
Off-Highway Tractors175	Off-Highway Tractors175	Off-Highway Tractors	175	0	0	0	0	60935.40853	80.8304	21867.66775	3.177582751	0	0	0	0
Off-Highway Tractors300	Off-Highway Tractors300	Off-Highway Tractors	300	0	0	0	0	29842.83417	8.139512637	6423.269904	4.644050161	0	0	0	0
Off-Highway Tractors600	Off-Highway Tractors600	Off-Highway Tractors	600	0	0	0	0	79073.0239	10.57609621	9700.817746	8.151170826	0	0	0	0
Off-Highway Tractors750	Off-Highway Tractors750	Off-Highway Tractors	750	0	0	0	0	6403.705683	0.688073035	505.6864938	12.66319078	0	0	0	0
Off-Highway Tractors9999	Off-Highway Tractors9999	Off-Highway Tractors	9999	0	0	0	0	5775.845655	0.230275426	181.4152027	31.83768732	0	0	0	0
Off-Highway Trucks25	Off-Highway Trucks25	Off-Highway Trucks	25	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Trucks50	Off-Highway Trucks50	Off-Highway Trucks	50	0	0	0	0	633.3402548	1.705800356	1057.047391	0.599159867	0	0	0	0
Off-Highway Trucks75	Off-Highway Trucks75	Off-Highway Trucks	75	0	0	0	0	791.3443756	0.853424161	463.3852729	1.707760936	0	0	0	0
Off-Highway Trucks100	Off-Highway Trucks100	Off-Highway Trucks	100	0	0	0	0	337.4751123	0.295234677	185.5025915	1.819247427	0	0	0	0
Off-Highway Trucks175	Off-Highway Trucks175	Off-Highway Trucks	175	0	0	0	0	17395.26677	6.365191941	5785.555229	3.010812688	0	0	0	0
Off-Highway Trucks300	Off-Highway Trucks300	Off-Highway Trucks	300	0	0	0	0	46299.03368	12.6374387	9287.75607	4.338941869	0	0	0	0
Off-Highway Trucks600	Off-Highway Trucks600	Off-Highway Trucks	600	0	0	0	0	295958.5856	43.34866752	30988.1879	8.221765926	0	0	0	0
Off-Highway Trucks750	Off-Highway Trucks750	Off-Highway Trucks	750	0	0	0	0	36311.87754	5.631183201	3244.654181	11.19129359	0	0	0	0
Off-Highway Trucks9999	Off-Highway Trucks9999	Off-Highway Trucks	9999	0	0	0	0	1388097.2263	9.829492029	6567.847949	21.14844011	0	0	0	0
Pavers25	Pavers25	Pavers	25	1385.885613	4.754729216		0	6.545097879	0.871807404		0	0	0	0	0
Pavers50	Pavers50	Pavers	50	2569.6	2.81	1091.35	2.35451505	1446.067791	4.36340109	1554.611473	0.930179544	0	0	0	0
Pavers75	Pavers75	Pavers	75	0	0	0	0	7053.587537	11.3186567	4497.886915	1.600215178	0	0	0	0
Pavers100	Pavers100	Pavers	100	2299.5	1.52	605.9	3.795180723	7621.593104	8.694729356	3786.864928	2.013638752	0	0	0	0
Pavers175	Pavers175	Pavers	175	0	0	0	0	25331.86095	15.39023676	8524.12926	2.972017449	0	0	0	0
Pavers300	Pavers300	Pavers	300	0	0	0	0	30059.19119	11.38452155	6358.690033	4.821620651	0	0	0	0
Pavers600	Pavers600	Pavers	600	0	0	0	0	5369.58294	1.381974421	685.4457126	7.83371001	0	0	0	0
Pavers750	Pavers750	Pavers	750	0	0	0	0	222.3551199	0.031803854	16.65864853	13.9472252	0	0	0	0
Pavers9999	Pavers9999	Pavers	9999	0	0	0	0	5097.514442	0.229626973	123.8297213	41.16551655	0	0	0	0
Paving Equipment25	Paving Equipment25	Paving Equipment	25	1307.754388	10.34547655		0	11.98392369	2.157196514		0	0	0	0	0
Paving Equipment50	Paving Equipment50	Paving Equipment	50	3007.8	7.63	1339.55	2.245231686	3553.99202	12.07252499	4656.560532	0.763222555	0	0	0	0
Paving Equipment75	Paving Equipment75	Paving Equipment	75	0	0	0	0	2627.221644	4.756771751	1940.573398	1.353837312	0	0	0	0
Paving Equipment100	Paving Equipment100	Paving Equipment	100	1241	1.98	335.8	3.695652174	4406.718598	5.416925536	2320.233068	1.899255234	0	0	0	0
Paving Equipment175	Paving Equipment175	Paving Equipment	175	0	0	0	0	28121.30699	17.48912563	11401.35739	2.466487698	0	0	0	0
Paving Equipment300	Paving Equipment300	Paving Equipment	300	0	0	0	0	12647.55252	5.547038801	2078.743997	6.24878745	0	0	0	0
Paving Equipment600	Paving Equipment600	Paving Equipment	600	0	0	0	0	29850.43886	8.008096801	4645.546365	6.425603474	0	0	0	0
Paving Equipment750	Paving Equipment750	Paving Equipment	750	0	0	0	0	6471.498016	1.188257149	580.113665	11.55329347	0	0	0	0
Paving Equipment9999	Paving Equipment9999	Paving Equipment	9999	0	0	0	0	4056.041998	0.424650089	223.5936627	18.14029884	0	0	0	0
Rollers25	Rollers25	Rollers	25	4196.038182	22.66758614		0	7.779631726	17.11528175		0	0	0	0	0
Rollers50	Rollers50	Rollers	50	3387.2	1.97	1230.05	2.753709199	3610.1286	122.7084321	44367.50619	0.813891325	0	0	0	0
Rollers75	Rollers75	Rollers	75	0	0	0	0	14305.94553	24.90583964	9340.64484	1.531580078	0	0	0	0
Rollers100	Rollers100	Rollers	100	10464.53	3.7	2306.8	4.536390405	2097.96969	29.65366848	11219.5269	1.865142549	0	0	0	0
Rollers175	Rollers175	Rollers	175	0	0	0	0	122112.1799	80.19958658	47572.41744	2.566869343	0	0	0	0
Rollers300	Rollers300	Rollers	300	0	0	0	0	10549.92613	5.524387327	2413.902388	4.370485883	0	0	0	0
Rollers600	Rollers600	Rollers	600	0	0	0	0	8353.994774	2.30047836	1140.107873	7.327172235	0	0	0	0
Rollers750	Rollers750	Rollers	750	0	0	0	0	205.1057632	0.018038853	14.92304879	13.7442252	0	0	0	0
Rollers9999	Rollers9999	Rollers	9999	0	0	0	0	9130.574512	0.426450899	203.9334697	44.77231974	0	0	0	0
Rough Terrain Forklifts25	Rough Terrain Forklifts25	Rough Terrain Forklifts	25	0	0	0	0	0	0	0	0	0	0	0	0
Rough Terrain Forklifts50	Rough Terrain Forklifts50	Rough Terrain Forklifts	50	1095	0.74	313.9	3.488372093	1083.557534	4.067677772	1093.957577	0.990493106	0	0	0	0
Rough Terrain Forklifts75	Rough Terrain Forklifts75	Rough Terrain Forklifts	75	0	0	0	0	43334.27623	83.09800968	27065.53856	1.601086789	0	0	0	0
Rough Terrain Forklifts100	Rough Terrain Forklifts100	Rough Terrain Forklifts	100	2366.6	11.2	4613.6	5.129748805	33124.22192	47.58463689	15185.5981	2.18058815	0	0	0	0
Rough Terrain Forklifts175	Rough Terrain Forklifts175	Rough Terrain Forklifts	175	1350.5	0.32	116.8	11.5625	194749.6887	166.9217499	79409.88108	2.452461659	0	0	0	0
Rough Terrain Forklifts300	Rough Terrain Forklifts300	Rough Terrain Forklifts	300	0	0	0	0	1671.609966	1.057739116	388.3818705	4.304258572	0	0	0	0
Rough Terrain Forklifts600	Rough Terrain Forklifts600	Rough Terrain Forklifts	600	0	0	0	0	472.6620646	0.164031369	69.40080347	6.810807836	0	0	0	0
Rough Terrain Forklifts750	Rough Terrain Forklifts750	Rough Terrain Forklifts	750	0	0	0	0	155.5476204	0.032815054	12.32759893	12.61744807	0

ITEM 11.1. ATTACHMENT 3

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2026
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total_Activity	Total_Population	Horsepower_Hours_hhpy
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	100 Gasoline		2.47E-07	2.99E-07	3.56E-07	3.76E-06	9.10E-07	0.000119599	8.09E-09	8.28E-09	1.08E-09	9.75E-10	3.87522E+01	22.00453889	0.001179541	503.416608
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	100 Diesel		0.010698769	0.012945511	0.015406227	0.098499121	0.093623062	15.98211885	0.006864079	0.006314952	0.000145866	0.000103777	519846.7139	31029.32522	269.6107463	18581122.7
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	175 Gasoline		6.81E-07	8.29E-07	9.86E-07	1.02E-05	5.08E-06	0.000629716	4.76E-08	4.56E-08	5.72E-09	5.13E-09	20.40844831	61.83352097	0.004741706	544.6498808
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	175 Diesel		0.007525012	0.009105264	0.010836017	0.088497462	0.072214016	14.91887389	0.004133065	0.003914002	0.000136236	0.000122077	485352.9843	46320.86247	174.1735426	19282701.87
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	25 Gasoline		5.68E-06	6.87E-06	8.17E-06	6.91E-05	1.14E-06	0.000185918	1.23E-07	1.13E-07	1.52E-09	1.52E-09	6.025398194	225.1258602	0.084430457	160.8017767
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	25 Diesel		0.000581445	0.000703548	0.000837208	0.002389416	0.00181726	0.213074417	9.89E-05	9.10E-05	1.94E-06	1.75E-06	6950.138739	4876.028428	18.00481119	2428422.0384
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	300 Diesel		0.003976453	0.004811508	0.005726093	0.027197001	0.031439231	12.47953815	0.001432041	0.001317478	0.000110403	0.000102116	405919.0749	26440.14113	58.49452259	16129844.56
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	50 Gasoline		4.92E-06	5.96E-06	7.09E-06	0.000163384	1.13E-05	0.000887716	2.77E-07	2.55E-07	3.35E-08	3.01E-08	119.5152093	423.4377794	0.421109338	3188.538935
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	50 Diesel		0.01975722	0.014490624	0.01724504	0.050007781	0.038459139	4.825341996	0.003082748	0.002836128	4.38E-05	3.95E-05	156952.7923	26334.36445	207.9291692	5610036.6
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	600 Diesel		0.052577722	0.006388043	0.00759892	0.04155557	0.042365885	16.63024662	0.001884626	0.001733856	0.000151866	0.000135999	549032.9495	22133.15481	45.67728072	21481724.09
Sacramento		2026 Agricultural - Sellers (Self Propelled)	Aggregate	25 Gasoline		1.89E-07	2.28E-07	2.72E-07	3.04E-06	3.97E-07	3.44E-05	2.25E-09	2.07E-09	8.51E-10	7.68E-10	2.945054626	27.26495752	0.013448081	81.26419715
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	75 Diesel		0.007980494	0.009656398	0.011491912	0.044548133	0.067126545	6.400886337	0.004169128	0.003837198	5.83E-05	5.24E-05	208200.1617	30669.4379	183.3653208	7441795.134
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	750 Diesel		0.000165756	0.000200564	0.000238753	0.000455193	0.001414931	0.266733477	7.51E-05	6.91E-05	4.04E-05	3.68E-05	12146.96026	284.4286146	0.778015087	385986.1303
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	100 Gasoline		6.09E-05	7.37E-05	8.77E-05	0.002606558	0.000241141	0.17508204	1.32E-05	1.21E-05	1.59E-06	1.43E-06	5674.229914	30.13580801	0.728665204	187116.0422
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	175 Gasoline		6.34E-05	7.67E-05	9.13E-05	0.001015139	0.000373974	0.244424654	1.84E-05	1.69E-05	2.21E-06	1.99E-06	7921.553199	479.6613056	0.978026752	253686.1039
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	175 Diesel		7.13E-06	8.62E-06	1.03E-05	0.000152682	6.68E-05	0.027774603	2.68E-06	2.47E-06	2.54E-07	2.27E-07	903.4181433	789.931751	0.443901792	43078.51986
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	25 Gasoline		0.009245373	0.011186901	0.013313337	0.11910838	0.047867574	0.439757509	0.000381897	0.000351345	5.73E-06	3.59E-06	1425I2.67509	3182.543091	80.14488058	456419.7622
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	25 Diesel		0.000242223	0.00029309	0.000348753	0.003118687	0.001254008	0.011523116	1.00E-05	9.20E-06	1.50E-07	9.40E-08	3.78E-01	0.082599	0.002098455	11945.4332
Sacramento		2026 Agricultural - ATVs	Aggregate	25 Electric		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento		2026 Agricultural - ATVs	Aggregate	50 Gasoline		0.000180521	0.000223876	0.000266417	0.010165697	0.000479467	0.03636472	2.53E-05	2.33E-05	3.06E-06	2.74E-06	10899.34891	2818.169425	37.48661289	349049.4307
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	50 Diesel		0.000366814	0.000443844	0.000528211	0.003079076	0.002588385	0.441438899	0.000101092	9.30E-05	4.03E-06	3.61E-06	14358.54183	8107.851155	26.40565394	615870.557
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	75 Gasoline		5.97E-05	7.22E-05	8.59E-05	0.001162824	0.000156207	0.023212628	0.000164549	0.000151476	9.21E-06	8.47E-06	3.351.9887	1118.98	0.736944457	175886.6447
Sacramento		2026 Agricultural - Agricultural Tractors	Aggregate	175 Diesel		0.000224571	0.000271731	0.000323382	0.002131693	0.002218762	0.350448809	0.000107756	9.91E-05	3.20E-06	2.87E-06	11398.96803	5913.454175	3.291764327	434838.005
Sacramento		2026 Agricultural - Bale Wagons (Self Propelled)	Aggregate	300 Diesel		2.62E-05	3.17E-05	3.77E-05	0.000146132	0.000270083	0.056134352	1.19E-05	1.09E-05	5.13E-07	4.59E-07	1825.869194	230.672363	0.459538541	69651.68585
Sacramento		2026 Agricultural - Bale Wagons (Self Propelled)	Aggregate	750 Diesel		9.91E-06	1.20E-05	1.43E-05	7.54E-05	0.000102506	0.012123506	4.46E-06	4.10E-06	1.12E-07	9.98E-08	397.8839103	397.8204426	0.227962469	13652.87945
Sacramento		2026 Agricultural - Combine Harvesters	Aggregate	175 Diesel		0.000106866	0.000129308	0.000153888	0.000107591	0.00103116	0.18399733	4.76E-05	4.36E-05	1.68E-06	1.51E-06	5984.838942	855.2636889	2.227248804	257255.9261
Sacramento		2026 Agricultural - Combine Harvesters	Aggregate	300 Diesel		0.000160122	0.000193747	0.000230575	0.000892351	0.001511392	0.334926078	7.11E-05	6.51E-05	2.56E-06	2.29E-06	10894.06309	1081.941075	2.020837446	468276.9698
Sacramento		2026 Agricultural - Combine Harvesters	Aggregate	600 Diesel		0.000443233	0.000535211	0.000636945	0.003450798	0.004522255	1.018584436	0.000187352	0.000172364	9.30E-06	8.33E-06	33131.26232	8230.266382	4.03627126	1424134.152
Sacramento		2026 Agricultural - Combine Harvesters	Aggregate	750 Diesel		0.000299431	0.000361641	0.000430837	0.004317022	0.004092338	1.147954606	0.000469261	0.000431641	1.28E-05	1.15E-05	44010.65516	2216.794169	2.752149122	928168.2114
Sacramento		2026 Agricultural - Combine Harvesters	Aggregate	9999 Diesel		1.41E-05	1.70E-05	2.02E-05	0.000107828	0.000200937	0.027360364	6.22E-06	5.72E-06	2.50E-07	2.24E-07	889.9442664	1642.70999	0.051787546	38253.90197
Sacramento		2026 Agricultural - Construction Equipment	Aggregate	100 Diesel		0.000247658	0.000299666	0.000356628	0.002032968	0.002154088	0.320236173	0.000100133	0.000147322	2.92E-06	2.62E-06	1041E-24858	5438.703411	6.886431384	446775.3745
Sacramento		2026 Agricultural - Construction Equipment	Aggregate	175 Diesel		0.000643107	0.000778159	0.000926377	0.004396874	0.007479701	1.190711115	0.000435371	0.000400151	5.59E-06	5.00E-06	1.1.01E-24858	1176.5397	1.477.26423	2022793.898
Sacramento		2026 Agricultural - Construction Equipment	Aggregate	300 Diesel		0.000177778	0.000215111	0.000256	0.000909756	0.001776926	0.331007111	8.47E-05	7.79E-05	2.83E-06	2.54E-06	10083.53919	4533.909839	2.442215583	488322.2675
Sacramento		2026 Agricultural - Construction Equipment	Aggregate	50 Diesel		3.93E-05	4.76E-05	5.66E-05	0.000196167	0.000394408	0.072204987	1.87E-05	1.72E-05	6.22E-07	5.59E-07	2232.048155	1178.538732	0.724161563	107681.9101
Sacramento		2026 Agricultural - Construction Equipment	Aggregate	600 Diesel		0.001201545	0.001454889	0.001729504	0.005828211	0.003079076	0.025883385	0.441438899	0.000101092	9.30E-06	4.03E-06	3.61E-06	14358.54183	8107.851155	1.138814661	340493.553
Sacramento		2026 Agricultural - Cotton Pickers	Aggregate	75 Gasoline		7.82E-05	9.46E-05	1.13E-04	0.001312804	0.000350265	0.003770248	0.000134247	0.000123504	9.21E-06	8.47E-06	3.246.0	83.07	0.198.96413	2886.289872	0.132109563	134679.848
Sacramento		2026 Agricultural - Cotton Pickers	Aggregate	175 Diesel		5.09E-05	6.16E-05	7.33E-05	0.000139065	0.000536687	0.117821903	2.17E-05	2.00E-05	1.08E-06	9.64E-07	3832.366001	2795.361297	0.511962813	164732.731
Sacramento		2026 Agricultural - Forage & Silage Harvesters	Aggregate	600 Diesel		0.000202167	0.000114109	0.000147	0.000909414	0.000961324	0.221846784	4.27E-05	3.93E-05	2.12E-06	1.90E-06	7541.221726	285.9205498	0.612928295	324156.8522
Sacramento		2026 Agricultural - Forage & Silage Harvesters	Aggregate	750 Diesel		0.000291821	0.000353103	0.000426722	0.002377147	0.003059507	0.553479282	0.000147978	0.000136092	4.88E-06	4.38E-06	17385.08867	4678.726855	1.328818415	747720.9764
Sacramento		2026 Agricultural - Forage & Silage Harvesters	Aggregate	9999 Diesel		0.000170098	0.000205812	0.000249491	0.001376974	0.002119702	0.280454658	7.95E-05	7.31E-05	2.56E-06	2.29E-06	9122.284343	2277.055876	0.520104126	392117.7654
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	100 Diesel		0.000313266	0.000381472	0.000453883	0.002665054	0.002734593	0.405122859	0.000180302	0.000165977	3.69E-06	3.33E-06	14026.00759	10441.17566	2.023837446	565673.7499
Sacramento		2026 Agricultural - Forklifts	Aggregate	175 Diesel		7.14E-05	8.63E-05	0.000102755	0.000724665	0.000685181	0.123072465	3.17E-05	2.92E-05	1.12E-06	1.01E-06	400.1.9485	317.4449404	1.944052915	192885.8841
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	50 Diesel		0.000338859	0.000434423	0.000516757	0.001808568	0.001449907	0.210910751	8.85E-05	8.13E-05	1.92E-06	1.72E-06	6850.487577	9158.228705	0.986923259	293832.1949
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	75 Diesel		0.000988768	0.001139641	0.001423826	0.007578229	0.009330164	1.229314515	0.000448664	0.000412777	1.12E-05	1.01E-05	39985.63125	15340.78922	31.35147767	1715069.994
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	175 Diesel		4.75E-05	5.74E-05	6.84E-05	0.000495413	0.000443978	0.082616718	2.13E-05	1.96E-05	7.54E-07	6.79E-07	2687.255045	2590.592893	1.092608146	122037.609
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	300 Diesel		0.000134185	0.000158104	0.000188627	0.000837958	0.000637358	0.12448109	5.19E-05	4.77E-05	2.24E-06	2.02E-06	7963.564794	3926.341889	0.240693072	361651.4239
Sacramento		2026 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel		6.62E-06	8.01E-06	9.53E-06	5.07E-05	6.99E-05	0.015404563	2.82E-06	2.59E-06	1.41E-07	1.26E-07	501.0607002	397.8204426	0.075987481	22754.79952
Sacramento		2026 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	750 Diesel		1.97E-06	4.80E-06	5.72E-06	1.68E-05	2.33E-05	0.005080175	1.85E-06	1.70E-06	4.67E-08	4.01E-08	159.4056043	1505.1932	0.018725448	6511.666932
Sacramento		2026 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	100 Diesel		0.001253321	0.001516510	0.001804782	0.009917918	0.010394188	1.557649885	0.000768765	0.000707264	1.42E-05	1.27E-05	50665.32053	17574.93766	26.16506385	1958978.353
Sacramento		2026 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	175 Diesel		0.000744645	0.000899593	0.001070959	0.007247856	0.006177483	1.121075853	0.000729881	0.000671841	1.38E-05	1.23E-05	49135.8197	11291.20833	16.19307108	1691807.928
Sacramento		2026 Agricultural - Hot Harvester	Aggregate	25 Diesel		8.34E-05	0.000100961	0.000120157	0.000404587	0.000342022	0.047131568	1.72E-05	1.58E-05	4.29E-07	3.86E-07	1533.037701	311.7518315	3.778916878	59275.01549
Sacramento		2026 Agricultural - Hot Harvester	Aggregate	300 Diesel		0.000401085	0.000497128	0.000591624	0.002066401	0.001977507	0.667641140	0.000107324	0.000101282	6.09E-06	5.46E-06	21726.23227	3521.647921	4.329158747	919462.6756
Sacramento		2026 Agricultural - Hot Harvester	Aggregate	50 Diesel		0.000048639	0.000058853	0.000069902	0.000315564	0.000192294	0.035347846	8.69E-06	8.06E-06	2.80E-07	2.57E-07	1002.041212	2.806.2	0.524729289	55347.01404
Sacramento		2026 Agricultural - Hot Harvester	Aggregate	75 Diesel		0.000312301	0.000160084	0.000195513	0.001033204	0.001229142	0.166350282	6.04E-05	5.56E-05	1.52E-06	1.36E-06	541.0374782	372.3831596	1.328854812	209210.4284
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	100 Diesel		0.000633579	0.000361472	0.000453883	0.002665054	0.002734593	0.405122859	0.000180302	0.000165977	3.69E-06	3.33E-06	14026.00759	10441.17566	2.023837446	1090085.779
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	175 Diesel		0.000726881	0.000879526	0.001046708	0.007151288	0.0070966	1.202095538	0.000334459	0.000307702	1.10E-05	9.82E-06	39041.86777	12952.40977	15.49496756	1678199.174
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	300 Diesel		0.000339861	0.000324972	0.000386753	0.002373733	0.001881844	0.241061368	8.72E-05	8.02E-05	2.76E-06	2.54E-06	11315.56581	2585.262368	2.456519925	547728.3776
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	600 Diesel		0.000205981	0.000249237	0.000296613	0.001578768	0.002174988	0.479384692	8.77E-05	8.07E-05	4.38E-06	3.92E-06	15592.83591	2300.834063	1.929866424	670251.8551
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	750 Diesel		9.91E-05	0.000119899	0.000142886	0.000754025	0.000911389	0.122323218	4.46E-05	4.10E-05	1.12E-06	1.00E-06	3978.779259	3410.490803	0.158735932	153839.7932
Sacramento		2026 Agricultural - Other Harvesters	Aggregate	750 Diesel		1.77E-05	2.14E-05	2.55E-05	0.000134767	0.000192861	0.043918093	1.59E-05	1.46E-05	4.74E-07	4.25E-07	1330.919411	1505.193179	0.028725449	57209.66383
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	100 Diesel		9.51E-05	0.000115119	0.000137001	0.000764548	0.000750018	0.121635556	5.63E-05	5.18E-05	1.11E-06	9.95E-07	3956.411821	1628.280497	2.178563216	163618.1332
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	175 Diesel		0.000394139	0.000477121	0.000567814	0.003878133	0.003344891	0.541101459	0.000166824	0.000153468	5.56E-06	5.01E-06	2117.8.2898	11247.92584	8.188118969	821772.4003
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	25 Diesel		3.36E-06	4.06E-06	4.83E-06	1.63E-05	1.18E-05	0.001885776	6.92E-07	6.36E-07	1.72E-08	1.55E-08	61.66348596	395.1880577	0.183035874	25118.93311
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	300 Diesel		0.000468851	0.000564489	0.000672266	0.003288855	0.002318228	0.369566228	0.000135695	0.000124727	2.74E-06	2.52E-06	98.1.0.0	5583.53482	9038.024874	1176908.885
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	50 Diesel		0.000156305	0.000188129	0.000225079	0.000764667	0.00060105	0.088992402	3.67E-05	3.38E-05	8.09E-07	7.28E-07	2894.635445	6888.714605	3.80561547	118244.9144
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	600 Diesel		0.000568877	0.000712411	0.000847829	0.004877161	0.005824474	1.079274706	0.000288071	0.000246626	8.66E-06	7.96E-06	3011.957983	3629.536926	1.305419792	359146.9241
Sacramento		2026 Agricultural - Sprayers/Spray Rigs	Aggregate	750 Diesel		0.001592397	0.0019208	0.002293852	0.011032621	0.013822452	2.417241439	0.000637035	0.000587704	1.53E-05	1.37E-05	5455.24759	5964.180684	2.911699597	811201.8313
Sacramento		2026 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	100 Diesel		0.000225737	0.000273142	0.000325061	0.001910209	0.001740293	0.308037518	0.000129269	0.000118927	2.81E-06	2.52E-06	10019.46568	3270.305206	4.439835944	353130.4186
Sacramento		2026 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	175 Diesel		0.000545419	0.000660139	0.000785554	0.004618009	0.004206053	0.744725414	0.000312221	0.000287183	6.77E-06	6.11E-06	2435.251697	2634.093669	0.979454535	117014.2932
Sacramento		2026 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	300 Diesel		0.000105625	0.000127806	0.00015211	0.000558602	0.000338369	0.059223728	4.74E-05	4.36E-05	2.04E-06	1.82E-06	7254.241658	2698.81581	1.449690648	288258.9113
Sacramento		2026 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	50 Diesel		0.000138582	0.000167804	0.000198818	0.000631153	0.000496381	0.087375768	3.65E-05	3.79E-05	2.47E-07	2.24E-07	877.0952102	855.6268889	2.227248805	82751.97481
Sacramento		2026 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	75 Diesel		8.44E-05	0.000102178	0.00012116	0.000644926	0.000777639	0.104447047	3.81E-05	3.50E-05	9.53E-07	8.55E-07	3397.325142	1966.841059	2.355527479	121432.1707
Sacramento		2026 Agricultural - Support Equip - A/C Tug Narrow Body	Aggregate	100 Diesel		2.72E-05	3.29E-05	3.91E-05	0.000490746	0.000271279	0.085390332	2.09E-05	1.91E-05	8.09E-07	0	2774.777722	1053.65743	2.038349918	481671.0624
Sacramento		2026 Agricultural - Support Equip - A/C Tug Narrow Body	Aggregate	175 Diesel		7.40E-05	8.95E-05	0.000106494	0.001498654	0.000498067	0.156729855	3.82E-05	3.51E-05	2.47E-06	0	9456.866135	2588.868526	3.517752802	177456.0209
Sacramento		2026 Agricultural - Support Equip - A/C Tug Narrow Body	Aggregate	300 Diesel		2.42E-05	2.93E-05	3.49E-05	0.000237278	0.000122393	0.038904817	5.42E-06	4.98E-06	1.03E-06	0	3538.88104	636.3252866	1.058887393	77107.17777
Sacramento		2026 Agricultural - Support Equip - A/C Tug Narrow Body	Aggregate	50 Diesel		1.27E-05	1.53E-05	1.82E-05	0.000142451	0.000102302	0.023217595	3.93E-06	3.61E-06	5.20E-07	0	718.7515102	351.5683743	1.306498733	9795.738219
Sacramento		2026 Agricultural - Support Equip - A/C Tug Narrow Body	Aggregate	600 Diesel		2.46E-05	2.98E-05	3.54E-05	0.000208446	0.0002145	0.101976566	6.04E-06	5.56E-06	9.66E-07	0	3311.746289	368.5128767	0.559680677	69443.93367
Sacramento		2026 Agricultural - Support Equip - A/C Tug Narrow Body	Aggregate	750 Diesel		7.60E-05	9.19E-05	0.000108848	0.001178588	0.000719183	0.197292425	1.42E-05	1.31E-05	2.87E-06	0	6411.084226	3073.63543	1.959105269	142153.5014
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	100 Diesel		2.93E-06	3.55E-06	4.22E-06	4.36E-05	3.39E-05	0.007253588	2.93E-06	2.69E-06	6.87E-08	0	235.7060619	96.46193836	0.217287	4203.007238
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	175 Diesel		3.94E-05	4.76E-05	5.67E-05	0.000836255	0.000182299	0.13918083	1.24E-05	1.15E-05	1.32E-06	0	4522.705385	1166.77831	1.491193618	91257.86086
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	300 Diesel		8.80E-05	0.000106512	0.000126758	0.000709267	0.000562884	0.130512303	2.54E-05	2.34E-05	2.96E-06	0	10740.05496	1894.561265	1.227948864	222161.1057
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	50 Diesel		1.06E-06	1.29E-06	1.53E-06	1.23E-05	1.16E-05	0.001654101	5.03E-07	4.63E-07	1.57E-08	0	53.75028526	53.83801521	0.155205	958.4493443
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	600 Diesel		8.76E-05	0.000105944	0.000126067	0.000709267	0.000562884	0.130512303	2.76E-05	2.53E-05	2.96E-06	0	10740.05496	1894.561265	1.490276271	222161.1057
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	750 Diesel		3.22E-06	3.90E-06	4.64E-06	4.73E-05	4.21E-05	0.007921649	7.70E-07	7.08E-07	7.50E-08	0	257.4153818	125.9024445	0.248328	4590.107605
Sacramento		2026 Agricultural - Support Equip - A/C Tug Wide Body	Aggregate	750 Diesel		2.82E-06	3.41E-06	4.06E-06	2.30E-05	1.57E-05	0.003768191	1.46E-06	1.31E-06	3.31E-07	0	349.8726458	18.42747868	0.010241	695.7364806
Sacramento		2026 Agricultural - Support Equip - AirCraft Tractor	Aggregate	75 Diesel		1.70E-06	2.05E-06	2.44E-06	2.70E-05	2.20E-05	0.004500641	4.15E-07	3.82E-07	4.26E-08	0	146.2491181	113.3535532	0.217287	2607.844231
Sacramento		2026 Agricultural - Support Equip - Baggage Tug	Aggregate	100 Diesel		4.87E-05	5.90E-05	7.02E-05	0.001151298	0.000427489	0.214960139	3.03E-05	2.79E-05	2.04E-06	0	6985.167233	3266.536455	3.697944626	110643.9995
Sacramento		2026 Agricultural - Support Equip - Baggage Tug	Aggregate	175 Diesel		4.04E-06	4.88E-06	5.81E-06	1.17E-04	2.88E-06	4.74E-06	1.81E-08	1.66E-08	1.13E-07	0	386.4412569	111.1570668	0.138246	7660.056267
Sacramento		2026 Agricultural - Support Equip - Baggage Tug	Aggregate	50 Diesel		3.22E-05	3.90E-05	4.64E-05	0.000242563	0.000361169	0.066088115	1.10E-05	1.01E-05	6.26E-07	0	2147.544813	210.174222	0.502792124	32331.9201
Sacramento		2026 Agricultural - Support Equip - Baggage Tug	Aggregate	75 Diesel		5.21E-05	6.31E-05	7.51E-05	0.000812819	0.001237057	0.144500271	1.56E-05	1.44E-05	1.17E-06	0	4695.561506	1062.225953	1.160588888	76077.57204
Sacramento		2026 Agricultural - Support Equip - Belt Loader	Aggregate	100 Diesel		1.67E-05	2.03E-05	2.41E-05	0.000482369	0.000115523	0.092148724	1.05E-05	9.65E-06	8.73E-07	0	3994.388879	1534.072237	3.147615369	44817.79677
Sacramento		2026 Agricultural - Support Equip - Belt Loader	Aggregate	175 Diesel		1.74E-06	2.10E-06	2.50E-06	2.75E-05	1.38E-05	0.004878938	7.21E-07	6.63E-07	4.24E-08	0	158.5409272	79.48243827	0.124314575	3169.72928
Sacramento		2026 Agricultural - Support Equip - Belt Loader	Aggregate	300 Diesel		4.55E-07	5.50E-07	6.55E-07	4.36E-06	5.38E-07	0.002148046	4.62E-08	4.25E-08	2.03E-08	0	69.80140882	20.34867324	0.010341	1383.709781
Sacramento		2026 Agricultural - Support Equip - Belt Loader	Aggregate	50 Diesel		3.53E-05	4.27E-05	5.09E-05	0.000473183	0.000393214	0.071334385	1.06E-05	9.75E-06	6.76E-07	0	2318.023302	2796.914215	6.643873169	119661.28162
Sacramento		2026 Agricultural - Support Equip - Belt Loader	Aggregate	75 Diesel		1.06E-05	3.70E-05	5.40E-05	0.000472625	0.000619798	0.095959347	1.09E-05	9.21E-06	6.14E-07	0	2793.26397	2997.618974	4.630380208	42892.80777
Sacramento		2026 Agricultural - Support Equip - Belt Loader	Aggregate	750 Diesel		2.65E-06	3.21E-06	3.82E-06	3.89E-05	3.77E-05	0.001741215	1.93E-06	1.78E-06	1.65E-08	0	56.58109575	5.278310197	0.010341	1121.649017
Sacramento		2026 Agricultural - Support Equip - Bobtail	Aggregate	100 Diesel		4.88E-07	5.90E-07	7.03E-07	1.38E-05

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Sacramento	2026 Construction and Mining - Concrete Pump	Aggregate	50 Diesel	2.97E-07	3.59E-07	4.27E-07	2.67E-06	2.30E-06	0.000386586	7.16E-08	6.58E-08	3.66E-09	0	12.56217437	12.69856446	0.032803853	224.002677	
Sacramento	2026 Construction and Mining - Concrete Pump	Aggregate	600 Diesel	2.03E-05	2.46E-05	2.93E-05	0.000125263	0.000253629	0.066480561	7.74E-06	7.12E-06	6.30E-07	0	2160.297434	307.7825835	0.590466954	4284.86867	
Sacramento	2026 Construction and Mining - Concrete Pump	Aggregate	75 Diesel	2.37E-06	2.87E-06	3.42E-06	2.83E-05	2.71E-05	0.004642716	8.52E-07	7.84E-07	4.40E-08	0	150.8658642	113.3263013	0.229626971	2690.187836	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	100 Diesel	1.84E-06	2.22E-06	2.65E-06	3.59E-05	2.43E-05	0.009538145	1.70E-06	1.56E-06	6.19E-08	0	212.4580425	144.1493947	0.288888093	3788.450063	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	175 Diesel	1.50E-05	1.81E-05	2.16E-05	0.000252642	0.000167098	0.046781895	7.75E-06	7.13E-06	4.43E-07	0	1520.18584	685.4889985	2.462255403	26702.93803	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	300 Diesel	2.93E-06	3.55E-06	4.23E-06	2.28E-05	3.55E-05	0.012346066	1.25E-06	1.15E-06	1.17E-07	0	401.1875777	118.0848451	0.424650089	7952.981407	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	50 Diesel	1.05E-06	1.27E-06	1.51E-06	1.98E-05	1.35E-05	0.003549048	4.77E-07	4.02E-07	1.38E-08	0	115.1260257	187.9649371	0.115331002	2056.454506	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	600 Diesel	2.66E-06	3.21E-06	3.82E-06	3.08E-05	2.89E-05	0.009527301	1.32E-06	1.22E-06	9.03E-08	0	309.5913189	57.14700374	0.229626971	6137.213962	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	75 Diesel	1.97E-06	2.38E-06	2.84E-06	3.62E-05	3.27E-05	0.009790958	6.89E-07	6.34E-07	6.43E-08	0	226.6733758	168.7987218	0.679550923	3447.780281	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	750 Diesel	3.21E-07	3.88E-07	4.62E-07	3.72E-06	3.27E-06	0.002115568	1.86E-07	1.71E-07	2.00E-08	0	68.74574245	7.793149124	0.032803853	1362.787987	
Sacramento	2026 Construction and Mining - Crane less than 35ton	Aggregate	9999 Diesel	3.98E-06	4.82E-06	5.73E-06	5.42E-05	3.70E-05	0.012511197	2.86E-06	2.63E-06	1.28E-07	0	81.6017684	5.578677318	0.032803853	5017.640682	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	100 Diesel	2.83E-05	3.43E-05	4.08E-05	0.000321691	0.000290737	0.063482976	2.02E-05	1.86E-05	6.01E-07	0	2062.890388	960.5749314	4.95982369	23839.94496	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	175 Diesel	0.000168051	0.000218417	0.000259934	0.002546612	0.001939847	0.488116149	0.000102145	9.40E-05	4.62E-06	0	15861.41923	5869.848543	22.59041794	247446.7518	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	25 Diesel	1.11E-06	1.35E-06	1.60E-06	1.85E-05	8.79E-06	0.001922394	5.31E-07	4.88E-07	1.05E-08	0	104.728811	33.77059965	0.085607706	674921526	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	300 Diesel	0.000402859	0.000509239	0.000606036	0.003734649	0.004243314	1.491709215	0.000307306	0.000290721	1.41E-05	0	48473.3512	12791.31945	50.16379842	885698.9155	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	50 Diesel	4.03E-06	4.88E-06	5.81E-06	3.26E-05	2.65E-05	0.006315254	1.31E-06	1.21E-06	3.81E-08	0	199.9379071	167.4267461	0.351707944	3242.579276	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	600 Diesel	0.000459658	0.000556188	0.000661907	0.005148545	0.004531369	2.040863976	0.000194457	0.000178	1.93E-05	0	66318.23095	10570.1331	40.08694627	1279663.275	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	75 Diesel	1.47E-05	1.77E-05	2.11E-05	0.000110301	0.000161604	0.025864004	9.32E-06	8.59E-06	4.65E-07	0	840.4617272	462.5795444	2.527448353	3242.576212	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	750 Diesel	6.19E-05	7.49E-05	8.92E-05	0.000641652	0.000677157	0.315169616	2.88E-05	2.65E-05	2.99E-06	0	10241.49165	3089.093533	4.627683327	202832.3251	
Sacramento	2026 Construction and Mining - Cranes	Aggregate	9999 Diesel	2.00E-05	2.42E-05	2.89E-05	0.000196449	0.000494959	0.106211858	9.75E-06	8.97E-06	1.01E-06	0	3451.372846	262.9660792	1.081373819	69031.85954	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	100 Diesel	0.000346762	0.000419582	0.000499607	0.003999634	0.003455212	0.774273887	0.000247539	0.000228	7.37E-06	0	22300.36311	9908.404667	28.15975298	374448.3384	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	175 Diesel	0.000883529	0.00106907	0.001272281	0.014268745	0.008847064	2.431766369	0.000415331	0.000382105	2.31E-05	0	79085.66278	26601.99309	57.81697886	1548299.503	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	300 Diesel	0.000928181	0.001123099	0.001336829	0.007134682	0.008212662	2.988705364	0.000395275	0.000364	2.56E-05	0	97443.4547	20364.97211	46.83883234	1554813.154	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	50 Diesel	3.51E-05	4.25E-05	5.05E-05	0.000218932	0.000176754	0.029553125	1.19E-05	1.10E-05	2.80E-07	0	960.3339651	771.607297	2.823046002	12993.86076	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	600 Diesel	0.001445285	0.001748795	0.002082211	0.013402199	0.013976348	3.500893106	0.000479752	0.000420984	4.93E-05	0	169007.1848	20533.12679	46.80037604	3441149.118	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	75 Diesel	0.000138478	0.000167559	0.000199409	0.001102944	0.001552398	0.180675744	8.73E-05	8.03E-05	1.71E-06	0	5871.089817	3314.189404	11.19082786	94889.04235	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	750 Diesel	8.32E-05	0.000100649	0.000119878	0.000788559	0.000751053	0.133452624	3.41E-05	3.13E-05	3.16E-06	0	10835.60119	836.3823171	2.153792025	232092.6236	
Sacramento	2026 Construction and Mining - Crawler Tractors	Aggregate	9999 Diesel	0.000134981	0.000139127	0.000165677	0.001086166	0.023300892	0.017539467	0.000233	0.000213	1.02E-05	0	17271.72974	3210.334969	2.530481674	375152.242	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	100 Diesel	2.17E-06	2.62E-06	3.12E-06	5.25E-05	2.68E-05	0.00896768	1.88E-06	1.73E-06	8.49E-08	0	291.4063297	168.0857351	0.32803853	5196.218109	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	175 Diesel	1.12E-05	1.78E-05	2.16E-05	0.000672703	0.000374421	0.128155141	6.68E-06	6.15E-06	2.12E-06	0	4164.423652	1758.958308	2.593104387	62553.86188	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	300 Diesel	1.57E-05	1.89E-05	2.25E-05	0.000127226	7.96E-05	0.062812039	3.71E-06	3.41E-06	5.95E-07	0	2041.088176	509.0119738	0.885704031	40461.71221	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	50 Diesel	1.14E-06	1.37E-06	1.64E-06	1.76E-05	1.03E-05	0.002808389	3.44E-07	3.16E-07	4.66E-08	0	21.29307659	109.112805	0.295234677	1627.288147	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	600 Diesel	7.79E-05	9.42E-05	0.000112163	0.000676519	0.000274598	0.346344708	1.60E-05	1.47E-05	3.28E-06	0	11254.5967	1623.387019	2.788327505	223106.6047	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	75 Diesel	4.76E-06	5.76E-06	6.86E-06	8.18E-05	7.06E-05	0.013971292	6.98E-07	6.42E-07	1.32E-07	0	453.9959673	330.8566837	0.754488619	8095.502851	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	750 Diesel	8.21E-06	9.93E-06	1.18E-05	8.38E-05	0.000145443	0.027727807	4.32E-05	3.97E-05	2.72E-06	0	1064.313315	84.54590117	0.164018265	21088.51968	
Sacramento	2026 Construction and Mining - Crushing/Processing Equipment	Aggregate	9999 Diesel	1.37E-05	1.65E-05	1.97E-05	0.000137315	0.000245157	0.070836936	5.70E-06	5.25E-06	6.71E-07	0	2301.858602	136.3415979	0.262430824	45631.1204	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	100 Diesel	0.000549296	0.000664648	0.000791966	0.006340127	0.005476788	1.226855935	0.000470732	0.000434	1.58E-05	0	34238.87661	15696.41011	53.37866037	457144.8713	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	175 Diesel	0.000303097	0.000367506	0.000436436	0.056313302	0.023582381	9.36850151	0.001002843	0.000922616	8.87E-05	0	30441.09111	328287.4868	151.6715105	6038587.846	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	25 Diesel	3.01E-07	3.65E-07	4.34E-07	9.77E-07	7.23E-07	7.05E-05	6.80E-08	6.15E-08	6.68E-10	0	2.281729241	13.49817716	0.010303853	40.85509858	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	300 Diesel	0.002967317	0.003590451	0.004272936	0.021313432	0.022400697	10.01563942	0.000931975	0.000857417	9.49E-05	0	325459.0502	72441.55044	313.0106451	6469911.083	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	50 Diesel	0.001754106	0.002122468	0.002525911	0.020256691	0.016476611	2.760107473	0.005569714	0.000152417	2.56E-05	0	87740.46542	115208.2289	245.1482166	1554043.713	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	600 Diesel	0.003036088	0.003649466	0.004344563	0.021966166	0.023300892	10.75784648	0.000742642	0.000702918	0.000100504	0	374366.4279	52252.53579	84.77766509	7470885.77	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	75 Diesel	0.000895847	0.001083974	0.001290019	0.012820716	0.011402369	2.132283321	0.000220245	0.000202625	2.02E-05	0	69288.01603	52460.47058	101.4000006	1229995.569	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	750 Diesel	7.43E-05	9.00E-05	0.000107061	0.001021002	0.000522502	0.192055341	4.41E-05	4.03E-05	3.03E-06	0	10399.29718	872.9206383	1.643377545	222154.466	
Sacramento	2026 Construction and Mining - Excavators	Aggregate	9999 Diesel	0.000410947	0.000500878	0.000596084	0.003140589	0.007218841	1.616403732	0.000168789	0.000155446	1.53E-05	0	52526.19865	1756.169239	3.053212581	107503.2458	
Sacramento	2026 Construction and Mining - Asphalt Pavers	Aggregate	100 Diesel	5.80E-05	7.01E-05	8.35E-05	0.000401443	0.000557329	0.077271807	4.02E-05	3.97E-05	2.50E-06	0	2510.960834	1075.388734	3.469004433	37488.51179	
Sacramento	2026 Construction and Mining - Asphalt Pavers	Aggregate	175 Diesel	0.000558776	0.000676119	0.000804637	0.006405078	0.006271859	1.146257541	0.000333355	0.000306866	1.09E-05	0	37247.83877	11306.54007	34.39723206	670029.3187	
Sacramento	2026 Construction and Mining - Asphalt Pavers	Aggregate	300 Diesel	0.000923568	0.001119699	0.001332153	0.007718962	0.008371994	1.851599726	0.000348484	0.000320802	3.46E-05	0	118071.0684	24995.01102	64.19182977	2334117.199	
Sacramento	2026 Construction and Mining - Asphalt Pavers	Aggregate	50 Diesel	1.32E-05	1.60E-05	1.90E-05	0.000139506	7.31E-05	6.07E-06	0.000924934	1.32E-05	1.06E-05	0	300.0901155	312.7343094	1.213835114	4635.100307	
Sacramento	2026 Construction and Mining - Graders	Aggregate	600 Diesel	0.000196418	0.000237666	0.000282843	0.001726882	0.001380595	0.877448731	6.24E-05	5.74E-05	8.31E-06	0	28512.8496	8011.474781	9.516497878	565464.238	
Sacramento	2026 Construction and Mining - Graders	Aggregate	75 Diesel	2.53E-05	3.06E-05	3.64E-05	0.000222507	0.000166692	0.102409151	1.68E-05	1.55E-05	3.97E-07	0	1053.140232	574.7469481	2.331553097	14382.6452	
Sacramento	2026 Construction and Mining - Graders	Aggregate	750 Diesel	6.17E-06	7.47E-06	8.89E-06	6.21E-05	3.98E-05	0.033316512	2.34E-06	2.16E-06	3.16E-07	0	1083.257788	74.18750581	0.196821318	21474.42414	
Sacramento	2026 Construction and Mining - Graders	Aggregate	9999 Diesel	5.60E-06	6.77E-06	8.06E-06	4.38E-05	1.83E-05	0.015805159	2.54E-06	2.37E-06	2.26E-07	0	775.1189987	49.90761886	0.131215413	15307.35495	
Sacramento	2026 Construction and Mining - Hopper Tractor Trailer	Aggregate	300 Diesel	1.29E-06	1.56E-06	1.86E-06	1.23E-05	1.51E-06	0.006026416	1.30E-07	1.20E-07	5.71E-08	0	195.829431	45.76680224	0.085607706	3882.049587	
Sacramento	2026 Construction and Mining - Hopper Tractor Trailer	Aggregate	600 Diesel	1.36E-06	1.65E-06	1.96E-06	1.01E-05	1.76E-06	0.005244117	3.74E-07	3.44E-07	4.97E-08	0	170.4085069	28.86163018	0.085607706	3378.109798	
Sacramento	2026 Construction and Mining - Misc - Asphalt Pavers	Aggregate	150 Gasoline	4.25E-05	3.91E-05	4.65E-05	0.002353857	0.001301707	0.059181859	1.97E-05	1.97E-05	5.50E-07	8.08E-07	22955	605.9	1.52	36959.9	
Sacramento	2026 Construction and Mining - Misc - Asphalt Pavers	Aggregate	15 Gasoline	0.000015083	0.000152338	0.000165979	0.004991102	0.000112524	1.97E-07	6.39E-05	4.83E-05	7.97E-08	1.10E-07	312.1863618	0	2.777923658	0	
Sacramento	2026 Construction and Mining - Misc - Asphalt Pavers	Aggregate	25 Diesel	0.000666456	0.000673127	0.000733673	0.022181621	0.004145314	8.25E-07	0.000302772	0.000270348	5.31E-07	4.86E-07	1385.836102	0	4.754729216	0	
Sacramento	2026 Construction and Mining - Misc - Asphalt Pavers	Aggregate	50 Gasoline	9.45E-05	8.70E-05	0.000104042	0.008107954	0.000314308	0.054975976	3.79E-06	2.86E-06	6.68E-07	9.00E-07	2589.6	1091.35	2.81	34923.2	
Sacramento	2026 Construction and Mining - Misc - Asphalt Pavers	Aggregate	100 Gasoline	4.18E-05	3.84E-05	4.59E-05	0.003580844	0.000312083	0.054977383	4.84E-06	3.66E-06	7.71E-07	8.91E-07	2719.25	424.4	3.96	37259.2	
Sacramento	2026 Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	15 Gasoline	1.97E-05	1.99E-05	2.17E-05	0.000708754	1.47E-05	2.80E-08	9.07E-06	6.85E-06	1.13E-08	1.55E-08	44.16610484	0	0.947223178	0	
Sacramento	2026 Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	25 Diesel	1.11E-05	1.34E-05	1.60E-05	7.02E-05	8.38E-05	0.001606011	2.95E-06	2.31E-06	1.52E-09	1.31E-09	5.224144099	0	1.001764467	0	
Sacramento	2026 Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	175 Gasoline	9.97E-06	9.17E-06	1.10E-05	0.000778654	4.96E-05	0.023947881	1.71E-06	1.30E-06	2.38E-07	3.36E-07	959.95	105.85	0.95	13337.1	
Sacramento	2026 Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	25 Gasoline	0.000187888	0.000189767	0.00020676	0.006768086	0.000122742	2.52E-07	8.16E-05	6.17E-05	1.07E-07	1.48E-07	421.1433896	0	4.773459226	0	
Sacramento	2026 Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	25 Diesel	6.81E-05	8.19E-05	9.77E-05	0.000729507	0.000511747	0.010240515	1.68E-05	1.50E-05	3.57E-07	0	1053.140232	574.7469481	2.331553097	14382.6452	
Sacramento	2026 Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	50 Gasoline	7.43E-06	6.83E-06	8.17E-06	0.000471337	1.77E-05	0.005565579	3.84E-07	2.90E-07	6.77E-08	8.44E-08	240.9	87.6	0.89	2803.2	
Sacramento	2026 Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	150 Gasoline	0.000605014	0.000974064	0.001079548	0.119861026	0.009208914	6.67E-06	0.000788	0.000121244	5.65E-06	4.61E-06	13785.26994	0	661.4606614	0	
Sacramento	2026 Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	15 Diesel	7.67E-05	9.22E-05	0.000110254	0.000443889	0.000577706	0.001107464	2.03E-05	1.54E-05	1.05E-08	9.05E-09	16.02222443	0	30.56638509	0	
Sacramento	2026 Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	25 Gasoline	9.44E-05	9.54E-05	0.000103933	0.000432394	6.13E-05	1.13E-07	3.67E-05	2.77E-05	4.86E-08	6.71E-08	190.6124513	0	2.763127342	0	
Sacramento	2026 Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	25 Diesel	1.97E-05	2.37E-05	2.83E-05	8.07E-05	0.000149841	0.002910129	5.41E-06	3.88E-06	2.06E-09	1.77E-09	4.726899708	0	7.726979636	0	
Sacramento	2026 Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	5 Gasoline	0.000314092	0.000172504	0.00045658	0.864925896	0.000421996	3.20E-06	4.03E-05	3.04E-05	1.40E-06	1.94E-06	5386.485666	0	390.3666232	0	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	100 Gasoline	5.86E-05	5.39E-05	6.45E-05	0.004961872	0.000431311	0.136487977	2.68E-06	2.19E-06	1.66E-06	1.87E-06	5347.25	1135.15	1.86	74919.9	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	15 Gasoline	0.004971034	0.005020744	0.00547332	0.161277356	0.03370836	6.37E-06	0.002064168	0.001559594	2.57E-06	3.55E-06	10089.74505	0	97.02402014	0	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	25 Diesel	0.000102092	0.000133114	0.000419864	0.101163328	0.002426154	0.775	0.000392184	0.000321468	1.61E-06	2.23E-06	1033.274988	0	10.35613556	0	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	25 Diesel	1.35E-05	1.62E-05	1.94E-05	5.53E-05	0.000102425	0.00014807	3.44E-06	2.60E-06	1.41E-09	1.21E-09	4.816223115	0	1.007258573	0	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	5 Gasoline	0.000294238	0.000216688	0.000290778	0.007027474	0.000119624	2.65E-07	3.33E-06	2.52E-06	1.16E-07	1.60E-07	446.2823806	0	21.61449398	0	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	50 Diesel	0.000042068	0.000133237	0.000157011	0.010599928	0.000130702	0.127714705	4.80E-06	4.65E-06	1.55E-06	1.92E-06	5482.3	1981.95	3.24	69368.25	
Sacramento	2026 Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	50 Diesel	3.04E-05	3.62E-05	4.38E-05	0.000037766	0.000308597	0.051619019	7.45E-06	6.86E-06	6.50E-07	4.22E-07	1679	1211.8	2.09	39989.4	
Sacramento	2026 Construction and Mining - Misc - Cranes	Aggregate	100 Gasoline	6.49E-05	5.97E-05	7.14E-05	0.005511358	0.000168238	0.066778364	4.65E-06	3.52E-06	4.45E-07	9.50E-07	2711.05	817.6	1.97	82502.4	
Sacramento	2026 Construction and Mining - Misc - Cranes	Aggregate	175 Gasoline	3.32E-06	3.05E-06	3.65E-06	0.000158716	1.22E-05	0.004385626	3.14E-07	2.38E-07	4.36E-08	6.39E-08	182.5	32.85	0.05	4106.25	
Sacramento	2026 Construction and Mining - Misc - Cranes	Aggregate	50 Gasoline	1.46E-05	1.16E-05	1.41E-05	0.002713328	4.44E-05	0.016874164	1.29E-06	8.79E-07	2.26E-07	3.83E-07	886.65	401.5	0.95	14855.5	
Sacramento	2026 Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	15 Gasoline	0.000002876	2.90E-05	3.16E-05	0.000094915	2.15E-05	3.93E-08	1.27E-05	9.62E-06	1.58E-08	2.18E-08	62.05902285	0	0.5891797	0	
Sacramento	2026 Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	25 Gasoline	3.51E-05	0.000035615	0.000038804	0.001226722	2.30E-05	4.57E-08	1.48E-05	1.12E-05	1.94E-08	2.68E-08	76.48978328	0	0.384968542	0	
Sacramento	2026 Construction and Mining - Misc - Dumpers/Tenders	Aggregate	100 Gasoline	3.58E-05	3.29E-05	3.94E-05	0.003041121	2.68E-05	0.008374211	2.96E-06	2.26E-06	1.53E-08	8.06E-08	229.95	83.95	0.74	5540.7	
Sacramento	2026 Construction and Mining - Misc - Dumpers/Tenders	Aggregate	15 Gasoline	0.000642592	0.000649018	0.000707134	0.017882716	0.000479182	7.06E-07	0.000218878	0.000172931	2.91E-07	4.02E-07	1131.771549	0	42.5820278	0	
Sacramento	2026 Construction and Mining - Misc - Dumpers/Tenders	Aggregate	25 Gasoline	0.000308527	0.000319341	0.000347314	0.015616182	0.001409418	2.76E-06	9.76E-05	7.19E-05	1.24E-07	1.67E-07	469.2584988	0	7.882473512	0	
Sacramento	2026 Construction and Mining - Misc - Dumpers/Tenders	Aggregate	25 Diesel	9.73E-06	1.17E-05	1.40E-05	3.98E-05	7.39E-05	0.001016872	2.49E-06	1.88E-06	1.01E-09	8.74E-10	3.476188891	0	1.405054739	0	
Sacramento	2026 Construction and Mining - Misc - Dumpers/Tenders	Aggregate	5 Gasoline	0.000178899	0.000175638	0.000191365	0.003911042	0.000117478	1.47E-07	3.45E-06	2.40E-06	6.47E-08	8.21E-08	259.8654228	0	19.96664076	0	
Sacramento	2026 Construction and Mining - Misc - Excavators	Aggregate	25 Diesel	6.94E-05	8.35E-05	9.98E-05	0.000285092	0.000527893	0.000763056	1.78E-05	1.34E-05	7.24E-09	6.24E-09	24.81973587	0	2.20627931	0	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.478154576	0	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	15 Diesel	0.000168112	0.000203405	0.000243101	0.001066644	0.001273802	0.002441381	4.48E-05	3.38E-05	2.32E-08	2.00E-08	79.42650519	0	18.32242514	0	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	175 Gasoline	5.48E-05	5.04E-05	6.03E-05	0.004663603	0.000181927	0.141263301	1.01E-05	7.65E-06	1.40E-06	1.97E-06	5624.65	1029.3	2.78	129691.8	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.478154576	0	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.478154576	0	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	25 Diesel	3.63E-05	4.37E-05	5.22E-05	0.000145613	0.000276108	0.000399148	9.29E-06	7.02E-06	3.79E-09	3.26E-09	12.9838051	0	2.604268858	0	
Sacramento	2026 Construction and Mining - Misc - Other	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.478154576	0	
Sacramento	2026 Construction and Mining - Misc - Pavers	Aggregate	25 Diesel	1.81E-05	2.20E-05	2.63E-05	7.52E-05	0.000139225	0.000202168	4.68E-06	3.54E-06	1.91E-09	1.65E-09	6.545090782	0	0.871807404	0	
Sacramento	2026 Construction and Mining - Misc - Paving Equipment	Aggregate	100 Gasoline	1.40E-05	1.29E-05	1.54E-05	0.000712109	3.57E-05	0.013508803	2.28E-06	1.66E-06	1.04E-07	4.35E-07	1241	335.8	1.98	22162.8	
Sacramento	2026 Construction and Mining - Misc - Paving Equipment	Aggregate	15 Gasoline	0.013631288	0.013767	0.0150004	0.419748822	0.010167432	1.66E-05	0.005372312	0.00405908	6.74E-06	9.31E-06	26376.36122	0	465.7072386	0	
Sacramento	2026 Construction and Mining - Misc - Paving Equipment	Aggregate	25 Gasoline	0.000705333	0.000710304	0.000777877	0.021774062	0.000455944	8.13E-07	0.000262056	0.000188347	3.44E-07	4.81E-07	1387.754388	0	10.34547655	0	
Sacramento	2026 Construction and Mining - Misc - Paving Equipment	Aggregate	25 Diesel	0.000030972	3.73E-05	4.45E-05	0.000127148	0.000235407	0.000340315	7.92E-06	5.98E-06	3.23E-09	2.78E-09	11.06935269	0	2.157196314	0	
Sacramento	2026 Construction and Mining - Misc - Paving Equipment	Aggregate	5 Gasoline	0.000368113	0.000727942	0.00405086	0.888287938	0.000566664	3.13E-06	4.28E-05	0.000317496	4.68E-06	2.04E-06	1389.626	0	275.4586316	0	
Sacramento	2026

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Sacramento	2026 Construction and Mining - Scrapers	Aggregate	750 Diesel	0.000310201	0.000375344	0.00046669	0.000834166	0.002560642	1.610086647	0.000116393	0.000107082	1.53E-05	0	52320.04649	4149.520248	15.3664285	1228240.575	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	200 Diesel	0.001190738	0.001440793	0.001714663	0.021876909	0.013812631	3.707769439	0.000466888	0.000871137	5.51E-05	0	120484.6148	68748.69538	146.743708	2131128.047	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	175 Diesel	0.000272304	0.000329488	0.000392118	0.009450581	0.001764872	1.078425254	5.80E-05	5.34E-05	1.02E-05	0	35043.61679	16704.84333	25.45250604	692240.3653	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	300 Diesel	2.79E-05	3.27E-05	3.89E-05	0.000194119	0.000197593	0.08811069	8.81E-06	5.13E-06	8.35E-07	0	2863.172258	740.1209935	1.377763826	56959.91855	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	50 Diesel	0.000849971	0.001028665	0.001223958	0.007595755	0.00631942	1.042984148	0.000255984	0.000235505	9.88E-06	0	33891.95185	37276.21474	96.52187023	579039.0541	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	600 Diesel	1.57E-05	1.90E-05	2.26E-05	0.000117808	9.35E-05	0.061224059	4.21E-06	3.87E-06	5.80E-07	0	1989.486466	225.5606996	0.393646236	39438.78065	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	75 Diesel	0.002988624	0.003617445	0.004305058	0.043127332	0.039391302	7.277441216	0.000795025	0.000731423	9.89E-05	0	23648.1722	18446.44421	37.61748397	376.0207401	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	750 Diesel	1.98E-06	2.40E-06	2.85E-06	1.13E-05	2.50E-05	0.005991622	7.71E-07	7.10E-07	5.68E-08	0	194.6987937	16.28834001	0.032803853	3859.630687	0
Sacramento	2026 Construction and Mining - Skid Steer Loaders	Aggregate	9999 Diesel	0.000105974	0.000128228	0.000152602	0.000915315	0.001847805	0.450384908	4.30E-05	3.95E-05	4.27E-06	0	14632.28064	944.3818827	0.721664766	290560.6088	0
Sacramento	2026 Construction and Mining - Spray Truck	Aggregate	100 Diesel	4.23E-06	5.11E-06	6.08E-06	4.41E-05	3.79E-05	0.00725936	3.12E-06	2.87E-06	6.88E-08	0	235.894161	140.1183111	0.262430824	4206.351703	0
Sacramento	2026 Construction and Mining - Spray Truck	Aggregate	175 Diesel	8.10E-06	9.80E-06	1.17E-05	0.000144509	3.72E-05	0.021349976	3.26E-06	3.00E-06	2.19E-07	0	753.9709404	216.0576022	0.424945089	16806.75217	0
Sacramento	2026 Construction and Mining - Spray Truck	Aggregate	300 Diesel	9.44E-06	1.14E-05	1.36E-05	5.43E-05	8.77E-05	0.021597895	4.37E-06	4.02E-06	2.05E-07	0	701.8273664	146.3656896	0.229797962	13794.20365	0
Sacramento	2026 Construction and Mining - Spray Truck	Aggregate	50 Diesel	1.16E-05	1.40E-05	1.67E-05	0.000136875	0.000118919	0.014462945	5.30E-06	4.88E-06	1.56E-07	0	534.966256	737.6110706	1.508977238	95139.26268	0
Sacramento	2026 Construction and Mining - Spray Truck	Aggregate	600 Diesel	2.68E-05	3.25E-05	3.86E-05	0.000222522	0.000154541	0.068051564	7.68E-06	7.06E-06	8.34E-07	0	2861.250931	860.3137832	0.514861648	56720.28297	0
Sacramento	2026 Construction and Mining - Spray Truck	Aggregate	75 Diesel	4.93E-06	5.96E-06	7.10E-06	6.14E-05	6.16E-05	0.010020616	1.92E-06	1.77E-06	9.49E-08	0	325.6216716	233.9112182	0.459253962	5808.329698	0
Sacramento	2026 Construction and Mining - Spreader Tractor Trailer	Aggregate	50 Diesel	6.97E-07	8.41E-07	1.02E-06	1.72E-06	3.19E-06	0.000952388	1.85E-07	1.70E-07	3.02E-09	0	90.94930012	57.52298054	0.113215412	5512.849163	0
Sacramento	2026 Construction and Mining - Spreader Tractor Trailer	Aggregate	600 Diesel	5.60E-06	6.78E-06	8.07E-06	3.84E-05	5.28E-05	0.019995358	1.79E-06	1.65E-06	1.89E-07	0	649.7526628	104.3795447	0.196821218	12880.43582	0
Sacramento	2026 Construction and Mining - Spreader Truck	Aggregate	100 Diesel	4.77E-06	5.77E-06	6.87E-06	4.98E-05	4.28E-05	0.011605958	4.20E-06	3.86E-06	1.02E-07	0	377.1253434	192.94756	0.424945089	8724.738509	0
Sacramento	2026 Construction and Mining - Spreader Truck	Aggregate	175 Diesel	3.77E-06	4.56E-06	5.42E-06	8.79E-05	1.78E-05	0.013943521	9.72E-07	8.94E-07	1.32E-07	0	453.0971455	169.2378312	0.196821218	8982.01583	0
Sacramento	2026 Construction and Mining - Spreader Truck	Aggregate	300 Diesel	3.14E-06	3.80E-06	4.53E-06	2.01E-05	2.25E-05	0.000813847	8.80E-07	8.09E-07	9.30E-08	0	318.9026685	64.44912477	0.089411559	6321.788417	0
Sacramento	2026 Construction and Mining - Spreader Truck	Aggregate	50 Diesel	2.02E-07	2.45E-07	2.91E-07	1.80E-06	6.49E-06	0.000285907	5.86E-08	5.39E-08	2.72E-08	0	92.90589812	51.90022262	0.089411559	1606.455106	0
Sacramento	2026 Construction and Mining - Spreader Truck	Aggregate	600 Diesel	2.73E-05	3.31E-05	3.94E-05	0.000237469	0.000185235	0.092778466	9.17E-06	8.43E-06	8.79E-07	0	3014.854288	389.1562938	0.65607706	59765.22365	0
Sacramento	2026 Construction and Mining - Spreader Truck	Aggregate	75 Diesel	5.26E-07	6.36E-07	7.57E-07	9.28E-06	8.21E-06	0.001624256	2.65E-07	2.44E-07	1.54E-08	0	52.78862187	31.47444406	0.065607706	941.3014233	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	100 Diesel	9.10E-06	1.10E-05	1.31E-05	0.000146884	9.03E-05	0.028112371	6.78E-06	6.24E-06	2.66E-07	0	913.5164094	486.2068681	1.019074418	12599.30496	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	175 Diesel	1.65E-05	4.42E-05	5.26E-05	0.000581449	0.000183612	0.09960473	1.69E-05	1.56E-05	6.44E-07	0	3236.673883	1583.525851	2.446343166	63154.7872	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	300 Diesel	3.81E-05	4.61E-05	5.48E-05	0.000272051	0.000337943	0.115595321	1.51E-05	1.39E-05	1.10E-06	0	3756.290108	1026.346402	1.873122224	73383.05699	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	50 Diesel	1.25E-05	1.51E-05	1.80E-05	9.01E-05	7.32E-05	0.011723807	3.82E-06	3.51E-06	1.11E-07	0	380.9671474	527.3197797	1.115829108	58244.48852	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	600 Diesel	0.000177295	0.000214527	0.000255304	0.001441234	0.001108357	0.695767111	9.53E-05	8.74E-05	6.23E-06	0	21340.10659	3636.525013	5.613388387	429722.8137	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	75 Diesel	9.68E-06	1.17E-05	1.39E-05	0.000113734	0.000110899	0.020310007	3.53E-06	3.24E-06	1.92E-07	0	659.9772278	531.3293209	1.083474369	10188.9428	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	750 Diesel	6.84E-05	8.28E-05	9.85E-05	0.000531235	0.000509647	0.277756221	2.46E-05	2.26E-05	1.63E-06	0	9025.736868	941.6968352	1.676172776	179442.3308	0
Sacramento	2026 Construction and Mining - Surfacing Equipment	Aggregate	9999 Diesel	2.95E-05	3.57E-05	4.24E-05	0.000250468	0.000519507	0.124220457	1.16E-05	1.07E-05	1.66E-06	0	3966.492843	328.9413477	0.658718385	89725.77439	0
Sacramento	2026 Construction and Mining - Tank Truck	Aggregate	100 Diesel	6.40E-07	7.74E-07	9.21E-07	1.80E-06	6.49E-06	0.000285907	5.86E-08	5.39E-08	2.72E-08	0	92.90589812	51.90022262	0.065607706	1606.455106	0
Sacramento	2026 Construction and Mining - Tank Truck	Aggregate	175 Diesel	1.88E-06	2.27E-06	2.71E-06	2.45E-05	2.11E-05	0.004050106	1.05E-06	9.65E-07	3.84E-08	0	131.6080938	51.09666773	0.164019265	2608.962048	0
Sacramento	2026 Construction and Mining - Tank Truck	Aggregate	300 Diesel	6.29E-05	7.61E-05	9.06E-05	0.000420355	0.000400334	0.197715551	1.66E-05	1.52E-05	1.87E-06	0	6434.801333	3461.193424	2.068642739	127362.6812	0
Sacramento	2026 Construction and Mining - Tank Truck	Aggregate	600 Diesel	2.48E-05	3.00E-05	3.57E-05	0.000150109	0.000168037	0.079412948	7.48E-06	7.06E-06	6.07E-07	0	2563.537614	375.8717509	0.557605501	51155.54121	0
Sacramento	2026 Construction and Mining - Tanker Truck Trailer	Aggregate	100 Diesel	1.02E-06	1.23E-06	1.47E-06	2.71E-05	1.16E-05	0.000424703	9.74E-07	8.96E-07	4.02E-08	0	137.8348657	76.99891327	0.089411559	2457.805512	0
Sacramento	2026 Construction and Mining - Tanker Truck Trailer	Aggregate	175 Diesel	2.27E-06	2.75E-06	3.27E-06	3.68E-05	3.58E-05	0.005868783	6.50E-07	5.98E-07	5.56E-08	0	190.7071392	70.16585857	0.089411559	3780.563732	0
Sacramento	2026 Construction and Mining - Tanker Truck Trailer	Aggregate	300 Diesel	4.73E-07	5.72E-07	6.81E-07	4.67E-06	5.80E-07	0.002323652	4.94E-08	4.55E-08	2.20E-08	0	75.50747057	21.64299841	0.032803853	1496.82977	0
Sacramento	2026 Construction and Mining - Tanker Truck Trailer	Aggregate	50 Diesel	1.07E-06	1.30E-06	1.55E-06	9.43E-06	8.10E-06	0.00120766	2.68E-07	2.46E-07	1.14E-08	0	39.34107733	51.63420421	0.089411559	995.7640953	0
Sacramento	2026 Construction and Mining - Tanker Truck Trailer	Aggregate	600 Diesel	1.36E-06	1.65E-06	1.96E-06	1.30E-05	1.83E-06	0.000681972	1.41E-07	1.30E-07	6.31E-08	0	216.4810534	23.87588347	0.032803853	4291.451296	0
Sacramento	2026 Construction and Mining - Tanker Truck Trailer	Aggregate	75 Diesel	6.35E-07	7.68E-07	9.14E-07	8.83E-06	1.27E-06	0.000422887	8.36E-08	7.69E-08	1.35E-08	0	46.17197061	34.6595548	0.065607706	823.3166669	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	100 Diesel	1.16E-05	1.41E-05	1.67E-05	0.000134134	0.000159353	0.035927057	1.09E-05	1.00E-05	5.59E-07	0	1918.094517	1229.342737	1.674031536	34302.54279	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	175 Diesel	7.37E-05	8.92E-05	0.000106156	0.001881561	0.000578482	0.328147944	2.08E-05	1.92E-05	3.11E-06	0	10663.22468	4956.598762	10.16919443	211383.4833	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	300 Diesel	1.79E-06	2.17E-06	2.58E-06	1.87E-05	3.60E-06	0.000944819	2.15E-07	2.00E-07	6.95E-08	0	307.0203965	86.42158772	0.196821218	6086.246029	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	50 Diesel	1.99E-06	2.41E-06	2.87E-06	2.59E-05	2.33E-05	0.004277556	4.80E-07	4.41E-07	4.05E-08	0	138.9991155	181.7255112	0.45607706	2478.579923	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	600 Diesel	7.31E-07	8.84E-07	1.05E-06	2.81E-06	8.41E-06	0.00044122	8.51E-08	8.19E-08	2.41E-08	0	144.3182445	15.02578953	0.032803853	2860.986518	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	75 Diesel	3.47E-05	4.19E-05	4.99E-05	0.000686931	0.000603329	0.120795001	5.14E-06	4.73E-06	1.14E-06	0	3925.254623	2878.431389	8.594609486	69993.26052	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	750 Diesel	7.44E-07	9.01E-07	1.07E-06	9.16E-06	1.52E-06	0.004881994	1.50E-07	1.38E-07	4.62E-08	0	158.6412613	12.32078842	0.032803853	3144.840646	0
Sacramento	2026 Construction and Mining - Telescopic Handler	Aggregate	9999 Diesel	7.75E-06	9.37E-06	1.12E-05	6.98E-05	0.000220328	0.037812881	6.98E-06	6.45E-06	1.89E-06	0	1212.740256	23.56960265	0.089411559	24040.6947	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	100 Diesel	0.004414479	0.00534152	0.00635685	0.066941434	0.045623311	13.37542435	0.003216562	0.002959932	0.000107757	0	369646.399	199361.6581	415.5873566	6454422.123	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	175 Diesel	0.000372269	0.000450401	0.000536074	0.005636774	0.003841153	1.127680477	0.000271288	0.000249607	9.08E-06	0	385938.8365	362328.6711	246.5474219	543740.459	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	25 Diesel	1.97E-07	2.39E-07	2.84E-07	2.12E-06	1.62E-06	0.000235594	1.04E-07	9.57E-08	2.27E-09	0	7.785645661	16.31937878	0.045607706	318.8290647	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	300 Diesel	0.000145945	0.000176594	0.000210308	0.002204158	0.001241572	0.441466228	0.000106284	9.78E-05	3.56E-06	0	151404.6626	142644772	96.66235433	212766.4929	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	50 Diesel	0.001207645	0.001461225	0.001719008	0.008636399	0.007056638	1.096197328	0.000375658	0.000345605	1.04E-05	0	35621.12042	42004.27803	105.978413	580934.4906	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	600 Diesel	0.001011277	0.001247845	0.001485039	0.005652556	0.00699948	1.779471653	0.000311715	0.000286767	3.60E-05	0	123464.4043	17189.6602	28.93472313	248034.638	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	75 Diesel	0.000258083	0.000304781	0.000361164	0.002899331	0.001660644	0.483183641	0.000147305	0.000135509	4.61E-06	0	158030.0009	110963.3084	250.3120878	271575.2106	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	750 Diesel	4.72E-05	5.71E-05	6.79E-05	0.000427189	0.000367477	0.175432477	1.94E-05	1.78E-05	1.66E-06	0	5700.708939	444.521579	0.853398284	114827.2005	0
Sacramento	2026 Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	9999 Diesel	0.000210957	0.000261854	0.000314364	0.001931619	0.001845871	0.495581223	0.000153	0.000141	6.59E-06	0	22603.03919	628.739398	1.14850471	454582.121	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	100 Diesel	7.23E-05	8.75E-05	0.000104168	0.000760961	0.000645185	0.129954974	4.85E-05	4.47E-05	1.23E-06	0	4222.909551	1649.747176	5.118494143	72166.57373	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	175 Diesel	7.66E-05	9.27E-05	0.000110321	0.001200002	0.000372401	0.205915325	5.51E-05	5.23E-05	1.38E-06	0	6808.886943	2116.404022	5.159202905	51886.1964	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	300 Diesel	4.59E-05	5.55E-05	6.61E-05	0.000331813	0.000495165	0.122592081	2.31E-05	2.13E-05	1.16E-06	0	3983.651067	709.6141384	1.966892402	79352.84792	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	50 Diesel	0.000028239	0.000317493	0.000377842	0.002311628	0.00202904	0.333389718	8.20E-05	7.54E-05	3.16E-06	0	10850.05417	8867.838749	28.47704907	184729.2664	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	600 Diesel	6.21E-05	7.52E-05	8.95E-05	0.000478404	0.000644766	0.193021834	3.56E-05	3.35E-05	1.89E-06	0	6473.098352	594.2164193	1.740494013	130962.5262	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	75 Diesel	7.15E-05	8.65E-05	0.000102932	0.000645481	0.000827654	0.109925101	4.21E-05	3.87E-05	1.04E-06	0	3572.03532	3867.889299	6.235553187	57775.65257	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	750 Diesel	2.84E-06	3.44E-06	4.09E-06	1.78E-05	4.45E-05	0.007951163	1.34E-06	1.24E-06	7.32E-08	0	258.1744316	19.42223855	0.032803853	5207.405139	0
Sacramento	2026 Construction and Mining - Trenchers	Aggregate	9999 Diesel	5.49E-05	6.64E-05	7.91E-05	0.000583829	0.000943395	0.254121742	2.25E-05	2.07E-05	2.41E-06	0	8257.730356	382.2129889	0.885704031	163697.9299	0
Sacramento	2026 Construction and Mining - Vacuum Truck	Aggregate	100 Diesel	4.19E-06	5.07E-06	6.04E-06	7.72E-05	5.08E-05	0.012446772	3.79E-06	3.49E-06	1.8E-07	0	404.4600247	209.5864137	0.762189897	5212.137276	0
Sacramento	2026 Construction and Mining - Vacuum Truck	Aggregate	175 Diesel	4.36E-05	5.28E-05	6.28E-05	0.000657514	0.00041062	0.112047138	1.96E-05	1.80E-05	1.06E-06	0	3640.991288	1321.091935	2.165054298	72177.54892	0
Sacramento	2026 Construction and Mining - Vacuum Truck	Aggregate	300 Diesel	3.85E-05	4.66E-05	5.55E-05	0.000248628	0.000347802	0.124339013	1.32E-05	1.21E-05	1.18E-06	0	4040.417913	883.8032157	1.377763826	80095.62191	0
Sacramento	2026 Construction and Mining - Vacuum Truck	Aggregate	50 Diesel	6.30E-06	7.62E-06	9.07E-06	4.53E-05	3.8E-05	0.008004936	1.81E-06	1.66E-06	5.50E-08	0	175.0981812	241.8687489	0.557605501	3122.286908	0
Sacramento	2026 Construction and Mining - Vacuum Truck	Aggregate	600 Diesel	4.92E-05	5.95E-05	7.08E-05	0.000324999	0.00046167	0.168586632	1.57E-05	1.44E-05	1.60E-06	0	5478.253204	858.9652924	1.672995503	108598.6678	0
Sacramento	2026 Construction and Mining - Vacuum Truck	Aggregate	75 Diesel	3.56E-06	4.31E-06	5.13E-06	4.90E-05	4.29E-06	0.008068648	1.28E-06	1.18E-06	7.64E-08	0	262.1917336	187.9079946	0.360842383	4675.127423	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	175 Diesel	1.41E-05	1.71E-05	2.03E-05	0.000197336	0.000133214	0.033097693	6.52E-06	6.00E-06	3.14E-07	0	1075.515307	394.9667566	0.688880913	21189.36557	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	300 Diesel	0.000010061	0.000121738	0.000144879	0.000617882	0.000182264	0.212525205	5.91E-05	5.42E-05	1.68E-06	0	6832.176569	1544.324474	2.922989759	135021.7713	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	50 Diesel	1.33E-06	1.61E-06	1.91E-06	1.58E-05	1.12E-05	0.001837767	4.60E-07	4.23E-07	1.74E-08	0	59.71856696	76.7612298	0.113215412	1064.872885	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	600 Diesel	0.000290279	0.000351238	0.000418002	0.002886714	0.002183865	0.959358251	9.56E-05	8.80E-05	9.09E-06	0	31181.01276	4021.779852	6.561921018	620933.3163	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	75 Diesel	8.89E-06	1.08E-05	1.28E-05	0.000127598	1.01E-05	0.002779544	6.50E-06	5.98E-06	1.01E-07	0	347.8425278	240.1249528	0.514861648	5609.667323	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	750 Diesel	8.11E-06	9.82E-06	1.17E-05	7.54E-05	0.000112598	0.01568946	4.47E-06	4.11E-06	1.49E-07	0	509.8317471	42.33140256	0.089411559	10106.69978	0
Sacramento	2026 Construction and Mining - Water Truck	Aggregate	9999 Diesel	1.40E-05	1.70E-05	2.02E-05	0.000103997	0.000144947	0.054892647	5.55E-06	5.10E-06	5.18E-07	0	1777.247116	113.158215	0.196821218	35231.46306	0
Sacramento	2026 Forestry - Extraction	Aggregate	100 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	300 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	600 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	75 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	750 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Extraction	Aggregate	9999 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	100 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	300 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	50 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	600 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Maintenance & Construction	Aggregate	75 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Manufacturing	Aggregate	100 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Manufacturing	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Manufacturing	Aggregate	300 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Manufacturing	Aggregate	50 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Manufacturing	Aggregate	600 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Forestry - Manufacturing	Aggregate	75 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Industrial - Aerial Lifts	Aggregate	100 Diesel	2.67E-05	3.23E-05	3.85E-05	0.000643894	0.000349983	0.116288458	2.44E-05	2.24E-05	1.10E-06	0	3778.81372	2579.362405	9.416698294	66758.81816	0
Sacramento	2026 Industrial - Aerial Lifts	Aggregate	175 Diesel	4.24E-05	5.11E-05	6.11E-05	0.000973012	0.000378031	0.171076852	1.61E-05	1.48E-05	1.62E-06	0	5559.172148	2890.501482	6.667421245	110168.338	0
Sacramento	2026 Industrial - Aerial Lifts	Aggregate	300 Diesel	7.29E-07	8.82E-07	1.05E-06	6.98E-06	3.94E-06	0.000630662	1.51E-07	1.39E-07	3.44E-08	0	117.9789832	32.21313637	0.07898693	2338.767977	0
Sacramento	2026 Industrial - Aerial Lifts	Aggregate	50 Diesel	0.000113074	0.000136819	0.000163826	0.001738957	0.001633512	0.295584647	3.88E-05	3.55E-05	2.80E-06	0	9605.074668	11725.48796	50.0178787	169075.9736	0
Sacramento	2026 Industrial - Aerial Lifts	Aggregate	600 Diesel	4.54E-07	5.49E-07	6.53E-07	4.07E-06	2.05E-06	0.000249674	1.88E-07	1.00E-07	2.04E-08	0	69.85402384	11.86882218	0.031594772	1384.758112	0
Sacramento	2026 Industrial - Aerial Lifts	Aggregate	75 Diesel	0.000174248	0.000210384	0.000250918	0.003315515	0.002977101	0.53781238	4.70E-05	4.32E-05	5.57E-06	0	19101.06584	15996.00003	54.5394476	337213.7408	0
Sacramento	2026 Industrial - Boom	Aggregate	100 Diesel	1.38E-05	1.67E-05	1.99E-05	0.000342039	0.000165081	0.058554122	1.28E-05	1.18E-05	5.56E-07	0	1965.979111	1272.691911	2.559253252	33979.21126	0
Sacramento	2026 Indust

ITEM 11.1.

ATTACHMENT 3

Sacramento	2026 Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	5 Gasoline	0.35476016	0.358331192	0.393838427	1.318948749	0.0087338	8.61426751	0.00544057	0.00410799	0.00011303	0.000156099	444722.1207	0	22293.7061	0
Sacramento	2026 Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	59079.65721	0
Sacramento	2026 Lawn and Garden - Misc - Other	Aggregate	15 Gasoline	0.001235	0.001247	0.001358	0.0689	0.000454	0.179068103	0.00000335	0.000002524	0.00000028	0.000000386	10877.07076	0	1357.502366	0
Sacramento	2026 Lawn and Garden - Misc - Other	Aggregate	15 Diesel	0.0000024	0.0000028	0.0000045	0.000017	0.0000003	0.002814274	0.00000714	0.00000054	2.67E-08	2.30E-08	91.53924685	0	0.384921493	0
Sacramento	2026 Lawn and Garden - Misc - Other	Aggregate	25 Gasoline	0.0002192	0.0002211	0.0002241	0.0202	0.0001507	0.0425	0.00000794	0.000000599	0.000000713	0.000000984	2797.572875	0	117.0648821	0
Sacramento	2026 Lawn and Garden - Misc - Other	Aggregate	25 Diesel	0.0000004	0.0000005	0.0000006	0.0000074	0.0000022	0.000424611	0.00000108	8.19E-08	4.04E-09	3.48E-09	13.85997141	0	0.0438	0
Sacramento	2026 Lawn and Garden - Misc - Other	Aggregate	5 Gasoline	0.000623	0.000629	0.000686	0.031272814	0.000243	0.0705	0.00001217	0.000000592	0.000001196	0.000001653	4547.867732	0	1105.362439	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	15 Gasoline	0.004802	0.004847	0.005280584	0.261703	0.003858	0.765800571	0.00001966	0.000014855	1.15E-05	1.58E-05	44524.57581	0	1194.788739	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	15 Diesel	0.0000125	0.0000169	0.0000807	0.0004318	0.00014	0.717385788	0.0001824	0.00013732	0.000008811	5.87E-06	2334.24299	0	826.0169756	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	72.16964094	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	25 Gasoline	0.1600721	0.161701837	0.176150594	9.563712698	0.062986216	19.86326017	0.00053253	0.000403171	0.000045718	0.000037251	1322224.166	0	19325.66135	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	25 Diesel	0.001851	0.002227	0.002655	0.007584	0.014102	1.856938303	0.0004726	0.0003573	0.00001761	0.00001516	60400.20626	0	1683.483625	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	0	824.3533528	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	5 Gasoline	0.000546	0.0005515	0.00060309	0.015294855	0.0002257	0.04532	1.18E-06	8.88E-07	7.58E-07	1.05E-06	2890.569137	0	194.479876	0
Sacramento	2026 Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	11.74711968	0
Sacramento	2026 Lawn and Garden - Misc - Snowblowers	Aggregate	15 Gasoline	0.000851	0.000859	0.000867	0.06085	0.000397	0.1063	0.00000208	1.54E-06	0.00000096	0.000002899	7638.468029	0	1867.009039	0
Sacramento	2026 Lawn and Garden - Misc - Snowblowers	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	183.3007232	0
Sacramento	2026 Lawn and Garden - Misc - Snowblowers	Aggregate	25 Gasoline	0.000002573	0.000002597	2.82E-06	0.000608	0.000001853	0.00045555	8.71E-09	6.59E-09	8.60E-09	1.19E-08	32.58617865	0	3.845383804	0
Sacramento	2026 Lawn and Garden - Misc - Snowblowers	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	0	0.377503969	0
Sacramento	2026 Lawn and Garden - Misc - Snowblowers	Aggregate	5 Gasoline	0.000364	0.0003685	0.0004008	0.01913	0.0001567	0.04369	0.00000754	5.70E-07	7.31E-07	0.000001008	2800.255941	0	1403.621625	0
Sacramento	2026 Lawn and Garden - Misc - Snowblowers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	137.8054989	0
Sacramento	2026 Lawn and Garden - Misc - Tillers	Aggregate	15 Gasoline	0.0009032	0.0009126	0.0009948	0.05768	0.0005572	0.146301492	2.50E-06	0.00000189	2.32E-06	3.20E-06	8952.229277	0	1485.076505	0
Sacramento	2026 Lawn and Garden - Misc - Tillers	Aggregate	2 Gasoline	0.0038026	0.00383466	0.00418453	0.016199494	0.000367938	0.064469	3.63E-06	4.76E-06	1.03E-06	1.42E-06	3550.164718	0	2009.584354	0
Sacramento	2026 Lawn and Garden - Misc - Tillers	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	621.350497	0
Sacramento	2026 Lawn and Garden - Misc - Tillers	Aggregate	5 Gasoline	0.00056	0.0005653	0.0006162	0.028485	0.0001469	0.06676	9.97E-07	7.53E-07	1.12E-06	1.53E-06	4232.685452	0	998.2568786	0
Sacramento	2026 Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	15 Gasoline	0.00005155	0.00005202	0.00005669	0.002844	0.00001989	0.007355	1.13E-07	0.000000385	1.18E-07	0.000000163	448.1392277	0	55.12220737	0
Sacramento	2026 Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	2 Gasoline	0.379631299	0.383399312	0.417679601	2.110525839	0.02259	11.09382848	0.0002883	0.00245	0.000150323	0.00020731	586872.3202	0	123261.1299	0
Sacramento	2026 Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	184579.6794	0
Sacramento	2026 Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	25 Gasoline	0.00005744	0.00005801	0.00006324	0.022888	2.41E-05	0.01134	1.27E-07	9.64E-08	1.54E-07	2.13E-07	599.5246302	0	25.3737141	0
Sacramento	2026 Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	5 Gasoline	0.013956	0.0141091	0.015355	0.25229	0.0059998	0.857031638	0.00001687	0.00001362	0.000017077	0.000023362	48568.08178	0	3974.486143	0
Sacramento	2026 Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	2976.055439	0
Sacramento	2026 Lawn and Garden - Misc - Wood Splitters	Aggregate	15 Gasoline	0.0177782	0.017879	0.0194861	0.905011893	0.0093974	2.301121137	7.18E-05	0.000054239	0.000036448	0.000050253	141177.4385	0	4847.705323	0
Sacramento	2026 Lawn and Garden - Misc - Wood Splitters	Aggregate	2 Gasoline	0.0003391	0.000334212	0.00037331	0.00910075	0.00018619	0.021108	6.38E-07	4.82E-07	3.62E-07	5.00E-07	1366.419365	0	129.8351136	0
Sacramento	2026 Lawn and Garden - Misc - Wood Splitters	Aggregate	25 Gasoline	0.1061	1.07E-01	1.16E-01	0.00652217	4.32E-06	0.001407764	4.44E-08	3.36E-08	2.38E-08	3.30E-08	93.53754287	0	0.105568884	0
Sacramento	2026 Lawn and Garden - Misc - Wood Splitters	Aggregate	5 Gasoline	0.00114491	0.001134961	0.00123554	0.05124	0.0003974	0.152703873	2.47E-06	2.01E-06	2.77E-06	3.79E-06	7697.16652	0	467.0897337	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	100 Gasoline	0.001880812	0.001711575	0.00204771	0.093844831	0.004703852	0.179687749	0.00021888	9.36E-05	1.72E-05	2.56E-05	73073	19385.15	40.09	1356960.5
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	15 Gasoline	0.118866435	0.12005134	0.130801342	7.236892798	0.051109	15.03913989	0.00216613	0.000926547	0.000166553	0.000245547	10380756.845	0	9684.877627	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	15 Diesel	1.96E-05	2.36E-05	2.82E-05	0.000221824	0.000147855	0.02010199	4.18E-06	5.54E-06	1.91E-07	1.64E-07	653.8528238	0	2.471179118	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	118994.8309	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	175 Gasoline	0.000187191	0.000172178	0.000205992	0.082626857	0.000645174	0.222542084	1.60E-05	1.21E-05	2.21E-06	3.14E-06	8949.8	1295.75	2.68	173630.5
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	25 Gasoline	0.001674088	0.001690829	0.001842231	0.243951394	0.002459995	0.371504805	4.66E-06	6.17E-06	7.22E-06	9.96E-06	28372.3195	0	100.2778679	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	25 Diesel	8.18E-05	9.84E-05	0.000117638	0.000331935	0.000616591	0.088521417	1.86E-05	2.46E-05	8.00E-07	7.04E-07	2639.101689	0	4.963626882	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	0	630.4549453	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	5 Gasoline	0.025199168	0.025445541	0.027724021	1.030959217	0.007543505	2.43512724	2.93E-05	3.88E-06	3.95E-05	5.46E-05	1545017.122	0	3600.32536	0
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	44850.2434	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	50 Gasoline	0.000611732	0.000561931	0.000674275	0.052020668	0.000823421	0.277088749	1.91E-05	1.44E-05	3.37E-06	4.75E-06	135614	5967.75	12.36	208871.25
Sacramento	2026 Light Commercial - Misc - Air Compressors	Aggregate	50 Diesel	0.000565506	0.000672999	0.000814329	0.005977663	0.004069822	0.711108098	0.000146883	0.000135133	8.93E-06	5.82E-06	23130.05	22659.2	27.85	838390.4
Sacramento	2026 Light Commercial - Misc - Gas Compressors	Aggregate	100 Nat Gas	0	0	0.000229018	0.11680753	0.008865547	2.7933266	0	0	0	0	1545702	15965.1	1.88	1404928.8
Sacramento	2026 Light Commercial - Misc - Gas Compressors	Aggregate	175 Nat Gas	0	0	0.000475915	0.023758632	0.002329004	0.7269724	0	0	0	0	319693.75	2573.25	0.3	178494.5
Sacramento	2026 Light Commercial - Misc - Gas Compressors	Aggregate	300 Nat Gas	0	0	4.83E-05	0.027339857	0.002293201	0.74923866	0	0	0	0	41109.95	3058.6	0.25	412300
Sacramento	2026 Light Commercial - Misc - Gas Compressors	Aggregate	50 Nat Gas	0	0	4.11E-05	0.007293043	0.001489237	0.47970788	0	0	0	0	26415.05	7723.4	0.91	187144.8
Sacramento	2026 Light Commercial - Misc - Gas Compressors	Aggregate	600 Nat Gas	0	0	6.80E-05	0.038503624	0.003229592	1.0551778	0	0	0	0	57899.95	1799.45	0.21	608214.1
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	100 Gasoline	0.000636108	0.000558092	0.000693958	0.028418424	0.000853432	1.191389147	8.31E-05	6.28E-05	1.15E-05	1.64E-05	46855.05	9030.1	78.6	749488.8
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	100 Nat Gas	0	0	3.09E-06	0.002434898	0.000236672	0.077245271	0	0	0	0	4201.15	671.6	5.84	55742.8
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	15 Gasoline	0.109982726	0.111082554	0.121032581	6.127448055	0.057187966	15.58982092	0.000328539	0.000227504	0.000245909	0.000336585	1574912.645	0	21954.69123	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	15 Diesel	0.001025626	0.001233603	0.001474554	0.007127553	0.008671982	1.174219839	0.000246371	0.000326079	1.11E-05	9.60E-06	3819.915335	0	246.4053295	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	175 Gasoline	6.48E-05	5.96E-05	7.13E-05	0.006277493	0.000066453	0.012579337	1.38E-05	1.04E-05	1.91E-06	2.69E-06	7668.65	854.1	7.39	124698.6
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	175 Nat Gas	0	0	4.61E-05	0.003155998	0.000321053	0.112644337	0	0	0	0	6069.95	558.45	4.86	81533.7
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	2 Gasoline	0.337392826	0.340766756	0.371288226	5.780333047	0.098641322	12.56950625	0.000416493	0.000551241	0.000222579	0.000307241	853151.5267	0	53004.18927	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	10447.26619	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	25 Gasoline	0.003875158	0.003910233	0.004260369	0.362960456	0.002216439	0.561003936	7.19E-06	9.52E-06	1.09E-05	1.50E-05	42701.38624	420.9035901	0	42701.38624
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	25 Diesel	0.001488949	0.001788472	0.002137513	0.00611234	0.011445918	1.474985294	0.000307186	0.000406506	1.40E-05	1.21E-05	48134.94624	0	180.232404	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	5 Gasoline	0.031708546	0.032017552	0.034884517	1.471553604	0.022709174	3.511477285	0.000119	8.64E-05	5.35E-05	7.39E-05	209425.3486	0	12136.60787	0
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	50 Gasoline	0.003057754	0.002812522	0.003364871	0.21222002	0.000527988	2.405139135	0.000165822	0.000125288	2.92E-05	3.65E-05	104068.8	46730.95	406.35	1495390.4
Sacramento	2026 Light Commercial - Misc - Generator Sets	Aggregate	50 Diesel	0.001051414	0.001251127	0.001514636	0.012806456	0.012182222	1.959053997	0.000392483	0.000309004	1.68E-05	1.63E-05	63713.7	45617.7	135.15	1505384.1
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	15 Gasoline	0.040206008	0.040608069	0.04424426	2.94732817	0.020495861	5.758045589	7.36E-05	9.75E-05	0.000100026	0.000138072	392739.4597	0	13024.12524	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	15 Diesel	9.75E-06	1.17E-05	0.000014018	6.78E-05	8.25E-05	0.011178717	2.34E-06	3.10E-06	1.06E-07	9.14E-08	363.6075735	0	11.41314464	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	24674.49359	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	2 Gasoline	2.36E-05	2.39E-05	2.60E-05	0.00042959	8.05E-06	0.001111416	1.35E-08	1.79E-08	1.89E-08	2.61E-08	73.40068888	0	9.515862321	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	15 Diesel	9.75E-06	1.17E-05	0.000014018	6.78E-05	8.25E-05	0.011178717	2.34E-06	3.10E-06	1.06E-07	9.14E-08	363.6075735	0	11.41314464	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	25 Gasoline	0.000631786	0.000638103	0.000695241	0.051705224	0.000310744	0.101012342	1.29E-06	1.71E-06	1.75E-06	2.41E-06	6880.231995	0	86.41430583	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	25 Diesel	3.76E-06	4.52E-06	5.40E-06	0.000125998	0.000231253	0.031749437	7.71E-07	1.02E-06	3.55E-08	3.05E-08	12.12826813	0	2.622917558	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	0	163.7138154	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	5 Gasoline	0.074700547	0.075448563	0.082204495	3.760031107	0.030397302	8.484187022	0.000102539	0.000136606	0.000139971	0.000192797	546540.7397	0	34434.62833	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	64479.35681	0
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	50 Gasoline	2.73E-05	2.51E-05	3.01E-05	0.001942255	4.57E-06	0.024053027	1.68E-06	1.27E-06	2.96E-07	3.68E-07	1051.2	408.6	3.64	11855.2
Sacramento	2026 Light Commercial - Misc - Pressure Washers	Aggregate	50 Diesel	3.49E-05	4.15E-05	5.02E-05	5.22E-05	5.44E-05	0.009313867	1.28E-05	1.16E-06	1.19E-07	7.62E-08	302.95	470.85	1.43	17892.5
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	100 Gasoline	0.000711179	0.000654142	0.000782609	0.037047292	0.001880644	1.365304407	9.52E-05	7.19E-05	1.32E-05	1.89E-05	53950.65	9092.15	41.21	845569.95
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	15 Gasoline	0.012939774	0.012719705	0.013858672	0.821301751	0.007975051	1.873252543	2.58E-05	3.15E-05	1.05E-05	4.21E-05	119695.573	0	3036.628995	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	15 Diesel	0.000750172	0.000902292	0.001078385	0.004641894	0.005655307	0.765103693	0.000161815	0.000214167	7.26E-06	0.000006255	24886.35232	0	185.0647388	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	175 Gasoline	2.66E-05	2.44E-05	2.92E-05	0.002656981	9.39E-06	0.06198287	4.46E-06	3.36E-06	5.48E-07	8.62E-07	2468.1	266.45	1.25	38368.8
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	2 Gasoline	0.005861923	0.005920542	0.006450889	0.054876602	0.00034915	0.162511025	1.60E-06	2.11E-06	2.65E-06	3.66E-06	10040.63157	0	1100.689522	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	80761.15413	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	25 Gasoline	9.35E-05	9.45E-05	0.000102954	0.006764896	6.71E-05	0.015418725	1.99E-07	2.64E-07	2.50E-07	3.45E-07	983.7533413	0	10.11198465	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	25 Diesel	0.000610039	0.000733742	0.000879941	0.002469988	0.004585854	0.598166802	0.000123911	0.000164	5.68E-06	4.89E-06	19456.43437	0	55.27798833	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	5 Gasoline	0.009698821	0.009795192	0.010672268	0.436152302	0.003133993	0.812631842	1.21E-05	1.61E-05	1.67E-05	2.30E-05	64631.48775	0	3333.921346	0
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	50 Gasoline	0.000468953	0.000441343	0.000516054	0.037060179	0.000736942	0.363141403	2.50E-05	1.89E-05	4.42E-06	5.61E-06	16508.9	7186.85	32.53	222792.35
Sacramento	2026 Light Commercial - Misc - Pumps	Aggregate	50 Diesel	0.000607913	0.000808221	0.001077947	0.007875238	0.007015974	1.147512442	0.000203785	0.000187648	1.49E-05	1.39E-05	37324.9	23812.6	59.16	381066.2
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	100 Gasoline	0.000818646	0.000751335	0.000898889	0.035609616	0.002321977	1.143817314	7.97E-05	6.03E-05	1.11E-05	1.59E-05	45508.2	13694.8	65.94	958636
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	15 Gasoline	0.063918655	0.064557842	0.070338581	3.761068198	0.029837212	6.748778967	0.000134	0.000115011	0.000122634	0.000169126	480401.3958	0	9932.290723	0
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	15 Diesel	0.004513176	0.005544109	0.006560298	0.032799993	0.040410387	0.461423937	9.76E-05	0.000129135	4.38E-06	3.77E-06	1500863.6056	0	83.65931756	0
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	42420.396	0
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	175 Gasoline	7.52E-05	6.92E-05	8.28E-05	0.004805417	0.000320706	0.142413794	2.01E-05	7.71E-06	1.41E-06	1.99E-06	5683.05	965.35	4.55	122895.5
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	25 Diesel	0.000751108	0.000903418	0.00107973	0.00334009	0.005645522	0.736358677	0.000152571	0.000201932	6.99E-06	6.00E-06	23951.3698	0	73.64126779	0
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	50 Gasoline	0.001138249	0.001046861	0.001252574	0.088810813	0.001763623	0.728628521	5.02E-05	3.80E-05	8.84E-06	1.14E-05	32525.15	13424.7	64.6	604111.5
Sacramento	2026 Light Commercial - Misc - Welders	Aggregate	50 Diesel	0.002382775	0.002835699	0.003431195	0.025858386	0.027623307	3.263780816	0.000655058	0.000820533	4.11E-05	2.67E-05	106160.25	89381.2	139.18	4111535.2
Sacramento	2026 Locomotive - Line Haul	Aggregate	0 Diesel	0.009976	0.0207	0.045	0.2118	0.8093	0	0.019	0.001	0.001	0.001	0	0	0	0
Sacramento	2026 Locomotive - Passenger	Aggregate	0 Diesel	0.003933232	0.00000387	0.00000661	0.015254983	0.07645213	0	0.001782118	0.001565045	0.000006602	0.000005312	0	0	0	0
Sacramento	2026 Locomotive - Short Line	Aggregate	0 Diesel	0.000242451	4.87E-09	5.80E-09	0.000645535	0.000656368	0	0.000011387	0.000024776	0.000003313	0.000002777	0	0	0	0
Sacramento	2026 Locomotive - Switcher	Aggregate	0 Diesel	0.001685807	0.000000107	0.000000127	0.004514446	0.016387025	0	0.000569153	0.000526	0.000035	0.000032	0	0	0	0
Sacramento	2026 Military Tactical Support - Misc - A/C Unit	Aggregate	100 Diesel	2.84E-06	3.38E-06	4.09E-06	6.18E-05	3.85E-05	0.01088488	1.36E-06	1.25E-06	1.25E-07	8.91E-08	354.05	98.55	0.33	9953.55
Sacramento	2026 Military Tactical Support - Misc - A/C Unit	Aggregate	300 Diesel	1.51E-06	1.80E-06	2.18E-06	1.59E-05	1.44E-05	0.005020451	3.94E-07	3.63E-07	1.05E-07	7.53E-08	298.3	54.75	0.16	11388
Sacramento	2026 Military Tactical Support - Misc - A/C Unit	Aggregate	600 Diesel	8.85E-07	1.05E-06	1.27E-06	9.37E-06	8.00E-06	0.005498568	2.30E-07	2.12E-07	5.37E-08	4.50E-08	178.85	0	0	0
Sacramento	2026 Military Tactical Support - Misc - Aircraft Support	Aggregate	100 Diesel	5.20E-07	6.18E-07	7.48E-07	1.13E-05	7.05E-06	0.001795444	2.48E-07	2.28E-07	2.28E-08	1.47E-08	58.4	0	0.09	0
Sacramento	2026 Military Tactical Support - Misc - Aircraft Support	Aggregate	175 Diesel	1.16E-06	1.38E-06	1.67E-06	2.95E-05	3.16E-05	0.003835193	4.51E-07	4.15E-07	4.64E-08	4.77E-08	189.8	51.1	0.16	7154
Sacramento	2026 Military Tactical Support - Misc - Cart	Aggregate	100 Diesel	2.65E-07	3.16E-07	3.82E-07	5.78E-06	3.60E-06	0.000897722	1.27E-07	1.17E-07	1.16E-08	7.55E-09	29.2	0	0	0
Sacramento	2026 Military Tactical Support - Misc - Cart	Aggregate	175 Diesel	9.49E-08	1.13E-07	1.37E-07	2.40E-06	5.48E-07	0	3.70E-08	3.40E-08	3.27E-09	0	0	0	0	0
Sacramento	2026 Military Tactical Support - Misc - Cart	Aggregate	300 Diesel	3.33E-07	3.96E-07	4.79E-07	3.51E-06	3.17E-06	0.001795444	8.68E-08	7.98E-08	2.26E-08	1.47E-08	58.4	0	0	0
Sacramento	2026 Military Tactical Support - Misc - Communications	Aggregate	100 Diesel	1.31E-07	1.56E-07	1.88E-07	2.85E-06	1.78E-06	0	6.26E-08	5.76E-08	5.72E-09	0	0	0	0	0
Sacramento	2026 Military Tactical Support - Misc - Communications	Aggregate	50 Diesel	7.66E-08	9.12E-08	1.10E-07	1.04E-06	9.73E-07	0	2.26E-08	2.08E-08	2.11E-09	0	0	0	0	0
Sacramento	2026 Military Tactical Support - Misc - Compressor	Aggregate	100 Diesel	2.93E-06	3.48E-06	4.21E-06	6.37E-05	3.97E-05	0.011109311	1.40E-06	1.29E-06	1.28E-07	9.09E-08	361.35	138.7	0.49	9847.7
Sacramento	2026 Military Tactical Support - Misc - Compressor	Aggregate	175 Diesel	1.38E-07	1.64E-07	1.99E-07	3.46E-06	1.38E-06	0

Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	15 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	175 Gasoline	0.181970245	0.183788947	0.20024715	0.850092318	0.030185505	4.072278817	0.019903059	0.015037863	5.77E-05	7.98E-05	225392.6964	0	739.0043677	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	25 Gasoline	0.069780042	0.070477842	0.076788679	0.186431843	0.006590898	0.746418512	0.004196599	0.003170763	1.30E-05	1.80E-05	47847.71819	0	1073.242973	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	250 Gasoline	0.172185665	0.173907522	0.189479821	0.880495801	0.053755638	5.276358281	0.037757532	0.028527908	6.92E-05	9.55E-05	270810.7487	0	667.725659	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	250 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	50 Gasoline	0.165822791	0.167481019	0.18247866	0.484613279	0.018924409	2.203484022	0.011988075	0.009057657	3.49E-05	0.000048235	132169.6545	0	1590.78894	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	50 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	500 Gasoline	0.068555418	0.069240973	0.075441056	0.928854294	0.032504218	3.838226271	0.008894007	0.006719916	5.26E-05	7.26E-05	206519.89	0	412.1742269	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	500 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	750 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Outboard Engines	Aggregate	750 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	120 Gasoline	3.03E-06	3.06E-06	3.33E-06	2.57E-05	1.49E-06	0.000497607	4.55E-08	3.44E-08	5.37E-09	7.42E-09	20.46251831	0	0.283468289	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	120 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	15 Gasoline	0.002009975	0.002030075	0.002211855	0.032837152	0.002080088	0.253637713	3.68E-05	2.79E-05	3.86E-06	5.33E-06	11647.63778	0	1209.887324	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	15 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	175 Gasoline	0.015139664	0.015322371	0.016694691	0.170959558	0.044210905	2.96292883	0.000288077	0.000225213	3.19E-05	4.40E-05	122487.3053	0	1071.46332	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	250 Gasoline	0.072870056	0.073598757	0.081189051	0.830860423	0.064703002	7.522167861	0.000750847	0.000567306	8.77E-05	0.000121037	338740.3746	0	2163.217807	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	250 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	50 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	500 Gasoline	0.091445842	0.092360301	0.100630571	0.637034371	0.035027457	13.52784492	0.001411835	0.00106672	0.000142011	0.000196027	553795.6677	0	2746.34056	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	500 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	750 Gasoline	0.0084695	0.008554195	0.009320168	0.015794269	0.002588768	0.443708353	4.63E-05	0.000034998	4.73E-06	6.53E-06	18577.24067	0	49.3632719	0
Sacramento	2026 Pleasure Craft - Vessels W/Sterndrive Engines	Aggregate	750 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	100 Diesel	0.000446961	0.000540822	0.000643823	0.011616192	0.005949688	1.697065227	0.000433609	0.000398921	1.57E-05	1.38E-05	55200.05139	42971.42816	102.2641171	34148749.98
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	175 Diesel	0.000112605	0.000136252	0.000162152	0.00324538	0.001276205	0.556382137	5.47E-05	5.04E-05	5.15E-06	4.55E-06	18097.31414	9099.831846	21.65593068	11195655.353
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	300 Diesel	0.000134362	0.000162578	0.000193481	0.003953126	0.001881518	1.035488977	4.22E-05	3.89E-05	9.59E-06	8.47E-06	33681.11243	7583.193205	18.0466089	20881635.518
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	50 Diesel	3.06E-06	3.71E-06	4.41E-06	7.64E-05	6.26E-05	0.013579043	5.84E-07	5.37E-07	1.26E-07	1.11E-07	441.6824201	505.5462137	1.20310726	24578.27164
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	600 Diesel	0.000210066	0.000254179	0.000302494	0.002129211	0.001961513	1.117999052	8.75E-05	8.05E-05	1.04E-05	9.15E-06	36364.89872	5055.462137	12.0310726	22496664.251
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	75 Diesel	0.000119319	0.000144376	0.000171819	0.002583625	0.001302229	0.394851839	3.38E-05	3.12E-05	3.66E-06	3.23E-06	12843.2552	1344.20156	31.28078876	7945102.2506
Sacramento	2026 Portable Equipment - Non-Rental Compressor	Aggregate	750 Diesel	0.000115591	0.000139865	0.000166451	0.001582291	0.00165094	0.860497821	7.16E-05	6.58E-05	7.97E-06	7.04E-06	27989.21524	2527.731068	6.0155363	17315114.157
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	100 Diesel	0.000864455	0.001023001	0.001217456	0.018585599	0.007850276	2.492444369	0.000698795	0.000634579	2.31E-05	2.04E-05	81071.1663	55658.89051	39.79253958	55015551.771
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	175 Diesel	0.001124621	0.001360791	0.001619454	0.026800313	0.006758581	4.134946081	0.000316727	0.000291389	3.83E-05	3.38E-05	134686.4427	57345.52355	40.90564684	8320435.734
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	300 Diesel	0.000933932	0.001122955	0.001323795	0.020477761	0.004602997	3.304902209	0.000340974	0.000317816	3.09E-05	2.73E-05	108473.5992	28672.76178	20.45282342	6710569.45
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	50 Diesel	0.000126606	0.000153194	0.000182313	0.001828758	0.001051514	0.177514592	3.65E-05	3.36E-05	1.64E-06	1.45E-06	5773.976414	6746.532183	4.81242904	321304.0734
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	600 Diesel	0.002477669	0.002997979	0.003567843	0.017006785	0.01289107	8.00875518	0.000664684	0.000611675	7.42E-05	6.55E-05	260498.9428	32046.02787	22.85903794	16115407.43
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	75 Diesel	0.000858316	0.001038562	0.001235975	0.012725455	0.009162473	1.718181537	0.000194021	0.0001785	1.59E-05	1.41E-05	55888.89676	53972.25746	38.49943232	3457365.707
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	750 Diesel	0.000626843	0.00075848	0.000902654	0.003816039	0.004241297	1.774733495	0.000229884	0.000211494	1.64E-05	1.45E-05	57726.34931	5059.899137	3.60932178	3571160.899
Sacramento	2026 Portable Equipment - Non-Rental Generator	Aggregate	9999 Diesel	0.003494322	0.00422813	0.005031824	0.024128908	0.049505818	11.33783586	0.001078034	0.000990843	0.000106897	9.28E-05	368783.1866	18552.9635	13.23417986	22814282.67
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	100 Diesel	0.000144954	0.000180839	0.000215214	0.005981024	0.002768049	0.93786957	0.000188036	0.000172993	8.69E-06	7.67E-06	30505.86839	21265.27231	64.96779204	1887203.429
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	175 Diesel	0.000599116	0.00072493	0.000862726	0.022513155	0.007184038	4.067984672	0.000284637	0.000261866	3.75E-05	3.31E-05	131667.8754	61826.81025	188.8878398	8145451.324
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	300 Diesel	0.00031187	0.000377362	0.000449092	0.002778228	0.003380605	1.326998063	0.000132291	0.000121708	1.23E-05	1.09E-05	43162.96161	11420.23884	34.89011054	2670217.026
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	600 Diesel	0.000327265	0.000395991	0.000471262	0.002316992	0.003197067	1.553018804	0.000128162	0.000117909	1.44E-05	1.27E-05	50514.68842	7482.225444	22.85903794	3125021.331
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	75 Diesel	0.000173875	0.000210089	0.00025038	0.004151275	0.001330257	0.650877598	5.73E-05	5.27E-05	6.03E-06	5.33E-06	21170.94634	20083.8683	61.35847026	1309711.366
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	750 Diesel	6.76E-05	8.18E-05	9.73E-05	0.001006163	0.000404786	0.533786228	2.40E-05	2.21E-05	4.98E-06	4.40E-06	17495.08394	1575.205357	4.81242904	1082309.213
Sacramento	2026 Portable Equipment - Non-Rental Other	Aggregate	9999 Diesel	0.002576946	0.003110119	0.003701299	0.029045027	0.050185877	14.85154329	0.000716462	0.000659163	0.000137584	0.000119526	483072.742	9845.033479	10.0778815	29884628.22
Sacramento	2026 Portable Equipment - Non-Rental Pump	Aggregate	100 Diesel	0.000114404	0.000138429	0.000164742	0.003608379	0.002014521	0.568400318	0.000125506	0.000115466	5.27E-06	4.65E-06	18488.22678	13417.86898	40.90564684	1143748.623
Sacramento	2026 Portable Equipment - Non-Rental Pump	Aggregate	175 Diesel	0.000237711	0.00028763	0.000342303	0.007824492	0.003031836	1.399693081	0.000186899	9.83E-05	1.30E-05	1.15E-05	45527.49579	22494.6827	68.57711382	2816495.669
Sacramento	2026 Portable Equipment - Non-Rental Pump	Aggregate	300 Diesel	5.18E-05	6.26E-05	7.45E-05	0.00064851	0.000439899	0.338199162	1.42E-05	1.31E-05	3.13E-06	2.77E-06	11000.52658	3157.145642	9.624853081	680532.3888
Sacramento	2026 Portable Equipment - Non-Rental Pump	Aggregate	50 Diesel	1.66E-05	2.01E-05	2.39E-05	9.86E-05	3.70E-05	0.010816503	5.59E-06	5.14E-06	9.98E-08	8.85E-08	351.8258988	394.8432052	1.20310726	195781.0319
Sacramento	2026 Portable Equipment - Non-Rental Pump	Aggregate	600 Diesel	0.00027497	0.000332713	0.000395956	0.003993984	0.001394497	1.78186581	6.60E-05	6.08E-05	1.65E-05	1.46E-05	57958.47059	8287.50731	25.26252246	3585520.762
Sacramento	2026 Portable Equipment - Non-Rental Pump	Aggregate	75 Diesel	0.000154856	0.000187376	0.000222993	0.00372113	0.00298175	0.587275646	6.46E-05	5.94E-05	5.44E-06	4.81E-06	19102.18022	3854E.23065	56.54604122	1183730.005
Sacramento	2026 Portable Equipment - Rental Compressor	Aggregate	100 Diesel	2.51E-05	3.04E-05	3.62E-05	0.000961186	0.000331897	0.140130846	2.61E-05	2.40E-05	1.30E-06	1.15E-06	4554.003897	3312.289833	6.0155363	281974.618
Sacramento	2026 Portable Equipment - Rental Compressor	Aggregate	175 Diesel	0.000142556	0.000172493	0.000205281	0.007427765	0.000806782	1.366684059	2.24E-05	2.06E-05	1.27E-05	1.12E-05	44453.8189	20536.19696	37.79632506	2750074.13
Sacramento	2026 Portable Equipment - Rental Compressor	Aggregate	300 Diesel	0.000020838	0.000025114	0.000154668	0.001822565	0.000219307	0.974383018	1.62E-05	1.49E-05	9.03E-06	7.97E-06	31693.52203	7949.495598	14.43728712	1960676.656
Sacramento	2026 Portable Equipment - Rental Compressor	Aggregate	600 Diesel	0.000307496	0.000372077	0.000442794	0.003733125	0.000492914	1.919041311	3.50E-05	3.22E-05	1.78E-05	1.57E-05	62420.21654	7287.037632	13.23417986	3861540.515
Sacramento	2026 Portable Equipment - Rental Compressor	Aggregate	75 Diesel	2.39E-05	2.89E-05	3.44E-05	0.000562196	0.00042643	0.087867594	3.59E-06	3.31E-06	8.14E-07	7.18E-07	2858.049064	2649.831866	4.81242904	176809.2593
Sacramento	2026 Portable Equipment - Rental Compressor	Aggregate	750 Diesel	0.000161388	0.00019528	0.000232099	0.002115101	0.000787977	1.117127027	4.79E-05	4.40E-05	1.03E-05	9.14E-06	36338.53457	3312.289833	6.0155363	2247926.542
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	100 Diesel	0.00070535	0.000853473	0.001015703	0.020319867	0.006425676	2.775506222	0.000552412	0.000508219	2.57E-05	2.27E-05	90278.25427	9961294405	39.70253958	5584939.556
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	175 Diesel	0.000868675	0.001051097	0.001250892	0.028845238	0.002806836	4.724417523	0.000134767	9.64E-05	4.38E-05	3.87E-05	153670.0451	68645.2083	45.71807588	9586585.175
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	300 Diesel	0.000648682	0.000784905	0.000934102	0.005756683	0.001331467	2.55618731	6.74E-05	6.21E-05	2.37E-05	2.09E-05	83151.02367	25290.3399	16.84350164	5144023.275
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	600 Diesel	0.001208529	0.001462312	0.001740282	0.010987809	0.001870766	5.238367167	0.000128365	0.000119016	4.85E-05	4.29E-05	170387.1673	25290.3399	16.84350164	10540766.86
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	75 Diesel	0.000473324	0.000572722	0.000681587	0.008229334	0.00593981	1.179432199	4.99E-05	4.59E-05	1.09E-05	9.64E-06	38330.59384	36129.057	24.0621452	2371269.266
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	750 Diesel	0.000506632	0.000613024	0.00072955	0.002868442	0.003885317	1.234548018	0.000194748	0.000179168	1.14E-05	1.01E-05	40155.86021	3612.9057	2.40621452	2484186.85
Sacramento	2026 Portable Equipment - Rental Generator	Aggregate	9999 Diesel	0.003959196	0.004792138	0.005701883	0.033242252	0.007867807	1.499046022	0.000156432	0.000143917	1.39E-05	1.23E-05	48760.68674	3612.9057	2.40621452	3016512.604
Sacramento	2026 Portable Equipment - Rental Other	Aggregate	100 Diesel	6.55E-05	7.93E-05	9.43E-05	0.001970629	0.000607539	0.261153116	5.37E-05	4.94E-05	2.42E-06	2.14E-06	8494.467494	6249.386415	4.81242904	525498.5035
Sacramento	2026 Portable Equipment - Rental Other	Aggregate	175 Diesel	0.000276276	0.000334294	0.000397837	0.006156079	0.002015902	0.946005977	6.51E-05	5.99E-05	8.76E-06	7.74E-06	30795.51942	12498.77283	9.624853081	1903575.7
Sacramento	2026 Portable Equipment - Rental Other	Aggregate	75 Diesel	0.000151972	0.000183886	0.00021884	0.002382455	0.001703463	0.328174712	2.00E-05	1.84E-05	3.04E-06	2.69E-06	10674.46358	10936.42823	8.421758821	660360.9513
Sacramento	2026 Portable Equipment - Rental Other	Aggregate	100 Diesel	0.000268092	0.000321971	0.000383172	0.008021957	0.002313411	1.094083916	0.000212407	0.000195415	1.01E-05	8.96E-06	35616.29069	26814.14309	26.46835972	2203152.649
Sacramento	2026 Portable Equipment - Rental Pump	Aggregate	175 Diesel	0.000244914	0.000296346	0.000352676	0.005996738	0.002239082	0.958561661	7.73E-05	7.11E-05	8.88E-06	7.84E-06	31178.91529	15846.72092	15.64039438	1928840.546
Sacramento	2026 Portable Equipment - Rental Pump	Aggregate	300 Diesel	0.000364594	0.000441159	0.000525015	0.00253497	0.002345021	1.135850495	0.000108093	9.94E-05	1.05E-05	9.29E-06	36945.54852	20969.42217	10.82796534	2285585.35
Sacramento	2026 Portable Equipment - Rental Pump	Aggregate	600 Diesel	9.24E-05	0.000111851	0.000133112	0.000834561	0.000308922	0.402655096	8.11E-06	7.65E-06	3.73E-06	3.29E-06	13097.09921	2437.649372	2.40621452	810233.9599
Sacramento	2026 Portable Equipment - Rental Pump	Aggregate	75 Diesel	0.000166351	0.000201285	0.000239545	0.003887146	0.003122189	0.60638791	8.08E-05	7.43E-05	5.62E-06	4.96E-06	19723.84045	17063.5456	16.84350164	1220188.158
Sacramento	2026 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	120 Gasoline	0.003732341	0.003769664	0.004167213	0.083174214	0.001974147	1.534456452	0.000184469	0.000146912	1.89E-05	2.21E-05	62592.3726	0	1925.129578	0
Sacramento	2026 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	15 Gasoline	0.001954569	0.001974114	0.002150884	0.024588668	0.000503183	0.355875657	5.74E-05	4.33E-05	4.97E-06	5.37E-06	14968.88076	0	705.6208141	0
Sacramento	2026 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	25 Gasoline	0.001198752	0.001202666	0.001310351	0.01068524	0.000199992	0.143544836	2.67E-05	2.02E-05	2.08E-06	2.22E-06	6135.129851	0	344.4001493	0
Sacramento	2026 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	50 Gasoline	0.008896778	0.008985746	0.009790362	0.170750998	0.003728128	2.963130934	0.000374671	0.000283085	3.63E-05	4.35E-05	121683.7265	0	4903.157956	0
Sacramento	2026 Recreational - Golf Carts	Aggregate	120 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Golf Carts	Aggregate	15 Gasoline	0.001865108	0.00188376	0.002052439	0.05205623	0.001459157	0.632129334	0.000140876	0.00010644	5.33E-06	9.46E-06	26871.29523	0	714.5905477	0
Sacramento	2026 Recreational - Golf Carts	Aggregate	25 Gasoline	0.000515625	0.000558151	0.000608131	0.015428755	0.000432343	0.187297575	4.17E-05	3.15E-05	1.58E-06	2.80E-06	7961.80526	0	119.0984246	25
Sacramento	2026 Recreational - Golf Carts	Aggregate	5 Gasoline	4.29E-05	4.33E-05	4.72E-05	0.001211343	3.38E-05	0.000689199	3.25E-06	2.45E-06	1.69E-07	1.15E-07	326.0692552	0	17.00408066	0
Sacramento	2026 Recreational - Golf Carts	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Minibikes	Aggregate	120 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Minibikes	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Minibikes	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Minibikes	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Minibikes	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Off-Road Motorcycles Active	Aggregate	120 Gasoline	0.006736243	0.006803604	0.007412824	0.035279554	0.000246343	0.267833067	9.78E-05	7.39E-05	4.69E-06	5.01E-06	12933.97352	0	416.9194907	0
Sacramento	2026 Recreational - Off-Road Motorcycles Active	Aggregate	15 Gasoline	0.000655048	0.000661599	0.000720841	0.02747778	9.10E-05	0.052088582	1.61E-05	1.23E-05	1.57E-06	1.82E-06	2489.063092	0	122.0378287	0
Sacramento	2026 Recreational - Off-Road Motorcycles Active	Aggregate	25 Gasoline	0.001872703	0.001891431	0.002060797	0.004515689	2.27E-05	0.021252432	2.28E-05	1.72E-05	8.07E-07	5.70E-07	1301.046841	0	55.52000703	0
Sacramento	2026 Recreational - Off-Road Motorcycles Active	Aggregate	5 Gasoline	0.002004976	0.002024418	0.002205692	0.013780576	6.30E-05	0.074990054	5.70E-05	4.31E-05	2.14E-06	1.73E-06	3865.495936	0	186.2276402	0
Sacramento	2026 Recreational - Off-Road Motorcycles Active	Aggregate	50 Gasoline	0.009199651	0.009284648	0.010122656	0.030196662	0.000242413	0.219825741	0.000116348	8.79E-05	5.62E-06	4.66E-06	11132.51428	0	393.9305664	0
Sacramento	2026 Recreational - Snowmobiles Active	Aggregate	120 Gasoline	0	0	0	0	0	0	0	0	0	1.26E-08	0	0	0	0
Sacramento	2026 Recreational - Snowmobiles Active	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Snowmobiles Active	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	1.05E-08	0	0	0	0
Sacramento	2026 Recreational - Snowmobiles Active	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2026 Recreational - Snowmobiles Active	Aggregate	50 Gasoline	0	0	0	0	0	0	0	0	0	8.16E-08	0	0	0	0
Sacramento	2026 Transport Refrigeration Unit - Instate Genset	Aggregate	25 Diesel	0.000211236	0.00027799	0.000307022	0.000238144	0.00043907	0.549486151	9.85E-05	0.000090682	862.56	1.23E-08	17873.01	37970.12	48.54	0
Sacramento	2026 Transport Refrigeration Unit - Instate Genset	Aggregate	50 Diesel	0.00017196	0.0017557	0.0002475	0.00019101	0.0016675	0.311299579	3.02E-05	0.000027798	488.63	6.98E-09	10125.57	19471.53	24.86	0
Sacramento	2026 Transport Refrigeration Unit - Instate Trailer	Aggregate	25 Diesel	0.00042579	0.0451775	0.00637491	0.00491642	0.04596542	7.345608721	0.001263807	0.001161988	11531.61	1.65E-07	238928.93	364139.48	202.99	0
Sacramento	2026 Transport Refrigeration Unit - Instate Trailer	Aggregate	50 Diesel	0.000818808	0.0074082	0.009801026	0.00756112	0.06209866	15.50325756	0.003823049	0.00275723	18058.64	2.58E-07	374163.82	498261.64	277.77981	0
Sacramento	2026 Transport Refrigeration Unit - Instate Truck	Aggregate	23 Diesel	0.0006361	0.0064928	0.00091649	0.00070669	0.0082566	1.320215293	0.000424836	0.000390849	2072.51	2.96E-08	42942.34	77513.66	103.51	0
Sacramento	2026 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	25 Diesel	0.000197977	0.002023273	0.00028525	0.000220268	0.003837651	0.685403976	9.25E-05	8.52E-05	762.31	1.09E-08	15796.17	33557.98	270.58446	0
Sacramento	2026 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	50 Diesel	0.00012344	0.0012599	0.00017765	0.00013697	0.00117612	0.201597941	2.95E-05	0.000027114	316.41	4.52E-09	6557.33	12481.27	100.56	0
Sacramento	2026 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	25 Diesel	0.004391873	0.044849894	0.006326513	0.004879558	0

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	Equipment Type	Horsepower HP			Gas			Diesel				Natural Gas			
			Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	Fuel (Gal/Yr)	Population	Hrs/Yr	Gal/Hr	
Air Compressors25	Air Compressors	25	28811.02236	101.771682	0	0	2628.232202	4.981211062	0	0	0	0	0	0	0
Air Compressors50	Air Compressors	50	13300.6	12.1	5850.95	2.273237679	2260.45	27.23	22162.8	1.039925736	0	0	0	0	0
Air Compressors75	Air Compressors	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors100	Air Compressors	100	71510.8	39.23	18965.4	3.770592764	0	0	0	0	0	0	0	0	0
Air Compressors175	Air Compressors	175	8752.7	2.65	1262.9	6.930635838	0	0	0	0	0	0	0	0	0
Air Compressors300	Air Compressors	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors600	Air Compressors	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors750	Air Compressors	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Air Compressors9999	Air Compressors	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Aerial Lifts25	Aerial Lifts	25	2385.707552	14.1340431	0	0	18.49478299	8.626349232	0	0	0	0	0	0	0
Aerial Lifts50	Aerial Lifts	50	6730.6	11.59	4193.85	1.604873809	9571.684425	50.01756933	11697.72315	0.81825192	0	0	0	0	0
Aerial Lifts75	Aerial Lifts	75	0	0	0	0	19031.17799	54.53856121	15955.69495	1.192751431	0	0	0	0	0
Aerial Lifts100	Aerial Lifts	100	12001.2	11.59	4193.85	2.861618799	9780.569641	9.416447443	2684.425908	1.408334508	0	0	0	0	0
Aerial Lifts175	Aerial Lifts	175	0	0	0	0	5554.994857	6.667363997	2087.861773	1.855125142	0	0	0	0	0
Aerial Lifts300	Aerial Lifts	300	0	0	0	0	117.3706081	0.07898693	32.04168373	3.663059941	0	0	0	0	0
Aerial Lifts600	Aerial Lifts	600	0	0	0	0	69.80311419	0.031594772	11.85384185	5.88864902	0	0	0	0	0
Bore/Drill rigs25	Bore/Drill rigs	25	414.7796078	4.662486862	0	0	24.76308868	3.896056274	0	0	0	0	0	0	0
Bore/Drill rigs50	Bore/Drill rigs	50	237.25	0.89	87.6	2.708333333	1414.763951	2.689915946	1270.271698	1.113748093	0	0	0	0	0
Bore/Drill rigs75	Bore/Drill rigs	75	0	0	0	0	5444.787479	6.260895607	3036.253897	1.793258364	0	0	0	0	0
Bore/Drill rigs100	Bore/Drill rigs	100	2726.55	3.99	416.1	6.552631579	4220.659821	3.313638178	1701.519617	2.48053175	0	0	0	0	0
Bore/Drill rigs175	Bore/Drill rigs	175	959.95	0.97	109.5	8.766666667	29848.43638	13.13078948	8512.929492	3.506247339	0	0	0	0	0
Bore/Drill rigs300	Bore/Drill rigs	300	0	0	0	0	35736.89502	10.2728855	6336.537909	5.639819973	0	0	0	0	0
Bore/Drill rigs600	Bore/Drill rigs	600	0	0	0	0	51308.55663	8.82779863	5091.848605	10.07606587	0	0	0	0	0
Bore/Drill rigs750	Bore/Drill rigs	750	0	0	0	0	21196.14432	2.29694092	1300.36978	16.3000899	0	0	0	0	0
Bore/Drill rigs9999	Bore/Drill rigs	9999	0	0	0	0	6990.8803497	0.557665501	324.9974807	21.51056827	0	0	0	0	0
Cement and Mortar Mixers25	Cement and Mortar Mixers	25	186.3076771	2.70352051	0	0	7.124908131	2.758797909	0	0	0	0	0	0	0
Cement and Mortar Mixers50	Cement and Mortar Mixers	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers75	Cement and Mortar Mixers	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers100	Cement and Mortar Mixers	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers175	Cement and Mortar Mixers	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers300	Cement and Mortar Mixers	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers600	Cement and Mortar Mixers	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers750	Cement and Mortar Mixers	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Cement and Mortar Mixers9999	Cement and Mortar Mixers	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws25	Concrete/Industrial Saws	25	6202.177632	29.73139274	0	0	4.872131879	1.018951255	0	0	0	0	0	0	0
Concrete/Industrial Saws50	Concrete/Industrial Saws	50	5482.3	3.24	1981.95	2.76611418	1700.9	2.12	1226.4	1.386904762	0	0	0	0	0
Concrete/Industrial Saws75	Concrete/Industrial Saws	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws100	Concrete/Industrial Saws	100	5347.25	1.86	1135.15	4.710610932	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws175	Concrete/Industrial Saws	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws300	Concrete/Industrial Saws	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws600	Concrete/Industrial Saws	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws750	Concrete/Industrial Saws	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Concrete/Industrial Saws9999	Concrete/Industrial Saws	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes25	Cranes	25	0	0	0	0	104.2031818	0.065607708	10.51823353	9.906008941	0	0	0	0	0
Cranes50	Cranes	50	813.95	0.97	408.8	1.991071429	193.9408112	0.855657008	167.4382529	1.158282578	0	0	0	0	0
Cranes75	Cranes	75	0	0	0	0	821.1566023	2.527440357	465.1686053	1.765288098	0	0	0	0	0
Cranes100	Cranes	100	2726.55	1.96	821.25	3.32	2022.118936	4.959497738	965.790927	2.093743077	0	0	0	0	0
Cranes175	Cranes	175	171.55	0.03	32.85	5.222222222	15642.6387	22.30167646	5885.650946	2.657758478	0	0	0	0	0
Cranes300	Cranes	300	0	0	0	0	48168.03626	10.15970757	12820.18305	3.757201471	0	0	0	0	0
Cranes600	Cranes	600	0	0	0	0	66327.65077	40.08142292	10623.77979	6.243319429	0	0	0	0	0
Cranes750	Cranes	750	0	0	0	0	10244.66713	4.626601707	1089.28593	9.404938454	0	0	0	0	0
Cranes9999	Cranes	9999	0	0	0	0	3460.83483	1.083051768	263.1382698	13.15215317	0	0	0	0	0
Crawler Tractors25	Crawler Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawler Tractors50	Crawler Tractors	50	0	0	0	0	948.4593096	2.82203154	770.8743974	1.230368154	0	0	0	0	0
Crawler Tractors75	Crawler Tractors	75	0	0	0	0	5855.677228	11.39023147	3239.430716	1.753495648	0	0	0	0	0
Crawler Tractors100	Crawler Tractors	100	0	0	0	0	22283.51458	28.15876605	9936.969725	2.242485908	0	0	0	0	0
Crawler Tractors175	Crawler Tractors	175	0	0	0	0	79046.39589	57.81555712	26605.59557	2.97104403	0	0	0	0	0
Crawler Tractors300	Crawler Tractors	300	0	0	0	0	97522.97506	46.83697914	20380.18359	4.785186288	0	0	0	0	0
Crawler Tractors600	Crawler Tractors	600	0	0	0	0	169607.1423	46.79801697	20558.86651	8.249829445	0	0	0	0	0
Crawler Tractors750	Crawler Tractors	750	0	0	0	0	11003.93616	2.13834304	841.9473899	13.06962441	0	0	0	0	0
Crawler Tractors9999	Crawler Tractors	9999	0	0	0	0	17294.91799	2.530334809	1006.952205	17.17553018	0	0	0	0	0
Crushing/Proc. Equipment25	Crushing/Proc. Equipment	25	74.78446828	0.376454204	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment50	Crushing/Proc. Equipment	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment75	Crushing/Proc. Equipment	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment100	Crushing/Proc. Equipment	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment175	Crushing/Proc. Equipment	175	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment300	Crushing/Proc. Equipment	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment600	Crushing/Proc. Equipment	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment750	Crushing/Proc. Equipment	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Crushing/Proc. Equipment9999	Crushing/Proc. Equipment	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Dumpers/Tenders25	Dumpers/Tenders	25	458.9285858	7.708348918	0	0	3.525284525	1.424889917	0	0	0	0	0	0	0
Dumpers/Tenders100	Dumpers/Tenders	100	233.6	0.74	80.3	2.909090909	0	0	0	0	0	0	0	0	0
Excavators25	Excavators	25	0	0	0	0	27.38383469	2.267171749	13.19021079	2.076072561	0	0	0	0	0
Excavators50	Excavators	50	0	0	0	0	87250.95191	245.1473083	114688.5847	0.760764048	0	0	0	0	0
Excavators75	Excavators	75	0	0	0	0	6887.612918	101.3997119	52167.05451	1.320337708	0	0	0	0	0
Excavators100	Excavators	100	0	0	0	0	54028.162	513.7811364	28027.28465	1.927698765	0	0	0	0	0
Excavators175	Excavators	175	0	0	0	0	303552.3508	151.6701974	107963.2955	2.811625464	0	0	0	0	0
Excavators300	Excavators	300	0	0	0	0	325225.9127	113.0081025	72356.31139	4.494782922	0	0	0	0	0
Excavators600	Excavators	600	0	0	0	0	373703.7811	78.77678673	52140.17143	7.167290994	0	0	0	0	0
Excavators750	Excavators	750	0	0	0	0	10546.83744	1.642938595	874.0569302	12.06653374	0	0	0	0	0
Excavators9999	Excavators	9999	0	0	0	0	52451.86266	3.052999609	1748.749455	29.99392652	0	0	0	0	0
Forklifts25	Forklifts	25	44.96565427	0.107863336	0	0	0.070840591	0.015797386	5.263314534	0.013459312	0	0	0	0	0
Forklifts50	Forklifts	50	116883.95	39.42	70101.9	1.667343538	12274.99507	36.20855416	18692.08884	0.656694668	171177.7	71.04	127987.25	1.337459003	
Forklifts75	Forklifts	75	0	0	0	0	124881.9043	246.7737457	97947.79399	1.274984349	0	0	0	0	0
Forklifts100	Forklifts	100	545075	147.17	249572.4	2.184439688	73027.34921	126.6415816	54461.78662	1.340891545	1073735.1	249.33	440209.15	2.390278787	
Forklifts175	Forklifts	175	37474.55	5.28	9066.6	4.133252818	280166.2085	274.9462752	146572.1408	1.911456075	80471.55	9.14	16439.6	4.894982238	
Forklifts300	Forklifts	300	0	0	0	0	9041.305676	7.702985342	3813.212661	2.371045799	0	0	0	0	0
Forklifts600	Forklifts	600	0	0	0	0	2708.721095	1.428400963	705.2393584	3.840853552	0	0	0	0	0
Forklifts750	Forklifts	750	0	0	0	0	325.781129	0.080202465	35.35009098	9.215849808	0	0	0	0	0
Forklifts9999	Forklifts	9999	0	0	0	0	3091.245471	0.316127526	155.3075332	19.90402788	0	0	0	0	0
Generator Sets25	Generator Sets	25	43519.37048	428.8269032	0	0	48355.98992	181.064738	0	0	4117.2	5.72	657	6.266666667	
Generator Sets50	Generator Sets	50	1018210.4	398.14	45730.85	2.226514486	62305.5	132.17	44621.25	1.396319018	5949.5	4.76	543.85	10.93959732	
Generator Sets75	Generator Sets	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets100	Generator Sets	100	45818.45	76.91	8836.65	5.185047501	0	0	0	0	0	0	0	0	0
Generator Sets175	Generator Sets	175	7504.4	7.27	835.85	8.978165939	0	0	0	0	5949.5	4.76	543.85	10.93959732	
Generator Sets300	Generator Sets	300	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets600	Generator Sets	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets750	Generator Sets	750	0	0	0	0	0	0	0	0	0	0	0	0	0
Generator Sets9999	Generator Sets	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Graders25	Graders	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Graders50	Graders	50	0	0	0	0	289.8502448	1.213791919	319.8013101	0.90634477	0	0	0	0	0
Graders75	Graders	75	0	0	0	0	1046.595022	2.331479369	576.9142276	1.814125865	0	0	0	0	0
Graders100	Graders	100	0	0	0	0	2503.635921	4.03684223	1083.688091	2.310191994	0	0	0	0	0
Graders175	Graders	175	0	0	0	0	37283.7996	34.39421026	11376.52425	3.277257516	0	0	0	0	0
Graders300	Graders	300	0	0	0	0	118657.3251	64.33283881	25002.31749	4.745853065	0	0	0	0	0
Graders600	Graders	600	0	0	0	0	28474.59337	9.512620004	4005.37877	7.109688704	0	0	0	0	0
Graders750	Graders	750	0	0	0	0	1078.12578	0.196823118	73.84279632	14.60028576	0	0	0	0	0
Graders9999	Graders	9999	0	0	0	0	768.6090072	0.131215412	49.48392799	15.5324079	0	0	0	0	0
Off-Highway Tractors25	Off-Highway Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Tractors50	Off-Highway Tractors	50	0	0	0	0	15002.35315	26.37937781	16113.45794	0.931044919	0	0	0	0	0
Off-Highway Tractors75	Off-Highway Tractors	75	0	0	0	0	13047.95059	14.24465446	8698.3664021	1.500046099	0	0	0	0	0
Off-Highway Tractors100	Off-Highway Tractors	100	0	0	0	0	1237.959915	9.415548933	9954.155256	2.077708528	0	0	0	0	0
Off-Highway Tractors175	Off-Highway Tractors	175	0	0	0	0	66800.9742	20.8323504	21016.83906	3.178450099	0	0	0	0	0
Off-Highway Tractors300	Off-Highway Tractors	300	0	0	0	0	30006.0679	8.139402082	6443.614858	4.656713438	0	0	0	0	0
Off-Highway Tractors600	Off-Highway Tractors	600	0	0	0	0	79126.73088	10.56978838	9689.501294	8.166233584	0	0	0	0	0
Off-Highway Tractors750	Off-Highway Tractors	750	0	0	0	0	6391.381794	0.689032936	503.2883519	12.69924442	0	0	0	0	0
Off-Highway Tractors9999	Off-Highway Tractors	9999	0	0	0	0	5767.448734	0.230254828	180.1342218	32.01750715	0	0	0	0	0
Off-Highway Trucks25	Off-Highway Trucks	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Highway Trucks50	Off-Highway Trucks	50	0	0	0	0	635.8100548	1.705800356	1061.148779	0.599171452	0	0	0	0	0
Off-Highway Trucks75	Off-Highway Trucks	75	0	0	0	0	774.4997888	0.853082504	462.9923352	1.672813414	0	0	0	0	0
Off-Highway Trucks100	Off-Highway Trucks	100	0	0	0	0	339.194107	0.295234677	186.4748895	1.818980067	0	0	0	0	0
Off-Highway Trucks175	Off-Highway Trucks	175	0	0	0	0	17380.00652	6.36506074	5765.357818	3.014558171	0	0	0	0	0
Off-Highway Trucks300	Off-Highway Trucks	300	0	0	0	0	40486.40438	12.63702702	9315.755467	4.346023406	0	0	0	0	0
Off-Highway Trucks600	Off-Highway Trucks	600	0	0	0	0	296095.6107	43.3474108	35972.86729	8.231081729	0	0	0	0	0
Off-Highway Trucks750	Off-Highway Trucks	750	0	0	0	0	36819.79904	5.630303267	3252.059111	11.32199563	0	0	0	0	0
Off-Highway Trucks9999	Off-Highway Trucks	9999	0	0	0	0	139677.5206	9.822971508	6559.380969	21.2941444	0	0	0	0	0
Pavers25	Pavers	25	1369.440401	4.698526896	0	0	6.638540206	0.88405228	0	0	0	0	0	0	0
Pavers50	Pavers	50	2569.6	2.8	1113.25	2.308196721	1443.959584	4.363336304	1560.142237	0.92553073	0	0	0	0	0
Pavers75	Pavers	75	0	0	0	0	7033.706864	11.31848273	4405.564946	1.596505523	0	0	0	0	0
Pavers100	Pavers	100	2288.55	1.56	605.9	3.777108434	7616.396045	8.694575185	3793.661769	2.007663442	0	0	0	0	0
Pavers175	Pavers	175	0	0	0	0	25292.50527	15.38957034	8508.667702	2.97255765	0	0	0	0	0
Pavers300	Pavers	300	0	0	0	0	306210.55528	11.38436078	6349.101638	4.822642293	0	0	0	0	0
Pavers600	Pavers	600	0	0	0	0	5386.215025	1.181874232	685.4507872	7.857916463	0	0	0	0	0
Pavers750	Pavers	750	0	0	0	0	221.0349527	0.032803853	16.55974348	13.34772806	0	0	0	0	0
Pavers9999	Pavers	9999	0	0	0	0	5071.123793	0.229626971	123.1922014	41.16432481	0	0	0	0	0
Paving Equipment25	Paving Equipment	25	1338.205419	10.12593429	0	0	11.23170277	2.188835108	0	0	0	0	0	0	0
Paving Equipment50	Paving Equipment	50	2996.65	7.65	1335.9	2.243169399	3525.449482	12.07238309	4642.737381	0.759347168	0	0	0	0	0
Paving Equipment75	Paving Equipment	75	0	0	0	0	2622.690411	4.756683556	1941.028104	1.351186212	0	0	0	0	0
Paving Equipment100	Paving Equipment	100	1230.05	1.88	343.1	3.585106383	4404.741726	5.416675983	2330.042663	1.890412479	0	0	0	0	0
Paving Equipment175	Paving Equipment	175	0	0	0	0	28059.30703	17.48854636	11381.96925	2.465241859	0	0	0	0	0
Paving Equipment300	Paving Equipment	300	0	0	0	0	12649.59097	5.546671109	2976.924769	4.24921419	0	0	0	0	0
Paving Equipment600	Paving Equipment	600	0	0	0	0	29766.82384	8.008057292	4630.219826	6.428814389	0	0	0	0	0
Paving Equipment750	Paving Equipment	750	0	0	0	0	6436.151999	1.082527149	557.1329461	11.55227319	0	0	0	0	0
Paving Equipment9999	Paving Equipment	9999	0	0	0	0	4034.569623	0.426450089	222.3905873	18.14181828	0	0	0	0	0
Rollers25	Rollers	25	4109.994652	22.18623032	0	0	78.83821966	17.34450136	0	0	0	0	0	0	0
Rollers50	Rollers	50	3394.5	1.96	1222.75	2.776119403	35725.01507	122.7059382	44330.09243	0.80588632	0	0	0	0	0
Rollers75	Rollers	75	0	0	0	0	14212.30022	24.93521993	9323.777661	1.524301701	0	0	0	0	0
Rollers100	Rollers	100	10486.45	3.7	2303.15	4.553090333	21994.60303	29.60185584	11258.92643	1.953525779	0	0	0	0	0
Rollers175	Rollers	175	0	0	0	0	121883.8865	80.19669651	47511.87002	2.565335493	0	0	0	0	0
Rollers300	Rollers	300	0	0	0	0	10605.98218	5.523395139	2428.983229	4.36642874	0	0	0	0	0
Rollers600	Rollers	600	0	0	0	0	8391.171187	2.300412236	1141.520562	7.350871676	0	0	0	0	0
Rollers750	Rollers	750	0	0	0	0	205.7334381	0.032803853	14.96871853	13.7442252	0	0	0	0	0
Rollers9999	Rollers	9999	0	0	0	0	9076.328379	0.426450089	202.689035	44.7795727	0	0	0	0	0
Rough Terrain Forklifts25	Rough Terrain Forklifts	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Rough Terrain Forklifts50	Rough Terrain Forklifts	50	1087.7	0.68	313.9	3.465116279	1080.509621	4.067677772	1091.027429	0.990359722	0	0	0	0	0
Rough Terrain Forklifts75	Rough Terrain Forklifts	75	0	0	0	0	4307.914965	81.09738353	26940.20732	1.59874193	0	0	0	0	0
Rough Terrain Forklifts100	Rough Terrain Forklifts	100	23688.5	11.2	4650.1	5.094191523	30995.21731	47.58266298	15210.24104	2.03778607	0	0	0	0	0
Rough Terrain Forklifts175	Rough Terrain Forklifts	175	1343.2	0.32	116.8	11.5	194305.102	166.910567	79273.8646	2.451061305	0	0	0	0	0
Rough Terrain Forklifts300	Rough Terrain Forklifts	300	0	0	0	0	1666.8834	1.017219364	388.9448554	4.285654835	0	0	0	0	0
Rough Terrain Forklifts600	Rough Terrain Forklifts	600	0	0	0	0	471.3364465	0.164025719	69.22613917	6.808648469	0	0	0	0	0
Rough Terrain Forklifts750	Rough Terrain Forklifts	750	0	0	0	0	155.3298049	0.032810307	12.31173694	12.61640057	0	0	0	0	0
Rough Terrain Forklifts9999	Rough Terrain Forklifts	9999	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubber Tired Dozers25	Rubber Tired Dozers	25	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubber Tired Dozers50	Rubber Tired Dozers	50	0	0	0	0	399.7502389	0.932468543	229.0375623	1.745347947	0	0	0	0	0
Rubber Tired Dozers75	Rubber Tired Dozers	75	0	0	0	0	767.7398348	0.985680293	458.3925782	1.674852237	0	0	0	0	0
Rubber Tired Dozers100	Rubber Tired Dozers	100	0	0	0	0	1530.808875	1.641340461	732.8720669	2.088780507	0	0	0	0	0
Rubber Tired Dozers175	Rubber Tired Dozers	175	0	0	0	0	4630.01532	2.723920045	1600.236311	2.893332246	0	0	0	0	0
Rubber Tired Dozers300	Rubber Tired Dozers	300	0	0	0	0	5742.416642	2.199504125	1255.320895	4.574461132	0	0	0	0	0
Rubber Tired Dozers600	Rubber Tired Dozers	600	0	0	0	0	31167.83089	8.031875478	4410.961251	7.065995169	0	0	0	0	0
Rubber Tired Dozers750	Rubber Tired Dozers	750	0	0	0	0	946.3554552	0.164421341	85.23046105	11.10935508	0	0	0	0	0
Rubber Tired Dozers9999	Rubber Tired Dozers	9999	0	0	0	0	2525.198856	0.164015263	95.87895329	26.33736362	0	0	0	0	0
Scrapers25	Scrapers	25	0	0	0	0	0	0	0

ITEM 11.1.

ATTACHMENT 3

Sweepers/Scrubbers175	Sweepers/Scrubbers		175	240.9	0.07	29.2	8.25	689.3038785	0.632185595	251.0288858	2.745914584	0	0	0	0					FALSE
Sweepers/Scrubbers300	Sweepers/Scrubbers		300	0	0	0	0	938.2054029	0.458124194	186.2596803	5.037545884	0	0	0	0					FALSE
Sweepers/Scrubbers600	Sweepers/Scrubbers		600	0	0	0	0	149.9716809	0.047392158	20.0743114	7.470825669	0	0	0	0					FALSE
Sweepers/Scrubbers750	Sweepers/Scrubbers		750	0	0	0	0	0	0	0	0	0	0	0	0					FALSE
Sweepers/Scrubbers9999	Sweepers/Scrubbers		9999	0	0	0	0	297.0911435	0.015797386	5.819580539	51.05026754	0	0	0	0					FALSE
Tractors/Loaders/Backhoes25	Tractors/Loaders/Backhoes		25	0	0.161973476	0	0	128.0242301	16.49286036	16.13321764	7.935443068	0	0	0	0					
Tractors/Loaders/Backhoes50	Tractors/Loaders/Backhoes		50	0	0	0	0	35444.23342	105.9767187	42075.92325	0.842387301	0	0	0	0					
Tractors/Loaders/Backhoes75	Tractors/Loaders/Backhoes		75	0	0	0	0	15734.75451	250.3080691	110798.0063	1.420104557	0	0	0	0					
Tractors/Loaders/Backhoes100	Tractors/Loaders/Backhoes		100	8869.5	3.46	3029.5	2.927710843	369264.8005	415.5763837	199594.1063	1.850078679	0	0	0	0					
Tractors/Loaders/Backhoes175	Tractors/Loaders/Backhoes		175	0	0	0	0	384659.1654	246.5433398	161822.9213	2.377037581	0	0	0	0					
Tractors/Loaders/Backhoes300	Tractors/Loaders/Backhoes		300	0	0	0	0	179957.1778	67.86189944	41904.1776	4.284492534	0	0	0	0					
Tractors/Loaders/Backhoes600	Tractors/Loaders/Backhoes		600	0	0	0	0	123640.9161	28.91292516	17181.02975	7.193632378	0	0	0	0					
Tractors/Loaders/Backhoes750	Tractors/Loaders/Backhoes		750	0	0	0	0	5678.061955	0.853398294	442.5626046	12.82996325	0	0	0	0					
Tractors/Loaders/Backhoes9999	Tractors/Loaders/Backhoes		9999	0	0	0	0	225.0.97894	1.144838302	624.583819	36.04156601	0	0	0	0					
Trenchers25	Trenchers		25	8399.266464	27.50806214	0	0	117.1235591	11.74567363	0	0	0	0	0	0					
Trenchers50	Trenchers		50	16136.65	17.98	7219.7	2.235085945	10818.27488	28.47672333	8879.743405	1.218309402	0	0	0	0					
Trenchers75	Trenchers		75	0	0	0	0	3571.869897	6.235386036	1876.985343	1.992982306	0	0	0	0					
Trenchers100	Trenchers		100	9946.25	5.95	2398.05	4.147640791	4229.90334	5.118766423	1661.514412	2.545812007	0	0	0	0					
Trenchers175	Trenchers		175	0	0	0	0	6823.383893	5.118961468	2128.71625	3.205398509	0	0	0	0					
Trenchers300	Trenchers		300	0	0	0	0	3988.846612	1.969654886	709.7881474	5.619928024	0	0	0	0					
Trenchers600	Trenchers		600	0	0	0	0	6457.46662	1.740328415	592.0061124	10.90777018	0	0	0	0					
Trenchers750	Trenchers		750	0	0	0	0	279.8403733	0.098784983	20.12884451	13.90245591	0	0	0	0					
Trenchers9999	Trenchers		9999	0	0	0	0	8165.211093	0.885704031	377.9563919	21.60622566	0	0	0	0					
Welders25	Welders		25	0	0	0	0	24062.81542	73.98850677	0	0	0	0	0	0					
Welders50	Welders		50	31857.2	63.24	13136.35	2.425118088	103795.05	136.11	87417.5	1.187348643	0	0	0	0					
Welders75	Welders		75	0	0	0	0	0	0	0	0	0	0	0	0					
Welders100	Welders		100	44519.05	64.53	13410.1	3.319814916	0	0	0	0	0	0	0	0					
Welders175	Welders		175	5566.25	4.45	930.75	5.980392157	0	0	0	0	0	0	0	0					
Welders300	Welders		300	0	0	0	0	0	0	0	0	0	0	0	0					
Welders600	Welders		600	0	0	0	0	0	0	0	0	0	0	0	0					
Welders750	Welders		750	0	0	0	0	0	0	0	0	0	0	0	0					
Welders9999	Welders		9999	0	0	0	0	0	0	0	0	0	0	0	0					

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2027
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bi Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total_Activity	Total_Population	Horsepower_Hours_hhpy
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	100 Gasoline	2.41E-07	2.92E-07	3.47E-07	3.74E-06	8.65E-07	0.000119757	9.01E-09	8.29E-09	1.08E-09	9.76E-10	3.88118E06	22.96328661	0.013723736	103.578509
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	100 Diesel	0.010058086	0.012170284	0.014483643	0.097352237	0.08681604	15.85223868	0.006446121	0.005930431	0.000144789	0.000129796	515947.399	31352.22434	267.5175207	18441747.66
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	175 Gasoline	6.35E-07	7.69E-07	9.15E-07	1.04E-05	4.71E-06	0.000623213	4.69E-08	4.31E-08	5.66E-09	5.08E-09	20.19769919	63.4840935	0.046929087	539.0226223
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	175 Diesel	0.007119932	0.008651118	0.010252702	0.087514498	0.066445466	14.78653036	0.003160894	0.002908022	0.000135038	0.000120994	480958.091	40553.38765	172.7015112	19111640.09
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	25 Gasoline	4.88E-06	5.91E-06	7.03E-06	6.51E-05	1.10E-06	0.000184929	1.15E-07	1.06E-07	1.54E-09	1.51E-09	5.993345839	234.9347866	0.083983133	159.9463867
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	25 Diesel	0.000559392	0.000676864	0.000805525	0.002245626	0.00164151	0.211709213	9.56E-05	8.79E-05	1.92E-06	1.73E-06	6886.216996	4886.898901	17.85170363	246137.254
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	300 Diesel	0.003747831	0.004534876	0.005398877	0.024662137	0.027838397	12.33498849	0.001276517	0.001174396	0.000112623	0.000100852	400892.0736	26510.85149	57.73064709	15930088.59
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	50 Gasoline	4.43E-06	5.36E-06	6.37E-06	0.000115312	1.19E-05	0.003641159	2.74E-07	2.52E-07	3.31E-08	2.97E-08	118.0062461	432.3056483	0.415960046	3149.271404
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	50 Diesel	0.011485936	0.013897982	0.016539748	0.049033417	0.037436584	4.778314043	0.002936266	0.002701365	4.34E-05	3.91E-05	155423.1249	26395.00261	205.9749348	5555360.984
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	600 Diesel	0.004990411	0.006038398	0.007186192	0.019499918	0.03762952	16.39020167	0.001695806	0.001558027	0.000144977	0.000134116	533120.3889	22190.14486	44.45208122	21184992.53
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	75 Gasoline	1.82E-07	2.20E-07	2.62E-07	3.08E-06	6.44E-07	9.30E-05	7.00E-09	6.44E-09	8.42E-10	7.58E-10	3.014738696	70.19574178	0.013315852	80.45531976
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	75 Diesel	0.007677458	0.009289724	0.011055539	0.043907159	0.064934454	6.347439925	0.003960881	0.003643274	5.78E-05	5.19E-05	206461.7225	30714.1675	181.840114	7379657.289
Sacramento		2027 Agricultural - Agricultural Tractors	Aggregate	750 Diesel	0.000157169	0.000190171	0.000226324	0.001387447	0.001504466	0.36765441	6.96E-05	6.40E-05	3.36E-06	3.01E-06	11958.57915	286.87462	0.760838823	475193.2946
Sacramento		2027 Agricultural - ATVs	Aggregate	100 Gasoline	5.35E-05	6.47E-05	7.70E-05	0.002540058	0.000216707	0.174707296	1.31E-05	1.21E-05	1.59E-06	1.42E-06	5662.084856	300.4893093	7.012681813	181327.0983
Sacramento		2027 Agricultural - ATVs	Aggregate	175 Gasoline	5.73E-05	6.94E-05	8.25E-05	0.003411119	0.000302178	0.244203769	1.84E-05	1.69E-05	2.22E-06	1.99E-06	7917.313305	479.9062732	5.976362688	253550.3643
Sacramento		2027 Agricultural - ATVs	Aggregate	175 Diesel	6.61E-06	8.00E-06	9.52E-06	0.000715137	5.84E-05	0.027505445	2.38E-06	2.19E-06	2.55E-07	2.25E-07	894.6632872	790.3354576	0.430648866	42661.05417
Sacramento		2027 Agricultural - ATVs	Aggregate	25 Gasoline	0.008783658	0.010628226	0.012648467	0.11282537	0.00469974	0.435802199	0.000380521	0.00035008	3.71E-06	3.55E-06	14123.90373	3388.452378	79.40673638	452315.1037
Sacramento		2027 Agricultural - ATVs	Aggregate	25 Diesel	0.000320049	0.000278359	0.00033127	0.001539459	0.001323136	0.196781424	5.87E-05	5.40E-05	1.79E-06	1.61E-06	6400.664253	8623.065827	17.82705204	274538.3006
Sacramento		2027 Agricultural - ATVs	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	0	0.508.8161421	60206.30504
Sacramento		2027 Agricultural - ATVs	Aggregate	50 Gasoline	0.000163234	0.000197513	0.000235057	0.009487154	0.000427754	0.334062355	2.51E-05	2.31E-05	3.04E-06	2.72E-06	10826.61939	2819.608806	37.23981893	346720.2507
Sacramento		2027 Agricultural - ATVs	Aggregate	50 Diesel	0.000344663	0.000417286	0.000496035	0.002039892	0.00257578	0.439790892	9.25E-05	8.51E-05	4.01E-06	3.60E-06	1434.97746	8109.975622	26.30897516	613571.3488
Sacramento		2027 Agricultural - ATVs	Aggregate	75 Gasoline	5.30E-05	6.42E-05	7.63E-05	0.003007358	0.000145768	0.121259335	9.12E-06	8.39E-06	1.10E-06	9.88E-07	3929.891086	1110.230036	7.304165962	125853.9506
Sacramento		2027 Agricultural - Bale Wagons (Self Propelled)	Aggregate	175 Diesel	0.000212827	0.000257521	0.000306471	0.002086534	0.002061769	0.344238303	0.000100487	9.24E-05	3.14E-06	2.82E-06	11196.96034	5908.375002	3.233445323	427131.9868
Sacramento		2027 Agricultural - Bale Wagons (Self Propelled)	Aggregate	300 Diesel	2.47E-05	2.99E-05	3.56E-05	0.000139889	0.000252159	0.051581693	1.16E-05	1.01E-05	5.06E-07	4.53E-07	1801.18763	2306.975531	0.453898802	68717.78199
Sacramento		2027 Agricultural - Combine Harvesters	Aggregate	75 Diesel	9.39E-06	1.14E-05	1.35E-05	7.36E-05	8.70E-05	0.011998303	4.34E-06	3.81E-06	1.09E-07	9.82E-08	390.2665584	398.2180362	0.223597876	13391.48251
Sacramento		2027 Agricultural - Combine Harvesters	Aggregate	175 Diesel	0.000101102	0.000122333	0.000145586	0.001054586	0.001054247	0.009955374	0.180474519	4.40E-05	4.04E-05	1.65E-06	1.48E-06	587.0.25294	656.4822994	2.184605776	252330.5109
Sacramento		2027 Agricultural - Combine Harvesters	Aggregate	300 Diesel	0.000155413	0.000187207	0.000218032	0.000859969	0.001395502	0.328489963	6.58E-05	6.05E-05	3.01E-06	2.70E-06	10750.25516	3287.382835	1.999433445	461235.7572
Sacramento		2027 Agricultural - Combine Harvesters	Aggregate	600 Diesel	0.000418821	0.000506774	0.000603102	0.003979138	0.004201728	1.004763717	0.000171165	0.000159312	9.17E-06	8.22E-06	32668.48056	8625.903349	3.980720855	1404041.657
Sacramento		2027 Agricultural - Combine Harvesters	Aggregate	750 Diesel	0.000562603	0.00068075	0.000810149	0.004196921	0.006064595	1.360017045	0.000247203	0.000227427	1.24E-05	1.11E-05	44236.96247	2219.009602	3.704111724	1901508.269
Sacramento		2027 Agricultural - Combine Harvesters	Aggregate	9999 Diesel	1.94E-05	1.62E-05	1.93E-05	0.000101313	0.000195546	0.027095296	4.77E-06	4.39E-06	2.47E-07	2.22E-07	881.324886	1637.747691	0.051295314	37863.29671
Sacramento		2027 Agricultural - Construction Equipment	Aggregate	100 Diesel	0.000232266	0.000281042	0.000334463	0.002001508	0.002006921	0.316673888	0.000150794	0.00013873	2.89E-06	2.59E-06	10300.37892	5491.716034	8.810323055	441805.4772
Sacramento		2027 Agricultural - Construction Equipment	Aggregate	175 Diesel	0.000589726	0.000713569	0.000849206	0.007344507	0.006394313	1.284286731	0.002775324	0.002553482	1.17E-05	1.05E-05	41773.69993	7895.174684	26.86766868	1991933.84
Sacramento		2027 Agricultural - Construction Equipment	Aggregate	300 Diesel	0.000137067	0.000165851	0.000204574	0.002088744	0.001663555	0.389220809	0.00025278	0.000232509	2.82E-06	2.53E-06	10057.95595	4534.570264	7.435200685	479602.7872
Sacramento		2027 Agricultural - Construction Equipment	Aggregate	50 Diesel	3.80E-05	4.60E-05	5.47E-05	0.000189001	0.000147503	0.022226285	8.69E-06	8.00E-06	2.02E-07	1.82E-07	722.9492759	1179.716529	0.724857782	31008.85423
Sacramento		2027 Agricultural - Construction Equipment	Aggregate	600 Diesel	0.000119275	0.000144323	0.000171756	0.000975042	0.001161091	0.218950235	5.39E-05	4.96E-05	2.00E-06	1.79E-06	712174.4075	3658.641951	1.135746525	339592.6898
Sacramento		2027 Agricultural - Construction Equipment	Aggregate	75 Diesel	7.43E-05	8.99E-05	0.000107041	0.000582422	0.000848453	0.094944426	3.28E-05	3.01E-05	8.66E-07	7.77E-07	3088.235576	2989.274176	2.569938815	133461.8866
Sacramento		2027 Agricultural - Cotton Pickers	Aggregate	600 Diesel	4.81E-05	5.82E-05	6.93E-05	0.000361184	0.000500634	0.11618016	2.00E-05	1.84E-05	1.06E-06	9.51E-07	3778.965405	2793.011325	0.512405332	162437.3268
Sacramento		2027 Agricultural - Forage & Silage Harvesters	Aggregate	600 Diesel	9.79E-05	0.000118421	0.000140931	0.000866368	0.000809344	0.229575064	3.98E-05	3.66E-05	2.10E-06	1.88E-06	7467.335443	288.3793612	0.606922635	320980.4478
Sacramento		2027 Agricultural - Forage & Silage Harvesters	Aggregate	750 Diesel	0.000280239	0.000339089	0.000403544	0.002564436	0.002877063	0.653446785	0.000134121	0.000123392	4.85E-06	4.35E-06	17287.54876	4723.550947	1.320236125	930088.4169
Sacramento		2027 Agricultural - Forage & Silage Harvesters	Aggregate	9999 Diesel	0.000162544	0.000196883	0.000234069	0.00131448	0.002214333	0.27717434	7.51E-05	6.91E-05	2.53E-06	2.27E-06	9015.586186	2250.570769	0.513893145	387531.3917
Sacramento		2027 Agricultural - Forklifts	Aggregate	100 Diesel	0.000296738	0.000359053	0.000427303	0.002611169	0.002259908	0.424329406	0.000167862	0.000154433	3.87E-06	3.47E-06	13802.06527	10415.90861	8.600011529	592000.3618
Sacramento		2027 Agricultural - Forklifts	Aggregate	175 Diesel	6.81E-05	8.24E-05	9.81E-05	0.000431391	0.000645005	0.12186643	2.97E-05	2.73E-05	1.11E-06	9.97E-07	3964.019	3130.524431	1.932873469	180019.9714
Sacramento		2027 Agricultural - Forklifts	Aggregate	50 Diesel	0.000339271	0.000410517	0.000488549	0.001760885	0.001403235	0.207604024	8.24E-05	7.58E-05	1.89E-06	1.70E-06	6752.68646	9148.573578	8.844713088	289637.3776
Sacramento		2027 Agricultural - Forklifts	Aggregate	75 Diesel	0.000942861	0.001140862	0.00135772	0.00744976	0.00877409	1.214361456	0.000418872	0.000385362	1.11E-05	9.94E-06	39499.25653	15329.83107	30.96912891	1694208.347
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	175 Diesel	4.51E-05	5.46E-05	6.50E-05	0.000408774	0.000412277	0.081607573	1.99E-05	1.83E-05	7.46E-07	6.68E-07	2656.057143	2985.354885	1.085639369	120620.2104
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	300 Diesel	0.000107262	0.000129787	0.000154457	0.000607644	0.001095323	0.240565681	4.78E-05	4.39E-05	2.20E-06	1.97E-06	7824.824715	1928.26669	2.013629803	355350.7863
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel	6.23E-06	7.53E-06	8.96E-06	4.66E-05	6.49E-05	0.015109629	2.59E-06	2.38E-06	1.38E-07	1.24E-07	491.4674265	398.2180375	0.074532626	223193.1768
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	75 Diesel	3.80E-06	4.60E-06	5.47E-06	2.98E-05	3.52E-05	0.004852804	1.67E-06	1.54E-06	4.43E-08	3.97E-08	157.8460293	1506.697422	0.107661717	6447.958853
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	9999 Diesel	0.000119365	0.000145022	0.000172546	0.000943776	0.001627363	0.199228845	5.52E-05	5.08E-05	1.82E-06	1.63E-06	6487.888	1179.733142	0.370.9.2	278344.8772
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	50 Diesel	0.000116219	0.000141264	0.000168044	0.000919393	0.001586555	0.389220809	8.46E-05	7.78E-05	2.82E-06	2.53E-06	10057.95595	4534.570264	7.435200685	479602.7872
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel	0.000119365	0.000145022	0.000172546	0.000943776	0.001627363	0.199228845	5.52E-05	5.08E-05	1.82E-06	1.63E-06	6487.888	1179.733142	0.370.9.2	278344.8772
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	75 Diesel	3.80E-06	4.60E-06	5.47E-06	2.98E-05	3.52E-05	0.004852804	1.67E-06	1.54E-06	4.43E-08	3.97E-08	157.8460293	1506.697422	0.107661717	6447.958853
Sacramento		2027 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	9999 Diesel	0.000162544	0.000196883	0.000234069	0.00131448	0.002214333	0.27717434	7.51E-05	6.91E-05	2.53E-06	2.27E-06	9015.586186	2250.570769	0.513893145	387531.3917

Sacramento	2027 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Gasoline	4.79E-05	4.40E-05	5.27E-05	0.004838418	0.000472621	0.14547713	1.04E-05	7.88E-06	1.29E-06	2.03E-06	5807.15	857.75	4.61	107304.525
Sacramento	2027 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Nat Gas	0	0	6.63E-09	9.76E-06	1.00E-06	0.000397540	0	0	0	0	3.65	0	0.17	0
Sacramento	2027 Airport Ground Support - Misc - Service Truck	Aggregate	300 Gasoline	0.000853253	0.000784822	0.000938953	0.054478731	0.005208617	1.30705	9.64E-05	7.29E-05	1.34E-05	1.85E-05	52800.9	16417.7	19.51	2955186
Sacramento	2027 Airport Ground Support - Misc - Service Truck	Aggregate	300 Nat Gas	0	0	1.08E-05	0.00641196	0.00054469	0.182491232	0	0	0	0	9986.4	2489.3	1.9	448074
Sacramento	2027 Airport Ground Support - Misc - Sweeper	Aggregate	100 Gasoline	6.49E-06	5.97E-06	7.15E-06	0.00040927	3.54E-05	0.01024293	7.14E-07	5.40E-07	8.46E-08	1.43E-07	408.8	149.65	0.42	7976.345
Sacramento	2027 Airport Ground Support - Misc - Sweeper	Aggregate	50 Nat Gas	0	0	9.15E-08	2.60E-05	7.25E-06	0.002171204	0	0	0	0	109.5	51.1	0.15	2299.5
Sacramento	2027 Airport Ground Support - Misc - Water Truck	Aggregate	175 Gasoline	1.40E-05	1.29E-05	1.54E-05	0.001257139	0.000122286	0.036335126	2.60E-06	1.97E-06	3.61E-07	5.09E-07	1452.7	529.25	1.7	79387.5
Sacramento	2027 Airport Ground Support - Other	Aggregate	100 Diesel	6.89E-06	8.34E-06	9.92E-06	0.000107286	6.75E-05	0.017983068	5.05E-06	4.64E-06	1.70E-07	0	584.3629399	349.4823119	0.719443	10420.08008
Sacramento	2027 Airport Ground Support - Other	Aggregate	175 Diesel	2.18E-05	2.64E-05	3.14E-05	0.000431201	0.000152834	0.072870694	6.53E-06	6.01E-06	6.90E-07	0	2367.945908	1074.590446	1.522127131	47662.14724
Sacramento	2027 Airport Ground Support - Other	Aggregate	300 Diesel	4.16E-05	5.03E-05	5.99E-05	0.000307357	0.000311565	0.132136017	1.45E-05	1.33E-05	1.25E-06	0	4293.782932	1106.485511	1.833097794	86522.15864
Sacramento	2027 Airport Ground Support - Other	Aggregate	300 Gasoline	2.63E-05	3.19E-05	3.79E-05	0.000242794	0.000200772	0.031627516	8.67E-06	7.98E-06	3.00E-07	0	1027.416707	1597.18035	3.600891907	18153.30789
Sacramento	2027 Airport Ground Support - Other	Aggregate	600 Diesel	2.91E-05	3.52E-05	4.19E-05	0.000221815	0.000158831	0.113553463	7.40E-06	6.81E-06	1.08E-06	0	3689.939596	622.7845529	0.93123	73147.88051
Sacramento	2027 Airport Ground Support - Other	Aggregate	75 Diesel	2.37E-05	2.86E-05	3.41E-05	0.000295705	0.000286735	0.055095685	9.34E-06	8.59E-06	4.79E-07	0	1644.144855	1293.682522	2.795525115	27474.17495
Sacramento	2027 Airport Ground Support - Other	Aggregate	750 Diesel	2.96E-06	3.58E-06	4.27E-06	2.21E-05	2.37E-05	0.011688242	9.92E-07	9.12E-07	1.11E-07	0	379.8114491	35.15046507	0.002082	7529.229618
Sacramento	2027 Airport Ground Support - Other	Aggregate	9999 Diesel	1.67E-05	2.02E-05	2.40E-05	0.000153858	0.000334268	0.070808585	7.33E-06	6.75E-06	7.40E-07	0	2537.502197	54.1274294	0.093123	50302.42439
Sacramento	2027 Airport Ground Support - Passenger Stand	Aggregate	175 Diesel	8.10E-07	9.80E-07	1.17E-06	1.46E-05	5.66E-06	0.002309536	2.82E-07	2.59E-07	2.19E-08	0	75.04876453	32.48333112	0.062082	1487.736565
Sacramento	2027 Airport Ground Support - Passenger Stand	Aggregate	300 Diesel	5.13E-07	6.21E-07	7.39E-07	6.42E-06	1.19E-06	0.002973156	6.98E-08	6.42E-08	2.82E-08	0	96.62517578	19.49615508	0.031158077	2144.572659
Sacramento	2027 Airport Ground Support - Passenger Stand	Aggregate	50 Diesel	3.37E-06	4.08E-06	4.85E-06	3.92E-05	3.14E-05	0.006177363	9.39E-07	8.64E-07	5.85E-08	0	200.7345018	187.8710843	0.466222064	2915.9457
Sacramento	2027 Airport Ground Support - Passenger Stand	Aggregate	75 Diesel	5.68E-06	6.87E-06	8.18E-06	7.64E-05	6.87E-05	0.013782576	1.47E-06	1.35E-06	1.31E-07	0	447.8672115	326.1893368	0.621909977	7045.983798
Sacramento	2027 Cargo Handling Equipment - Port Forklift	Aggregate	175 Diesel	0.0001756	0.00021224	0.000252612	0.017533536	0.001490869	0.256695565	0.000101193	0.000085091	2.43E-06	5.76E-09	8349.477772	3634.780979	0	0
Sacramento	2027 Cargo Handling Equipment - Port Tractors/Loaders/Backhoes	Aggregate	300 Diesel	0.00001724	0.000208576	0.000248222	0.00121879	0.00001336	0.52980347	0.000002118	0.000001122	0.00000502	1.19E-08	17232.79594	2128.265612	0	0
Sacramento	2027 Commercial Harbor Craft - AE - Commercial Fishing	Aggregate	75 Diesel	0.000137027	0.000165803	0.000197319	0.000458572	0.001231909	0.085079382	5.43E-05	5.19E-05	0	0	2898.005162	1880.540803	1.583453971	49420.61304
Sacramento	2027 Commercial Harbor Craft - AE - Excursion	Aggregate	75 Diesel	9.22E-06	1.12E-05	1.33E-05	5.04E-05	0.000225704	0.014862017	6.66E-06	6.36E-06	0	0	1187.482813	963.4008189	5.102426052	20965.52788
Sacramento	2027 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	100 Diesel	7.23E-06	8.74E-06	1.04E-05	2.47E-05	0.000141708	0.0125824	8.10E-06	7.74E-06	0	0	428.5863293	235.4687796	1.541667	7579.7405
Sacramento	2027 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	175 Diesel	6.83E-06	8.26E-06	9.83E-06	2.75E-05	0.000142671	0.01453523	5.41E-06	5.17E-06	0	0	492.6273285	235.4687743	1.541667	8712.344768
Sacramento	2027 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	50 Diesel	0.000147382	0.000178332	0.000212123	0.000506486	0.002444944	0.217552338	0.000121251	0.000116154	0	0	7295.312272	8882.677038	7.708132942	113826.9891
Sacramento	2027 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	175 Diesel	0.000318241	0.000385079	0.000458275	0.005413644	0.002609894	0.918549812	0.000122498	0.000112698	8.70E-06	0	29848.43638	8512.929492	13.13078948	595726.9281
Sacramento	2027 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	50 Diesel	7.50E-06	9.07E-06	1.08E-05	7.15E-05	0.000142555	0.020404793	6.15E-06	5.88E-06	0	0	695.0355513	1578.696655	1.583454013	11508.69929
Sacramento	2027 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	600 Diesel	0.000108286	0.000131026	0.000155912	0.000543951	0.003027779	0.288910435	5.29E-05	5.05E-05	0	0	9840.973331	1578.696655	1.583454013	181155.4386
Sacramento	2027 Commercial Harbor Craft - ME - Excursion	Aggregate	300 Diesel	3.42E-05	4.14E-05	4.93E-05	0.000140884	0.000903787	0.130021632	1.27E-05	1.21E-05	0	0	4428.844593	1075.171388	5.102425803	82707.39844
Sacramento	2027 Commercial Harbor Craft - ME - Excursion	Aggregate	800 Diesel	0.000397056	0.000480437	0.00057176	0.001640728	0.010094945	1.454991659	0.000154169	0.000147386	0	0	49560.46029	5461.563943	5.102426	914812
Sacramento	2027 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	600 Diesel	0.000936427	0.001133076	0.001348515	0.002360647	0.01881162	1.495888938	0.000333726	0.000319042	0	0	50077.70095	7876.983946	9.24999993	924362.3122
Sacramento	2027 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	800 Diesel	4.59E-05	5.55E-05	6.61E-05	0.000249253	0.000951603	0.182569329	3.42E-05	3.27E-05	0	0	6184.698367	471.4464252	3.083332958	114160.7496
Sacramento	2027 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	9999 Diesel	0.000264998	0.000320647	0.000381596	0.002215568	0.005722678	1.611361964	0.000280124	0.000267799	0	0	54886.80296	2489.793787	3.083333042	1081068.47
Sacramento	2027 Commercial Harbor Craft - ME - Work Boat	Aggregate	300 Diesel	0.000173733	0.000207796	0.000247095	0.000515401	0.002063631	0.231469134	6.40E-05	6.12E-05	0	0	8156.262079	1960.344748	3.068023	150142.7935
Sacramento	2027 Commercial Harbor Craft - ME - Work Boat	Aggregate	600 Diesel	0.000601449	0.000727753	0.000866086	0.001841933	0.010075251	0.714535147	0.000222398	0.000212612	0	0	25178.02589	1578.696542	6.136045	463484.2675
Sacramento	2027 Commercial Harbor Craft - ME - Work Boat	Aggregate	9999 Diesel	0.001560711	0.00648646	0.007719423	0.023779443	0.048478914	8.463185147	0.001943249	0.001857746	0	0	298216.6773	11762.07087	18.40814082	5816402.517
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	100 Diesel	5.73E-05	6.92E-05	8.23E-05	0.000585999	0.000561079	0.129885741	4.32E-05	3.97E-05	1.23E-06	0	4220.659821	1701.519617	3.131638178	74708.18725
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	175 Diesel	0.000318241	0.000385079	0.000458275	0.005413644	0.002609894	0.918549812	0.000122498	0.000112698	8.70E-06	0	29848.43638	8512.929492	13.13078948	595726.9281
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	300 Diesel	0.000379817	0.000459578	0.000546936	0.002519338	0.003349884	1.09976006	0.000149783	0.00013178	1.04E-05	0	35736.89502	6336.537905	10.2735	716210.1098
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	50 Diesel	4.13E-05	5.00E-05	5.95E-05	0.000670318	0.000290843	0.093588936	5.63E-06	5.18E-06	4.12E-07	0	1414.763951	1270.271698	2.689915946	25227.38921
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	600 Diesel	0.000520711	0.00063006	0.000749824	0.004188846	0.004311651	1.57899526	0.000197653	0.000181841	1.50E-05	0	51308.51563	5091.848605	8.82779863	1033972.074
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	75 Diesel	7.70E-05	9.31E-05	0.000110827	0.001011983	0.000950122	0.167556807	2.72E-05	2.50E-05	1.59E-06	0	5444.787678	3036.253887	6.265895607	96611.2452
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	750 Diesel	0.000185688	0.00224683	0.002675391	0.001274449	0.005153182	0.652285906	6.77E-05	6.23E-05	6.18E-06	0	21196.14452	1300.36978	2.29694052	424857.7424
Sacramento	2027 Construction and Mining - Bore/Drill Rigs	Aggregate	9999 Diesel	6.12E-05	7.41E-05	8.81E-05	0.000407237	0.000997223	0.215135958	2.11E-05	1.94E-05	2.04E-06	0	6990.884907	324.9974807	0.557665501	138584.4071
Sacramento	2027 Construction and Mining - Bucket	Aggregate	100 Diesel	4.58E-06	5.55E-06	6.60E-06	6.07E-05	4.31E-05	0.009979689	3.39E-06	3.12E-06	9.45E-08	0	324.2917242	185.3080428	0.360842383	5762.614714
Sacramento	2027 Construction and Mining - Bucket	Aggregate	175 Diesel	5.29E-06	6.40E-06	7.62E-06	9.70E-05	3.88E-05	0.015945919	1.60E-06	1.47E-06	1.51E-07	0	518.165444	210.484339	0.360842383	10271.90345
Sacramento	2027 Construction and Mining - Bucket	Aggregate	300 Diesel	1.31E-05	1.58E-05	1.88E-05	9.17E-05	6.55E-05	0.041516435	3.32E-06	3.05E-06	3.93E-07	0	1349.083793	286.1671687	0.426450089	26743.69526
Sacramento	2027 Construction and Mining - Bucket	Aggregate	50 Diesel	2.56E-06	3.09E-06	3.68E-06	2.63E-05	2.23E-05	0.003410835	8.14E-07	7.49E-07	3.23E-08	0	110.8356801	127.7579792	0.295234677	1976.368766
Sacramento	2027 Construction and Mining - Bucket	Aggregate	75 Diesel	4.06E-06	4.92E-06	5.85E-06	5.81E-05	5.27E-05	0.009269331	1.04E-06	9.59E-07	9.13E-08	0	313.2117552	215.8814172	0.426450089	5585.398643
Sacramento	2027 Construction and Mining - Bucket	Aggregate	750 Diesel	7.47E-06	9.03E-06	1.08E-05	6.50E-05	4.15E-05	0.033125374	2.47E-06	2.27E-06	3.14E-07	0	1076.414807	75.27308736	0.131215412	21338.4148
Sacramento	2027 Construction and Mining - Compactor	Aggregate	100 Diesel	1.10E-06	1.33E-06	1.58E-06	2.76E-05	1.44E-05	0.004659329	1.21E-06	1.11E-06	4.41E-08	0	151.4056998	88.45622339	0.196823118	2699.793927
Sacramento	2027 Construction and Mining - Compactor	Aggregate	175 Diesel	2.19E-05	2.65E-05	3.16E-05	0.000482453	0.000139915	0.080334486	5.63E-06	5.18E-06	1.54E-07	0	2620.199182	1057.721811	1.574584944	51941.77621
Sacramento	2027 Construction and Mining - Compactor	Aggregate	300 Diesel	5.43E-06	6.57E-06	7.82E-06	4.18E-05	2.93E-05	0.020607025	1.39E-06	1.28E-06	1.95E-07	0	669.6288791	156.3306163	0.262430824	13274.45395
Sacramento	2027 Construction and Mining - Compactor	Aggregate	50 Diesel	3.10E-06	3.76E-06	4.47E-06	3.54E-05	2.87E-05	0.004957887	6.84E-07	6.29E-07	4.70E-08	0	161.1073921	237.7512214	0.557665501	2872.789857
Sacramento	2027 Construction and Mining - Compactor	Aggregate	600 Diesel	1.22E-05	1.47E-05	1.75E-05	0.000325379	6.46E-05	0.052802316	2.65E-06	2.43E-06	5.01E-07	0	1719.060712	216.9230418	0.360868008	34420.54049
Sacramento	2027 Construction and Mining - Compactor	Aggregate	75 Diesel	2.00E-06	2.42E-06	2.88E-06	3.14E-05	2.76E-05	0.00533146	3.98E-07	3.66E-07	5.05E-08	0	173.3340198	127.4230063	0.295234677	3090.802227
Sacramento	2027 Construction and Mining - Compactor	Aggregate	9999 Diesel	2.98E-06	3.61E-06	4.29E-06	2.96E-05	5.08E-05	0.015230686	9.36E-07	8.61E-07	1.44E-07	0	494.9237939	17.31024607	0.032803853	9811.170509
Sacramento	2027 Construction and Mining - Concrete Mixer	Aggregate	175 Diesel	1.32E-05	1.60E-05	1.90E-05	2.85E-05	8.36E-06	0.004568672	4.02E-07	3.70E-07	1.58E-08	0	148.4598065	62.13916762	0.039411558	3043.065757
Sacramento	2027 Construction and Mining - Concrete Mixer	Aggregate	300 Diesel	1.25E-06	1.51E-06	1.80E-06	1.13E-05	5.55E-06	0.005463067	2.54E-07	2.33E-07	5.18E-08	0	177.5233172	42.31783237	0.065607706	3519.15094
Sacramento	2027 Construction and Mining - Concrete Mixer	Aggregate	50 Diesel	8.67E-07	1.05E-06	1.25E-06	1.40E-05	1.16E-05	0.002366346	1.17E-07	1.08E-07	2.15E-08	0	73.64529892	133.619017	0.32803853	1313.207699
Sacramento	2027 Construction and Mining - Concrete Mixer	Aggregate	600 Diesel	1.07E-06	1.30E-06	1.55E-06	8.08E-06	9.29E-06	0.004235305	1.04E-07	9.60E-08	4.01E-08	0	137.6269713	22.62240301	0.032803853	2728.261803
Sacramento	2027 Construction and Mining - Concrete Mixer	Aggregate	75 Diesel	3.76E-07	4.55E-07	5.41E-07	4.21E-06	3.27E-06	0.00062799	6.23E-08	5.73E-08	5.95E-09	0	20.40663876	17.13189308	0.032803853	363.8814409
Sacramento	2027 Construction and Mining - Concrete Pump	Aggregate	100 Diesel	1.37E-06	1.66E-06	1.98E-06	2.52E-05	1.49E-05	0.003434596	1.08E-06	9.91E-07	4.12E-08	0	141.2141554	70.54603826	0.13133987	2342.531727
Sacramento	2027 Construction and Mining - Concrete Pump	Aggregate	175 Diesel	1.94E-05	2.34E-05	2.79E-05	0.000426449	0.000114629	0.070005035	4.72E-06	4.38E-06	6.64E-07	0	2276.45057	835.6394036	1.049723296	45127.44179
Sacramento	2027 Construction and Mining - Concrete Pump	Aggregate	300 Diesel	7.16E-06	8.66E-06	1.03E-05	6.14E-05	2.47E-05	0.028030585	1.53E-06	1.41E-06	2.66E-07	0	910.8587547	242.3231508	0.393646236	18056.49811
Sacramento	2027 Construction and Mining - Concrete Pump	Aggregate	50 Diesel	2.69E-07	3.25E-07	3.87E-07	4.45E-06	2.25E-06	0.000389526	6.02E-08	5.53E-08	3.69E-09	0	12.65773565	12.79515137	0.032803853	225.7065019
Sacramento	2027 Construction and Mining - Concrete Pump	Aggregate	600 Diesel	1.89E-05	2.28E-05	2.72E-05	0.000126734	0.000213347	0.067179435	6.66E-06	6.13E-06	6.36E-07	0	2183.007457	311.0181331	0.590469354	43275.05303
Sacramento	2027 Construction and Mining - Concrete Pump	Aggregate	75 Diesel	2.42E-06	2.93E-06	3.48E-06	2.83E-06	2.68E-05	0.00459131	8.34E-07	7.67E-07	4.35E-08	0	149.1954329	112.0884599	0.229626971	2660.381505
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	100 Diesel	1.71E-06	2.07E-06	2.46E-06	5.61E-05	1.05E-05	0.006560576	1.54E-06	1.42E-06	6.21E-08	0	213.1870512	144.6478051	0.688880913	3801.449596
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	175 Diesel	1.46E-05	1.77E-05	2.10E-05	0.000252012	0.00015691	0.066443922	7.35E-06	6.76E-06	4.40E-07	0	1509.203363	683.1189312	2.462178222	26610.0314
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	300 Diesel	2.88E-06	3.49E-06	4.15E-06	2.29E-05	3.27E-05	0.013124548	1.66E-06	1.07E-06	1.17E-07	0	400.0954793	117.7208192	0.426450088	7931.332087
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	50 Diesel	1.05E-06	1.27E-06	1.51E-06	1.98E-05	1.38E-05	0.003540117	4.01E-07	3.69E-07	3.95E-08	0	115.0407045	187.5168801	1.115331003	2051.511231
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	600 Diesel	2.62E-06	3.17E-06	3.78E-06	3.05E-05	2.74E-05	0.00948004	1.27E-06	1.17E-06	8.98E-08	0	308.055548	56.86160602	0.229626971	6106.769455
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	75 Diesel	1.98E-06	2.39E-06	2.85E-06	3.61E-05	3.25E-05	0.006755466	6.71E-07	6.17E-07	6.40E-08	0	219.5200453	167.8622493	0.787550923	3424.626848
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	750 Diesel	3.19E-07	3.86E-07	4.60E-07	3.75E-06	3.90E-06	0.002115167	1.68E-07	1.54E-07	2.02E-08	0	68.73352627	7.781764994	0.032803853	1362.549945
Sacramento	2027 Construction and Mining - Crane less than 35ton	Aggregate	9999 Diesel	3.98E-06	4.81E-06	5.73E-06	5.41E-05	5.69E-05	0.002507461	2.86E-06	2.63E-06	2.38E-08	0	81.48037325	5.569773081	0.032803853	1615.234193
Sacramento	2027 Construction and Mining - Cranes	Aggregate	100 Diesel	2.65E-05	3.20E-05	3.81E-05	0.000318929	0.000265337	0.062228284	1.87E-05	1.72E-05	5.89E-07	0	2022.118936	965.790927	4.959497738	23966.25175
Sacramento	2027 Construction and Mining - Cranes	Aggregate	175 Diesel	0.000172883	0.000208188	0.000248052	0.002533746	0.001854788	0.441383435	9.55E-05	8.78E-05	4.56E-06	0	15642.63837	5885.650946	22.30167644	248111.0826
Sacramento	2027 Construction and Mining - Cranes	Aggregate	25 Diesel	1.11E-06	1.34E-06	1.60E-06	1.34E-05	8.59E-06	0.003206728	5.48E-07	5.04E-07	3.04E-08	0	104.2031818	10.51823353	0.065607706	66.34375798
Sacramento	2027 Construction and Mining - Cranes	Aggregate	300 Diesel	0.000400636	0.000491695	0.000585158	0.003651516	0.003884776	1.482313514	0.000192577	0.000177164	1.40E-05	0	48168.03626	12820.18305	50.15970737	887636.6686
Sacramento	2027 Construction and Mining - Cranes	Aggregate	50 Diesel	3.81E-06	4.61E-06	5.49E-06	3.24E-05	2.58E-05	0.005968296	1.22E-06	1.13E-06	5.65E-08	0	193.9408112	167.4382529	0.853657084	1942.701378
Sacramento	2027 Construction and Mining - Cranes	Aggregate	600 Diesel	0.000447498	0.000541473	0.000644397	0.00502528	0.004100468	2.041153859	0.000178775	0.000164473	1.93E-05	0	66327.65077	10623.77979	40.08142292	1286015.079
Sacramento	2027 Construction and Mining - Cranes	Aggregate	75 Diesel	1.40E-05	1.70E-05	2.02E-05	0.000128981	0.000155699	0.025270109	8.83E-06	8.12E-06	2.39E-07	0	821.1566023	465.1686053	2.527440357	8274.165767
Sacramento	2027 Construction and Mining - Cranes	Aggregate	750 Diesel	6.08E-05	7.36E-05	8.76E-05	0.000541023	0.000609859	0.315267337	2.68E-05	2.46E-05	2.99E-06	0	10244.66713	1089.28593	4.626601707	202853.3913
Sacramento	2027 Construction and Mining - Cranes	Aggregate	9999 Diesel	1.95E-05	2.36E-05	2.81E-05	0.000195591	0.000452465	0.105030339	9.02E-06	8.30E-06	1.01E-06	0	3460.83483	263.1382698	1.083051768	69078.62225
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	100 Diesel	0.000323446	0.00039137	0.000465762	0.00393634	0.003129084	0.685748421	0.000241019	0.000221738	6.50E-06	0	22283.51458	8936.969725	28.15876605	375525.6559
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	175 Diesel	0.000085125	0.000103012	0.00012264	0.001406395	0.00078088	0.243257978	0.000128126	0.000116903	3.21E-06	0	79046.39589	26605.59557	57.81555712	1548158.516
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	300 Diesel	0.000901816	0.001091197	0.001298615	0.007046053	0.007436011	3.00115253	0.000364279	0.000335137	2.84E-05	0	97522.97506	20380.18359	46.83697914	1924331.598
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	50 Diesel	3.39E-05	4.10E-05	4.88E-05	0.000216118	0.000172926	0.029187697	1.13E-05	1.04E-05	2.76E-07	0	948.4593096	770.8743974	2.82203154	12982.47562
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	600 Diesel	0.001490655	0.001702355	0.002019843	0.012328777	0.011287234	5.219456276	0.000502198	0.000462023	4.94E-05	0	169607.1423	20558.86651	46.79801697	3445181.218
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	75 Diesel	0.000131873	0.000159565	0.000188986	0.001097885	0.001497393	0.18020144	8.08E-05	7.43E-05	1.71E-06	0	5855.677228	3339.430716	11.19023147	95608.38148
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	750 Diesel	8.21E-05	9.94E-05	0.000118242	0.000794087	0.000679886	0.338632931	3.18E-05	2.93E-05	5.21E-06	0	11003.93616	841.9473899	2.13834304	233625.5641
Sacramento	2027 Construction and Mining - Crawler Tractors	Aggregate	9999 Diesel	0.000113621	0.000137482	0.000163615	0.002062132	0.002116767	1.032309653	4.67E-05	4.29E-05	5.04E-06	0	17294.93799	1006.952205	2.530334809	368021.8751
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	100 Diesel	2.16E-06	2.61E-06	3.10E-06	5.25E-05	2.49E-05	0.008909385	1.79E-06	1.65E-06	8.44E-08	0	289.5120286	166.9463786	0.32803853	5162.439839
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	175 Diesel	3.16E-05	3.82E-05	4.54E-05	0.000767972	0.000118132	0.127392257	6.54E-06	6.02E-06	1.21E-06	0	4139.63363	1748.442208	2.591504387	82062.43443
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	300 Diesel	1.56E-05	1.89E-05	2.25E-05	0.000127312	7.28E-05	0.062505011	3.46E-06	3.19E-06	5.02E-07	0	1031.112131	506.5481633	0.885704031	40263.93326
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	50 Diesel	1.15E-06	1.39E-06	1.66E-06	1.77E-05	1.55E-05	0.002796811	3.15E-07	2.90E-07	2.65E-08	0	90.88286157	108.6627311	0.295234677	1620.579661
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	600 Diesel	7.92E-05	9.58E-05	0.000114403	0.000675402	0.002358796	0.343791787	1.54E-05	1.41E-05	3.26E-06	0	11171.5741	1611.460548	2.788337505	221460.7981
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	75 Diesel	4.88E-06	5.91E-06	7.03E-06	4.18E-05	7.02E-05	0.018355574	9.93E-07	9.17E-07	1.31E-07	0	450.2392983	328.0660054	0.754488603	8408.45436
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	750 Diesel	8.11E-06	9.81E-06	1.17E-05	6.37E-05	5.19E-05	0.03262898	2.51E-06	2.31E-06	3.09E-07	0	1060.284396	84.23666844	0.164019265	21018.65201
Sacramento	2027 Construction and Mining - Crushing/Processing Equipment	Aggregate	9999 Diesel	1.40E-05	1.69E-05	2.02E-05	0.000136951	0.000243206	0.070295072	5.53E-06	5.09E-06	6.66E-07	0	2284.250633	135.2762546	0.262430824	45282.0671
Sacramento	2027

Sacramento	2027 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.161973476	0
Sacramento	2027 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.161973476	0
Sacramento	2027 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.161973476	0
Sacramento	2027 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Diesel	0.000336660	0.000404938	0.000483966	0.001382113	0.002558893	0.003699252	8.61E-05	6.50E-05	3.51E-08	3.02E-08	120.3247365	0	16.42725265	0
Sacramento	2027 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.161973476	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	100 Gasoline	0.00022273	0.000204867	0.000245101	0.011243017	0.000577646	0.244522497	1.70E-05	1.29E-05	2.36E-06	3.48E-06	9946.25	2398.05	5.95	158271.3
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	15 Gasoline	0.002397382	0.002421356	0.002638172	0.07765269	0.001788424	3.07E-06	0.000993866	0.000750922	1.24E-06	1.71E-06	4863.387334	0	35.4918253	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	9.56E-05	0.000114943	0.000137376	0.000602926	0.00077082	0.001379897	2.53E-05	1.91E-05	1.31E-08	1.13E-08	44.88358717	0	13.80449025	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.03930353	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	25 Gasoline	0.004121234	0.004162446	0.004535166	0.13415203	0.002691806	4.99E-06	0.00161763	0.00122221	2.14E-06	2.95E-06	8399.266464	0	27.50806214	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	0.000327712	0.000394165	0.000471001	0.001345342	0.002409815	0.003600084	8.38E-05	6.31E-05	3.42E-08	2.94E-08	117.1235393	0	17.74567363	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.03930353	0
Sacramento	2027 Construction and Mining - Misc - Trenchers	Aggregate	50 Gasoline	0.000667024	0.000615529	0.000734019	0.054155903	0.000934157	0.33871722	2.34E-05	1.76E-05	4.12E-06	5.65E-06	16136.65	7219.7	17.98	216591
Sacramento	2027 Construction and Mining - Nurse Rig Other	Aggregate	175 Diesel	3.65E-07	4.41E-07	5.25E-07	6.02E-06	3.46E-06	0.001039648	2.62E-07	2.41E-07	9.89E-08	0	33.78353167	18.60308786	0.032803853	669.711163
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	100 Diesel	0.000179512	0.000217209	0.000258497	0.002358998	0.001692389	0.380702654	0.000126814	0.000116669	3.61E-06	0	12370.99915	5954.155256	9.415548932	219830.687
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000679572	0.000822282	0.000978584	0.012789563	0.004232717	2.05571982	0.000196711	0.000180973	1.95E-05	0	66800.9742	21016.83906	20.83233504	1326389.781
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000314009	0.000379951	0.000452173	0.005911339	0.002220714	0.923400735	0.000102981	9.52E-05	9.51E-06	0	30006.0679	6443.614858	8.139402083	603025.5836
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	0.000480192	0.000581032	0.000691477	0.003862097	0.003101141	0.461679415	0.000145097	0.000133494	4.37E-06	0	15002.35315	16113.45794	26.37937781	258464.3773
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.000724044	0.000876093	0.001042623	0.0051665	0.003568801	2.435030191	0.000171218	0.000151752	2.31E-05	0	79126.73088	9689.501294	10.56978838	1603000.001
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	0.000237421	0.000287279	0.000341886	0.002442988	0.002496008	0.402155502	9.99E-05	8.38E-05	1.80E-06	0	13047.95059	8688.366402	14.24466446	222489.4012
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	5.99E-05	7.25E-05	8.63E-05	0.000445913	0.00031889	0.196687105	1.82E-05	1.68E-05	1.86E-06	0	6391.381794	503.2883519	0.689032936	127992.9366
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	9999 Diesel	4.81E-05	5.82E-05	6.93E-05	0.000360348	0.000272468	0.177486314	1.67E-05	1.54E-05	1.68E-06	0	5767.448734	180.1342218	0.230254828	125067.0217
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	100 Gasoline	4.55E-06	5.51E-06	6.55E-06	6.02E-06	3.46E-06	0.001039648	2.72E-07	2.51E-06	9.89E-08	0	339.1941027	186.4748895	0.295234677	6048.346867
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000188542	0.000228135	0.0002715	0.003193619	0.001434348	0.534848845	7.60E-05	6.99E-05	5.07E-06	0	17380.00652	5765.357818	6.36506074	345651.5418
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000459806	0.000556365	0.00066212	0.003093751	0.00362557	1.245920151	0.000182113	0.000167544	1.18E-05	0	40486.40438	9315.735467	12.63702767	813202.7098
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	1.65E-05	2.00E-05	2.38E-05	0.000160902	0.000113481	0.039566291	5.62E-06	5.13E-06	1.85E-07	0	635.8100548	1061.148779	1.705800356	11337.46039
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.002567231	0.003106349	0.003696812	0.019270381	0.012901135	4.491987104	0.000597484	0.000549685	8.63E-05	0	296095.6107	35972.86729	43.3474106	5933150.791
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	1.23E-05	1.49E-05	1.77E-05	0.000114032	0.000130779	0.023834302	4.22E-06	3.88E-06	2.26E-07	0	774.4997888	462.9923352	0.853082554	11952.9632
Sacramento	2027 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	0.000313927	0.000379852	0.000452055	0.002591202	0.002338658	1.133085132	0.000109194	0.000100459	1.07E-05	0	36819.79904	3252.059111	5.630303267	850653.2655
Sacramento	2027 Construction and Mining - Off-Highway Trucks	Aggregate	9999 Diesel	0.001161062	0.001404885	0.001671929	0.008698632	0.018610894	4.298408084	0.000413815	0.000380871	4.07E-05	0	139677.5206	6559.380969	9.823971508	2965685.92
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	100 Diesel	0.000140042	0.000169451	0.000201661	0.002102589	0.001427646	0.371738907	0.000104923	9.65E-05	3.52E-06	0	12079.72063	5554.552143	17.03475787	199759.7405
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	175 Diesel	0.00035991	0.000435491	0.000518227	0.006457853	0.003818381	0.994254852	0.000280134	0.000257944	1.11E-05	0	38033.17609	13368.45202	29.99858976	736181.254
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	300 Diesel	0.000326582	0.000395164	0.000470278	0.002635863	0.00290984	1.108915367	0.000135614	0.000124765	1.05E-05	0	36034.39833	7185.185795	18.65764092	700672.9194
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	50 Diesel	0.000211595	0.00025603	0.000304697	0.001947594	0.001707881	0.276126645	7.09E-05	6.53E-05	2.62E-06	0	8972.783512	9263.318864	30.05242647	151577.2416
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	600 Diesel	0.000852951	0.001032071	0.001228157	0.007903817	0.006344152	1.483820648	0.000287377	0.000263487	1.03E-05	0	113006.7846	13375.8907	32.11161297	2278070.511
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	75 Diesel	0.000202122	0.000244568	0.000291056	0.002706668	0.002708541	0.475567582	8.25E-05	7.59E-05	4.50E-06	0	15453.65156	9419.491887	29.00725806	256792.5685
Sacramento	2027 Construction and Mining - Other Construction Equipment	Aggregate	750 Diesel	0.000109871	0.000132944	0.000158215	0.001071022	0.000824047	0.548548151	3.82E-05	3.51E-05	5.20E-06	0	17825.16786	1324.467901	3.512598741	359700.9054
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	0.000149835	0.000181301	0.000215763	0.001460936	0.002979346	0.731294201	6.40E-05	5.89E-05	6.84E-06	0	23461.32754	973.9399328	2.560407014	470801.1102
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	100 Diesel	5.13E-05	6.20E-05	7.38E-05	0.000691812	0.000501389	0.117902626	3.75E-05	3.45E-05	1.12E-06	0	3831.266413	1875.11575	4.790519451	66167.10063
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	175 Diesel	0.000158656	0.000191974	0.000228465	0.002181041	0.001396682	0.484436905	6.54E-05	6.02E-05	4.59E-06	0	15741.86174	5866.685302	11.64804032	308694.4684
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	300 Diesel	0.000143316	0.000173413	0.000206575	0.001301243	0.001082063	0.454607413	5.11E-05	4.70E-05	4.69E-06	0	16074.30388	3409.146348	7.285029914	318516.1837
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	50 Diesel	3.55E-05	4.30E-05	5.12E-05	0.000371449	0.000318925	0.054248113	1.19E-05	1.09E-05	5.14E-07	0	1762.801911	2108.83548	6.102910661	28596.4803
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	600 Diesel	0.000218319	0.000264166	0.000314379	0.001846908	0.001431293	0.874977585	6.40E-05	5.89E-05	8.29E-06	0	28432.54927	3568.364993	7.021661588	565968.3245
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	75 Diesel	2.97E-05	3.60E-05	4.28E-05	0.000308369	0.000189153	0.063345587	1.21E-05	1.11E-05	6.19E-07	0	2123.094546	1443.232598	3.839424175	57380.41183
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	750 Diesel	3.08E-05	3.72E-05	4.43E-05	0.000310879	0.000269296	0.095066426	1.50E-05	1.38E-05	9.01E-07	0	3089.200113	223.5561495	0.623273207	61239.0623
Sacramento	2027 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	7.22E-05	8.73E-05	0.000103948	0.000617382	0.001347915	0.321392351	3.04E-05	2.79E-05	3.04E-06	0	10443.70052	534.3881033	1.148134855	207031.7245
Sacramento	2027 Construction and Mining - Pavers	Aggregate	100 Diesel	9.54E-05	0.000115421	0.000137356	0.001382124	0.000958005	0.234335449	6.88E-05	6.31E-05	2.22E-06	0	7616.396045	3793.661769	8.694575185	134457.6961
Sacramento	2027 Construction and Mining - Pavers	Aggregate	175 Diesel	0.00025137	0.000304158	0.000361973	0.004611264	0.002010269	0.778346499	8.91E-05	8.20E-05	7.37E-06	0	25292.50527	8508.667702	15.38957034	500030.0089
Sacramento	2027 Construction and Mining - Pavers	Aggregate	300 Diesel	0.000245992	0.00029765	0.000354228	0.001907226	0.001623712	0.942310844	6.55E-05	6.03E-05	8.93E-06	0	30620.55528	6349.331636	11.3843609	607479.7841
Sacramento	2027 Construction and Mining - Pavers	Aggregate	50 Diesel	5.08E-05	6.15E-05	7.32E-05	0.000359915	0.000281202	0.062338658	1.13308E-05	1.07E-05	4.21E-07	0	1443.959584	1560.142237	4.363383044	24236.44541
Sacramento	2027 Construction and Mining - Pavers	Aggregate	600 Diesel	3.98E-05	4.82E-05	5.74E-05	0.000325088	0.000226096	0.165754304	1.02E-05	9.40E-06	1.57E-06	0	5386.215025	685.4507872	1.181874232	108861.3841
Sacramento	2027 Construction and Mining - Pavers	Aggregate	75 Diesel	0.000116846	0.000141384	0.000168258	0.001292422	0.001369497	0.216453888	5.09E-05	4.68E-05	2.05E-06	0	7033.706864	4405.564848	11.31848273	122437.1735
Sacramento	2027 Construction and Mining - Pavers	Aggregate	750 Diesel	1.29E-06	1.56E-06	1.86E-06	1.32E-05	4.47E-06	0.003802085	1.35E-07	1.18E-07	6.44E-08	0	221.0349527	16.59574348	0.032803853	4381.708125
Sacramento	2027 Construction and Mining - Pavers	Aggregate	9999 Diesel	4.20E-05	5.08E-05	6.05E-05	0.000304508	0.000742751	0.156057749	1.71E-05	1.57E-05	1.48E-06	0	5071.123793	123.1922014	0.229626971	100527.9213
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	100 Diesel	4.67E-05	5.65E-05	6.72E-05	0.000764202	0.000464476	0.115550641	3.36E-05	3.09E-05	1.28E-06	0	4404.741726	2330.042663	5.416675982	72407.47911
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	175 Diesel	0.000243782	0.000294976	0.000351045	0.005113383	0.001666764	0.863491503	7.54E-05	6.94E-05	8.18E-06	0	28059.30703	11381.96925	17.48854636	553336.6915
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	300 Diesel	0.000104917	0.000126949	0.00015108	0.000821813	0.000742658	0.389275983	3.23E-05	2.97E-05	3.69E-06	0	12649.59097	2976.924769	5.54667109	250353.4544
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	50 Diesel	7.05E-05	8.51E-05	0.000101276	0.000775899	0.000640163	0.108491477	2.09E-05	1.92E-05	1.03E-06	0	3525.449482	4642.737381	12.07283809	61594.22135
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	600 Diesel	0.000218879	0.000264844	0.000315186	0.001821676	0.001015916	0.916038284	5.34E-05	4.91E-05	6.68E-06	0	29766.82384	4630.218826	8.008057292	593563.9543
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	75 Diesel	3.91E-05	4.73E-05	5.63E-05	0.000479453	0.000486161	0.08071015	1.51E-05	1.39E-05	7.65E-07	0	2622.690411	1941.028104	4.756683556	45747.23478
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	750 Diesel	4.33E-05	5.24E-05	6.23E-05	0.000387209	0.000254651	0.188504854	1.46E-05	1.34E-05	1.88E-06	0	6436.151999	557.1329461	1.682527144	127587.6932
Sacramento	2027 Construction and Mining - Paving Equipment	Aggregate	9999 Diesel	3.31E-05	4.00E-05	4.76E-05	0.000239262	0.000548635	0.124159039	1.32E-05	1.21E-05	1.18E-06	0	4034.569623	222.3905873	0.426450089	79979.68775
Sacramento	2027 Construction and Mining - Rollers	Aggregate	100 Diesel	0.000279388	0.000338059	0.000402319	0.003902264	0.002739248	0.676857515	0.000204625	0.000188255	6.41E-06	0	21994.60303	11258.92643	29.60185584	366960.3551
Sacramento	2027 Construction and Mining - Rollers	Aggregate	175 Diesel	0.001608058	0.001907501	0.002156034	0.023183819	0.007952777	3.792830345	0.000335163	0.000307118	3.55E-05	0	121883.8865	47511.87003	80.19669651	2396490.404
Sacramento	2027 Construction and Mining - Rollers	Aggregate	300 Diesel	9.66E-05	0.000116835	0.000139043	0.000798307	0.000800549	0.326386374	3.90E-05	3.57E-05	1.59E-06	0	10605.98218	2428.983229	5.32339539	206275.713
Sacramento	2027 Construction and Mining - Rollers	Aggregate	50 Diesel	0.000846869	0.001024711	0.001219491	0.007834228	0.006471715	0.099394469	0.000255576	0.000235299	1.04E-05	0	35725.01507	44330.09243	122.7059382	588762.6733
Sacramento	2027 Construction and Mining - Rollers	Aggregate	600 Diesel	6.55E-05	7.93E-05	9.43E-05	0.000599606	0.000451459	0.352328223	2.66E-05	1.96E-05	2.45E-06	0	8391.171167	1141.520562	2.309412236	172631.9187
Sacramento	2027 Construction and Mining - Rollers	Aggregate	75 Diesel	0.000200965	0.000243168	0.000289389	0.002544804	0.002567935	0.437366484	7.91E-05	7.28E-05	4.14E-06	0	14212.30022	9323.777661	24.93521993	239162.9041
Sacramento	2027 Construction and Mining - Rollers	Aggregate	750 Diesel	1.57E-06	1.90E-06	2.26E-06	1.18E-05	1.25E-05	0.0063312	5.40E-07	4.97E-07	6.00E-08	0	205.7334381	14.96871851	0.032803853	4078.377046
Sacramento	2027 Construction and Mining - Rollers	Aggregate	9999 Diesel	6.94E-05	8.37E-05	9.48E-05	0.000557765	0.001092037	0.279331114	2.61E-05	2.40E-05	2.65E-06	0	9076.328729	202.689035	0.426450089	179925.4884
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	100 Diesel	0.000278263	0.000336699	0.000406699	0.005320648	0.00295148	0.953490618	0.000212536	0.000195533	9.04E-06	0	30995.21731	15210.24104	47.58266298	524028.2859
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	175 Diesel	0.001539577	0.001862889	0.002216991	0.034310858	0.012056711	5.979506348	0.000498685	0.000458579	5.66E-05	0	194305.102	79273.8646	166.919567	3836625.062
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	300 Diesel	1.22E-05	1.48E-05	1.76E-05	0.000110887	9.64E-05	0.051296336	4.27E-06	3.93E-06	4.86E-07	0	1666.88344	388.9448554	1.017219864	32506.47966
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	50 Diesel	1.97E-05	2.38E-05	2.83E-05	0.00021531	0.000190643	0.033251387	5.90E-06	5.43E-06	3.15E-07	0	1080.509621	1091.027429	4.067677772	19267.13007
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	600 Diesel	2.85E-04	3.45E-04	4.11E-04	2.72E-03	1.92E-05	0.014504814	6.67E-07	6.13E-07	1.37E-07	0	471.3364465	69.22613917	0.164025719	9337.787308
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	75 Diesel	0.000419785	0.000507094	0.000604009	0.007569252	0.007375779	1.325440707	8.38E-05	7.71E-05	4.26E-06	0	43070.43905	36940.20733	83.07385853	758265.6166
Sacramento	2027 Construction and Mining - Rough Terrain Forklifts	Aggregate	750 Diesel	6.98E-07	8.45E-07	1.01E-06	8.96E-06	1.51E-06	0.004780088	1.24E-07	1.14E-07	4.53E-08	0	155.3298409	12.31173694	0.032810307	3077.934235
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	100 Diesel	2.16E-05	2.62E-05	3.11E-05	0.000274213	0.000119778	0.047108806	1.67E-05	1.54E-05	4.46E-07	0	1530.808875	732.8720609	1.641340461	25409.72487
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	175 Diesel	5.75E-05	6.93E-05	8.25E-05	0.000565561	0.000523309	0.104483165	2.53E-05	2.34E-05	1.35E-06	0	4630.01532	1600.236311	2.727920045	91339.08451
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	300 Diesel	5.82E-05	7.04E-05	8.38E-05	0.000443395	0.000408657	0.176715981	2.19E-05	2.02E-05	1.67E-06	0	5742.416642	1255.320895	2.199504125	114321.7498
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	50 Diesel	4.18E-06	5.05E-06	6.01E-06	5.80E-05	3.89E-05	0.012301834	1.15E-06	1.05E-06	1.17E-07	0	399.7502389	229.0375621	0.592468543	3561.80601
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	600 Diesel	0.000267282	0.000347611	0.000413685	0.002758332	0.002132113	0.959152594	0.000108421	9.67E-05	9.09E-06	0	31167.83089	4410.961251	8.031875479	607728.7013
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	75 Diesel	1.14E-05	1.37E-05	1.64E-05	0.00013022	0.000138877	0.023626272	5.24E-06	4.82E-06	2.24E-07	0	767.7398348	458.3925782	0.985680293	11332.94078
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	750 Diesel	6.65E-06	8.05E-06	9.58E-06	6.07E-05	3.88E-05	0.02913834	2.05E-06	1.89E-06	2.76E-07	0	946.8554552	85.23046105	0.164421341	22814.19155
Sacramento	2027 Construction and Mining - Rubber Tired Dozers	Aggregate	9999 Diesel	2.01E-05	2.44E-05	2.90E-05	0.000158648	0.000487946	0.077709865	1.03E-05	9.45E-06	7.36E-07	0	2525.138856	95.87895329	0.164010656	50058.5279
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	100 Diesel	0.000315378	0.000381607	0.000454144	0.004855626	0.003019651	0.819098875	0.000231071	0.000212585	7.76E-06	0	26616.76084	14747.42906	27.37049089	453829.7323
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	175 Diesel	0.00219074	0.002650795	0.003154665	0.036749386	0.017560519	6.134314712	0.000849868	0.000781878	5.81E-05	0	199335.6268	74220.49981	102.2389535	3938107.851
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	300 Diesel	0.000358281	0.000433552	0.000515925	0.006035925	0.002015593	0.708835031	9.82E-05	8.93E-05	1.04E-05	0.000081371	31752.2302	91146.27995	129.414563	7996387.008
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	50 Diesel	7.03E-05	8.50E-05	0.000101179	0.000531401	0.000413142	0.063888302	2.16E-05	1.99E-05	6.05E-07	0	2076.061532	2467.330745	5.05280492	35009.74338
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	600 Diesel	0.000425633	0.000935014	0.000492909	0.019196967	0.013126194	8.788602177	0.000616584	0.000567257	8.33E-05	0	285587.1611	41648.26443	57.50222021	5751493.564
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	75 Diesel	0.000153449	0.000185774	0.000378367	0.002905659	0.003006353	0.498473721	0.000102865	0.000094653	4.72E-06	0	16197.99053	11574.25793	22.54287312	276784.3248
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	750 Diesel	6.22E-05	7.53E-05	8.96E-05	0.000606446	0.00048457	0.228568713	2.34E-05	2.16E-05	2.17E-06	0	7427.380218	777.7798295	1.584798974	190744.9867
Sacramento	2027 Construction and Mining - Rubber Tired Loaders	Aggregate	9999 Diesel	0.000117539	0.000214823	0.000255657	0.001460411	0.003049948	0.748154682	6.31E-05	5.80E-05	7.09E-06	0	24311.41692	1470.830579	2.331472245	502733.1613
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	100 Diesel	8.38E-06	1.01E-05	1.21E-05	0.000133716	8.86E-05	0.024446366	5.91E-06	5.44E-06	2.32E-07	0	794.1939454	316.2854787	1.017915655	50058.5279
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	175 Diesel	0.000109302	0.000132255	0.000157394	0.001286806	0.001199289	0.20993097	6.81E-05	6.27E-05	1.99E-06	0	6821.743485	1794.303058	6.169391195	128742.6091
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	300 Diesel	0.000871548	0.001054566	0.001255021	0.00756475	0.008316183	2.927896182	0.000412753	0.000373733	2.74E-05	0	95142.49727	15883.5509	48.71949875	1822128.821
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	50 Diesel	0.000307945	0.000372614	0.000443501	0.003849325	0.002015593	0.708835031	9.82E-05	8.93E-05	1.04E-05	0.000081371	31752.2302	91146.27995	129.414563	7996387.008
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	600 Diesel	0.002678748	0.003241285	0.00385739	0.031562627	0.023282291	10.41539037	0.001099657	0.001011684	9.87E-05	0	338449.9271	33859.94077	101.7247389	7085322.787
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	75 Diesel	1.22E-05	1.48E-05	1.76E-05	0.000113717	0.000143242	0.01976088	7.25E-06	6.67E-06	1.87E-07	0	642.1332328	337.5136798	1.279897731	10505.05526
Sacramento	2027 Construction and Mining - Scrapers	Aggregate	750 Diesel	0.000307945	0.000372614	0.000443441	0.003841316	0.00230729	1.124541456	0.000101912	0.000092008	1.54E-05	0	52789.76141	4135.671665	15.36385233	1234143.612
Sacramento	2027 Construction and Mining - Skid Steer Loaders	Aggregate	100 Diesel	0.001126571	0.001363154	0.001622266	0.021905814	0.012468662	3.699073907	0.000886629	0.000815699	3.50E-05	0	120202.052	68668.73691	146.7418516	2128643.01
Sacramento	2027 Construction and Mining - Skid Steer Loaders	Aggregate	175 Diesel	0.000275384	0.000333234	0.000396553	0.004560983	0.001643698	1.070804855	5.53E-05	5.09E-05	1.01E-05	0	34795.99059	16588.18915	25.42493201	687412.1123
Sacramento	2027 Construction and Mining - Skid Steer Loaders	Aggregate	300 Diesel	2.67E-05	3.23E-05	3.84E-05	0.000194214	0.000181962	0.088048548	8.32E-06	7.65E-06	3.34E-07	0	2861.152981	738.8264816	1.377761826	56867.2395
Sacramento	2027 Construction and Mining - Skid Steer Loaders	Aggregate	50 Diesel	0.000809563	0.000979572	0.001165771	0.0075297	0.006222046	1.036991317	0.000223649	0.000217571	7.82E-06	0	33697.21375

ITEM 11.1.

ATTACHMENT 3

Sacramento	2027 Industrial - Boom	Aggregate	175 Diesel	1.57E-05	1.90E-05	2.27E-05	0.000318249	0.000105202	0.059296669	4.45E-06	4.09E-06	5.01E-07	0	1719.958843	881.0944044	1.137411792	34095.7733
Sacramento	2027 Industrial - Boom	Aggregate	300 Diesel	1.93E-06	2.34E-06	2.78E-06	1.66E-05	9.09E-06	0.007834361	3.86E-07	3.55E-07	7.42E-08	0	254.5789405	71.41621122	0.11077533	5325.229137
Sacramento	2027 Industrial - Boom	Aggregate	50 Diesel	0.000163633	0.000197996	0.000235632	0.002476396	0.00205865	0.380830198	4.15E-05	3.81E-05	3.61E-06	0	12375.14373	13595.32586	33.68002695	220667.6362
Sacramento	2027 Industrial - Boom	Aggregate	600 Diesel	2.62E-06	3.17E-06	3.78E-06	1.77E-05	1.93E-05	0.00785054	1.04E-06	9.60E-07	7.44E-08	0	255.1046615	39.8637885	0.063189544	5057.09235
Sacramento	2027 Industrial - Boom	Aggregate	75 Diesel	0.000238699	0.000288826	0.000343726	0.003817946	0.003278412	0.544307351	3.86E-05	3.55E-05	6.07E-06	0	20806.89908	16141.43541	31.21588504	370970.0847
Sacramento	2027 Industrial - Boom	Aggregate	9999 Diesel	1.09E-06	1.32E-06	1.57E-06	1.01E-05	1.73E-05	0.005138083	3.27E-07	3.00E-07	4.87E-08	0	166.9629096	9.734722534	0.015797386	3309.805661
Sacramento	2027 Industrial - Forklifts	Aggregate	100 Diesel	0.000274221	0.000331808	0.000394879	0.005034662	0.002840997	0.868746425	0.000212124	0.000195154	8.23E-06	0	28230.06663	28835.63697	70.45890705	485955.6523
Sacramento	2027 Industrial - Forklifts	Aggregate	175 Diesel	0.000747966	0.000905039	0.001077071	0.014933887	0.005523017	2.532084592	0.000240387	0.000221064	2.39E-05	0	81897.08752	64167.75156	106.9218367	1620792.066
Sacramento	2027 Industrial - Forklifts	Aggregate	25 Diesel	9.27E-09	1.12E-08	1.33E-08	3.02E-08	2.41E-08	2.18E-06	2.06E-09	1.89E-09	2.07E-11	0	0.070840591	5.263314534	0.015797386	1.263195488
Sacramento	2027 Industrial - Forklifts	Aggregate	300 Diesel	6.96E-05	8.42E-05	0.000100193	0.000523213	0.00051786	0.226938996	2.40E-05	2.21E-05	2.15E-06	0	7374.422276	3424.267806	6.685765978	146942.6822
Sacramento	2027 Industrial - Forklifts	Aggregate	50 Diesel	9.36E-05	0.000113282	0.000134815	0.000946694	0.000775167	0.136690972	2.77E-05	2.54E-05	1.29E-06	0	4441.796099	8452.487833	23.2961633	71567.24077
Sacramento	2027 Industrial - Forklifts	Aggregate	600 Diesel	2.05E-05	2.48E-05	2.95E-05	0.000197139	0.000161604	0.066852828	7.52E-06	6.92E-06	6.52E-07	0	2237.384648	636.0132192	1.264383342	45194.95633
Sacramento	2027 Industrial - Forklifts	Aggregate	75 Diesel	0.000500008	0.000605097	0.000720115	0.007650925	0.006935144	1.302107448	0.000129511	0.000111915	1.23E-05	0	42312.2087	55677.75557	132.7072333	739743.9264
Sacramento	2027 Industrial - Forklifts	Aggregate	750 Diesel	1.00E-06	1.21E-06	1.44E-06	1.02E-05	4.21E-06	0.001245435	2.89E-07	2.66E-07	4.97E-08	0	170.4513241	23.08354021	0.047302158	3378.958589
Sacramento	2027 Industrial - Forklifts	Aggregate	9999 Diesel	2.28E-05	2.76E-05	3.28E-05	0.001182391	0.000412255	0.09512937	8.94E-06	8.22E-06	9.01E-07	0	3091.245471	155.3075332	0.316127526	62971.89847
Sacramento	2027 Industrial - Garbage Refuse	Aggregate	175 Diesel	2.35E-07	2.84E-07	3.38E-07	3.37E-06	2.84E-06	0.000572958	1.34E-07	1.24E-07	5.43E-09	0	18.61838608	8.829746598	0.015797386	369.0834078
Sacramento	2027 Industrial - Garbage Refuse	Aggregate	300 Diesel	6.82E-07	8.25E-07	9.81E-07	5.50E-06	3.75E-06	0.002792542	1.56E-07	1.43E-07	2.65E-08	0	90.74415	20.05882675	0.031594772	1798.875583
Sacramento	2027 Industrial - Garbage Refuse	Aggregate	50 Diesel	3.78E-08	4.58E-08	5.45E-08	6.41E-07	6.09E-07	0.000101084	1.31E-08	1.20E-08	9.58E-10	0	3.284736624	6.16545793	0.015797386	58.57185034
Sacramento	2027 Industrial - Garbage Refuse	Aggregate	600 Diesel	1.02E-05	1.23E-05	1.47E-05	8.09E-05	4.81E-05	0.041455286	2.08E-06	1.91E-06	3.93E-07	0	1347.09676	144.3692056	0.203586018	26704.30512
Sacramento	2027 Industrial - Garbage Refuse	Aggregate	75 Diesel	2.21E-07	2.68E-07	3.19E-07	2.69E-06	2.22E-06	0.000414337	7.08E-08	6.52E-08	3.92E-09	0	13.46395376	8.537794279	0.015797386	240.0827751
Sacramento	2027 Industrial - Garbage Refuse	Aggregate	9999 Diesel	2.09E-06	2.53E-06	3.01E-06	2.02E-05	3.50E-05	0.010346558	7.61E-07	7.00E-07	9.80E-08	0	336.2132061	18.56999125	0.031594772	6664.955561
Sacramento	2027 Industrial - Garbage Transfer	Aggregate	300 Diesel	9.42E-07	1.14E-06	1.36E-06	6.16E-06	7.04E-06	0.002923797	2.55E-07	2.34E-07	2.77E-08	0	95.00929866	21.59174331	0.031594772	1883.426177
Sacramento	2027 Industrial - Garbage Transfer	Aggregate	600 Diesel	1.64E-06	1.98E-06	2.36E-06	1.43E-05	4.33E-06	0.007142422	2.67E-07	2.46E-07	6.77E-08	0	232.0942591	22.52602855	0.031594772	4600.943374
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	100 Gasoline	0.000158072	0.000145395	0.000173949	0.009016921	0.000402744	0.302545017	2.11E-05	1.59E-05	2.92E-06	4.20E-06	12001.2	4193.85	11.59	280987.95
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	15 Gasoline	2.53E-05	2.56E-05	2.79E-05	0.000720128	1.89E-05	2.84E-08	9.22E-06	6.96E-06	1.16E-08	1.60E-08	45.50443588	0	0.42041915	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	15 Diesel	2.78E-05	3.34E-05	3.99E-05	0.000175244	0.000209922	0.040041075	7.36E-06	5.56E-06	1.81E-09	3.28E-09	13.04568916	0	0.079535345	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	15 Electric	3.04E-06	2.75E-07	3.01E-06	0.000107016	2.93E-06	9.83E-09	2.73E-07	2.06E-07	2.24E-10	2.02E-09	5.759969205	0	0.145260676	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.132483402	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	25 Gasoline	0.001416946	0.001431116	0.001559262	0.037557216	0.000925196	1.40E-06	0.000452817	0.000314277	6.07E-07	8.38E-07	2385.707552	0	14.1340431	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	25 Diesel	5.18E-05	6.23E-05	7.44E-05	0.000212397	0.000393665	0.000568602	1.35E-05	1.02E-05	5.40E-09	4.65E-09	18.49478299	0	8.626349232	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	25 Electric	0.000259225	2.35E-05	0.000256605	0.006577817	0.000180821	5.78E-07	1.77E-05	1.34E-05	1.41E-08	1.27E-07	361.4216997	0	5.848150579	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.132483402	0
Sacramento	2027 Industrial - Misc - Aerial Lifts	Aggregate	50 Gasoline	0.00019949	0.000183491	0.000219527	0.01683435	0.00029857	0.150707833	1.04E-05	7.85E-06	1.83E-06	2.36E-06	6730.6	4193.85	11.59	138397.05
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	100 Gasoline	0.011164188	0.010268818	0.012285506	1.097060635	0.054690614	12.0305926	0.000838802	0.000633761	0.000116232	0.000182864	521986.5	24922.3	135.97	17144561
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	100 Nat Gas	0	0	0.002066429	0.916232094	0.093680683	19.22027201	0.001709329	0	0	0	1073735.1	449209.15	240.33	16444640.5
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	175 Gasoline	0.000586136	0.000539128	0.000645007	0.038744264	0.003283908	0.891907887	6.39E-05	4.83E-05	8.86E-06	1.27E-05	36131.35	8949.8	4.96	1306670.8
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	175 Nat Gas	0	0	9.33E-05	0.053235846	0.004473116	1.467019568	0.000130467	0	0	0	80471.55	16439.6	9.14	2400181.6
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	25 Gasoline	8.94E-06	9.03E-06	9.84E-06	0.000747206	5.01E-06	2.02E-07	1.81E-08	1.37E-08	1.14E-08	1.58E-08	44.96565442	0	0.107863336	0
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	25 Electric	4.73E-05	4.28E-06	4.68E-05	0.000679328	1.90E-05	5.25E-08	2.10E-06	1.58E-06	1.53E-09	1.38E-08	39.41345915	0	0.201881082	0
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	50 Gasoline	0.005299937	0.004874482	0.005832257	0.641854033	0.012559134	2.030758443	0.000319999	0.000105777	2.47E-05	4.06E-05	115796.25	69788	38.74	2861308
Sacramento	2027 Industrial - Misc - Forklifts	Aggregate	50 Nat Gas	0	0	0.003499476	1.551427557	0.014226551	3.107574718	0.000285261	0	0	0	171177.7	127987.25	71.04	5247477.25
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	100 Gasoline	4.93E-05	4.53E-05	5.42E-05	0.003751435	0.000289499	0.086818007	6.05E-06	4.57E-06	8.39E-07	1.23E-06	3514.95	872.35	1.23	68915.65
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	15 Gasoline	0.000292569	0.000295496	0.000321955	0.017320552	0.000151303	6.80E-06	1.46E-06	1.10E-06	2.69E-07	3.72E-07	1053.498396	0	14.62839194	0
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	15 Diesel	1.60E-05	1.73E-05	2.30E-05	0.001113353	0.000113533	0.000250526	4.76E-06	3.60E-06	2.38E-09	2.05E-09	8.148795009	0	1.489697262	0
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	175 Gasoline	6.96E-06	6.40E-06	7.66E-06	0.000644078	5.73E-05	0.017997378	1.29E-06	9.75E-07	1.79E-07	2.51E-07	715.4	76.65	0.1	13337.1
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.013502736	0
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	25 Gasoline	0.000255674	0.00026217	0.000285644	0.022906944	0.000145287	6.20E-06	5.54E-07	4.19E-07	3.50E-07	4.83E-07	1376.604367	0	4.913121202	0
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	25 Diesel	4.61E-05	5.55E-05	6.63E-05	0.001893851	0.000350572	0.000506803	1.18E-05	8.91E-06	4.81E-09	4.14E-09	16.484666	0	1.537571479	0
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.013502736	0
Sacramento	2027 Industrial - Misc - Other General Industrial Equipment	Aggregate	50 Gasoline	0.000159679	0.000146873	0.000175718	0.015859242	0.000302456	0.101464516	6.99E-06	5.29E-06	1.23E-06	1.69E-06	4810.7	2646.25	3.73	79387.5
Sacramento	2027 Industrial - Misc - Other Material Handling Equipment	Aggregate	100 Gasoline	8.94E-05	8.22E-05	9.84E-05	0.005463297	0.000449133	0.120026368	8.37E-06	6.32E-06	1.16E-06	1.71E-06	4883.7	1781.2	4.68	96184.8
Sacramento	2027 Industrial - Misc - Other Material Handling Equipment	Aggregate	50 Gasoline	3.75E-06	3.45E-06	4.13E-06	0.000336284	8.12E-06	0.00208286	1.44E-07	1.08E-07	2.53E-08	3.58E-08	102.2	14.6	0.04	598.6
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	100 Gasoline	0.000243044	0.000223552	0.000267455	0.015323189	0.001566431	0.526043729	3.67E-05	2.77E-05	5.08E-06	7.50E-06	20848.8	4657.4	9.02	316703.2
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	15 Gasoline	0.000111852	0.000119705	0.000130424	0.007317926	5.97E-05	3.01E-06	3.03E-07	2.29E-07	1.13E-07	1.57E-07	444.4452372	0	6.501670824	0
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	15 Diesel	6.36E-06	7.66E-06	9.15E-06	4.51E-05	5.38E-05	9.96E-05	1.89E-06	1.43E-06	9.45E-10	8.14E-10	3.240338646	0	0.695712424	0
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	175 Gasoline	1.88E-06	1.73E-06	2.07E-06	0.000206139	1.88E-05	0.006128934	4.39E-07	3.32E-07	6.08E-08	8.44E-08	240.9	29.2	0.07	4088
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009369664	0
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	25 Gasoline	0.000265074	0.000263876	0.000284616	0.024879331	0.000145677	6.73E-06	6.03E-07	4.55E-07	3.79E-07	5.23E-07	1492.318455	0	6.443520234	0
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	25 Diesel	9.24E-06	1.11E-05	1.33E-05	3.79E-05	7.02E-05	0.000101548	2.36E-06	1.78E-06	9.64E-10	8.30E-10	3.303037456	0	0.128585011	0
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009369664	0
Sacramento	2027 Industrial - Misc - Sweepers/Scrubbers	Aggregate	50 Gasoline	0.000416312	0.000382923	0.000458126	0.035901047	0.00091721	0.327964192	2.26E-05	1.71E-05	3.99E-06	5.12E-06	14601.65	5584.5	10.82	195457.5
Sacramento	2027 Industrial - Mower	Aggregate	100 Diesel	2.66E-05	3.22E-05	3.84E-05	0.00051893	0.000312455	0.085166089	2.28E-05	2.10E-05	8.07E-07	0	2767.486934	1442.561488	2.622518272	49345.10766
Sacramento	2027 Industrial - Mower	Aggregate	175 Diesel	7.54E-06	9.13E-06	1.09E-05	0.000160171	5.13E-05	0.026006865	1.85E-06	1.70E-06	2.46E-07	0	845.097631	363.0222908	0.584741097	16896.97212
Sacramento	2027 Industrial - Mower	Aggregate	300 Diesel	3.66E-07	4.44E-07	5.25E-07	2.16E-06	4.55E-06	0.001099836	1.50E-07	1.38E-07	1.04E-08	0	35.53707878	10.59382102	0.015797386	704.4892902
Sacramento	2027 Industrial - Mower	Aggregate	50 Diesel	0.000200647	0.000242783	0.000288932	0.002219712	0.001770719	0.276152701	6.72E-05	6.19E-05	2.62E-06	0	8973.630184	1958.70096	25.08097661	159625.7881
Sacramento	2027 Industrial - Mower	Aggregate	75 Diesel	8.48E-05	0.000102581	0.000122079	0.001138104	0.000981452	0.183834868	2.06E-05	1.89E-05	1.74E-06	0	5973.746105	4853.145763	9.525823758	106520.9795
Sacramento	2027 Industrial - Mower	Aggregate	9999 Diesel	1.54E-05	1.86E-05	2.22E-05	9.83E-05	0.000248866	0.049196683	6.91E-06	5.36E-06	4.66E-07	0	1598.659578	57.79595663	0.126370688	31691.18539
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	100 Diesel	3.15E-05	3.81E-05	4.53E-05	0.000443901	0.000311685	0.074542458	2.40E-05	2.21E-05	7.06E-07	0	2422.27413	1470.570399	2.541906721	42945.45169
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	175 Diesel	7.78E-05	9.41E-05	0.000112016	0.001378068	0.000641803	0.231507569	3.11E-05	2.87E-05	2.19E-06	0	7522.87884	3377.016437	5.925645055	150136.4177
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	300 Diesel	5.31E-06	6.42E-06	7.64E-06	0.000656346	0.000248872	0.1538807	2.12E-05	1.95E-05	1.46E-06	0	4997.985909	1259.191662	2.65488479	100299.5776
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	50 Diesel	0.000168929	0.000204404	0.000243257	0.001478994	0.001280959	0.191412635	5.14E-05	4.53E-05	1.81E-06	0	6219.986955	9241.796805	23.25655519	239094.6468
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	600 Diesel	0.00013471	0.000162999	0.000193983	0.001103688	0.000976058	0.486104992	4.36E-05	4.01E-05	4.60E-06	0	15796.06652	2431.465933	4.761477446	332287.6308
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	75 Diesel	4.80E-05	5.81E-05	6.93E-05	0.000525712	0.000631954	0.103315569	2.08E-05	1.91E-05	1.79E-07	0	3357.127462	2906.145569	6.809906376	59385.02574
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	750 Diesel	3.02E-05	3.65E-05	4.34E-05	0.000235919	0.000241476	0.113424286	1.41E-05	1.21E-05	1.07E-06	0	3685.741960	324.437489	0.713002638	79683.98426
Sacramento	2027 Industrial - Other General Industrial Equipment	Aggregate	9999 Diesel	4.85E-05	5.87E-05	6.99E-05	0.000365316	0.000865342	0.184914816	2.04E-05	1.88E-05	1.75E-06	0	6008.839199	323.8855232	0.63189544	119116.8149
Sacramento	2027 Industrial - Other Truck	Aggregate	100 Diesel	2.52E-06	3.05E-06	3.63E-06	4.43E-05	2.56E-05	0.010518484	2.19E-06	2.02E-06	9.96E-08	0	341.7998692	209.536411	0.315947172	6094.815571
Sacramento	2027 Industrial - Other Truck	Aggregate	175 Diesel	2.71E-05	3.28E-05	3.91E-05	0.00052797	0.000153924	0.083643738	6.15E-06	5.66E-06	7.92E-07	0	2718.017862	940.8817702	1.011303618	54430.76205
Sacramento	2027 Industrial - Other Truck	Aggregate	300 Diesel	5.18E-05	6.27E-05	7.46E-05	0.000341281	0.000376559	0.151433962	1.62E-05	1.49E-05	1.43E-06	0	4920.873001	1115.796809	1.437894217	98700.44764
Sacramento	2027 Industrial - Other Truck	Aggregate	50 Diesel	6.21E-06	7.51E-06	8.94E-06	5.97E-05	5.31E-05	0.008590764	1.75E-06	1.59E-06	8.14E-08	0	279.1583853	464.8175223	0.805666884	4977.81863
Sacramento	2027 Industrial - Other Truck	Aggregate	600 Diesel	0.000177944	0.000215312	0.00025624	0.001175119	0.000926841	0.55640296	4.51E-05	4.15E-05	5.27E-06	0	18080.41125	2278.173764	3.682170685	361062.5921
Sacramento	2027 Industrial - Other Truck	Aggregate	75 Diesel	1.02E-05	1.24E-05	1.47E-05	0.000119066	0.000118706	0.019387046	3.88E-06	3.66E-06	1.84E-07	0	629.9854283	448.7368668	0.71088237	11233.59844
Sacramento	2027 Industrial - Other Truck	Aggregate	750 Diesel	1.60E-05	1.93E-05	2.30E-05	8.44E-05	0.000138125	0.042719461	5.87E-06	5.40E-06	4.05E-07	0	1388.176306	104.9875974	0.179137264	27518.64955
Sacramento	2027 Industrial - Other Truck	Aggregate	9999 Diesel	1.41E-05	1.70E-05	2.02E-05	9.65E-05	0.000225588	0.048344689	5.15E-06	4.74E-06	4.58E-07	0	1570.969095	38.10231849	0.063189544	31142.26037
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	100 Diesel	3.89E-07	4.70E-07	5.60E-07	5.89E-06	2.92E-06	0.000998139	1.90E-07	1.75E-07	9.46E-09	0	32.43468534	16.70012011	0.031594772	578.3597752
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	175 Diesel	8.64E-06	1.05E-05	1.24E-05	0.000154439	6.75E-05	0.024978940	3.10E-06	2.86E-06	2.37E-07	0	811.6953887	290.9612859	0.505679415	16348.91001
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	300 Diesel	7.40E-06	8.95E-06	1.07E-05	5.65E-05	3.52E-05	0.027408937	1.57E-06	1.45E-06	2.60E-07	0	890.6581898	210.2669103	0.31594772	17656.05023
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	50 Diesel	1.93E-07	2.33E-07	2.78E-07	1.30E-06	1.05E-06	0.000172756	3.12E-08	2.87E-08	1.64E-09	0	5.613750544	8.362716051	0.015797386	100.1017111
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	600 Diesel	2.52E-06	3.05E-06	3.63E-06	2.19E-05	6.29E-06	0.011208618	4.01E-07	3.69E-07	1.06E-07	0	364.2259913	60.19659877	0.094784316	7220.269803
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	75 Diesel	4.77E-07	5.77E-07	6.87E-07	8.34E-06	6.94E-06	0.001452067	5.88E-08	5.41E-08	1.38E-08	0	47.18517417	40.63979023	0.079111392	799.9536308
Sacramento	2027 Industrial - Railcars or Track Cars	Aggregate	9999 Diesel	1.46E-06	1.76E-06	2.10E-06	1.01E-05	2.87E-05	0.004791023	7.93E-07	7.30E-07	4.54E-08	0	155.6851202	10.57510723	0.015797386	3086.239294
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	100 Diesel	3.05E-05	3.70E-05	4.40E-05	0.000532688	0.000321655	0.093732457	2.40E-05	2.21E-05	8.88E-07	0	3045.852385	1404.127736	4.609078799	53418.06515
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	175 Diesel	7.37E-06	8.91E-06	1.06E-05	0.000123083	7.56E-05	0.0212125	3.66E-06	3.37E-06	2.01E-07	0	689.3038785	251.0288858	0.632185595	13743.6376
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	300 Diesel	6.71E-06	8.12E-06	9.67E-06	5.85E-05	4.70E-05	0.028874915	2.02E-06	1.86E-06	2.74E-07	0	938.2954029	186.2596803	0.458124194	18729.72071
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	50 Diesel	5.18E-05	6.27E-05	7.46E-05	0.000530955	0.000474835	0.081138821	1.60E-05	1.47E-05	7.69E-07	0	2636.620131	2927.5144	11.07748855	44759.39576
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	600 Diesel	1.26E-06	1.52E-06	1.81E-06	1.31E-05	9.57E-06	0.004615199	4.99E-07	4.59E-07	4.37E-08	0	149.9716809	20.0743114	0.047392158	2972.978367
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	75 Diesel	2.60E-05	3.14E-05	3.74E-05	0.000411528	0.000388975	0.071898026	8.34E-06	7.67E-06	6.81E-07	0	2336.33891	1301.041106	4.282808182	41005.20151
Sacramento	2027 Industrial - Sweepers/Scrubbers	Aggregate	9999 Diesel	1.51E-06	1.83E-06	2.17E-06	1.73E-05	3.07E-05	0.005342623	6.53E-07	6.00E-07	8.66E-08	0	297.0914455	5.819580539	0.015797386	5883.415506
Sacramento	2027 Industrial - Tow Tractor	Aggregate	600 Diesel	5.05E-07	6.11E-07	7.27E-07	3.96E-06	5.42E-06	0.002099143	1.57E-07	1.45E-07	1.99E-08	0	68.21203335	8.49910718	0.015797386	1352.207952
Sacramento	2027 Industrial - Yard Goat	Aggregate	100 Diesel	4.69E-06	5.68E-06	6.76E-06	6.59E-05	3.95E-05	0.010800375	2.63E-06	2.42E-06	1.02E-06	0	350.9600747	181.3916159	0.189568632	6258.151967
Sacramento	2027 Industrial - Yard Goat	Aggregate	175 Diesel	0.000510021	0.000617126	0.000734419	0.069240709	0.026931181	1.452271628	0.000136037	0.000125135	1.38E-05	0	47191.81991	14784.34039	11.83281468	937328.5157
Sacramento	2027 Industrial - Yard Goat	Aggregate	300 Diesel	0.000299944	0.000362932	0.000431919	0.001995287	0.001522189	0.903894019	7.17E-05	6.60E-05	8.56E-06	0	29372.19385	7571.038158	6.935901101	584781.2114
Sacramento	2027 Industrial - Yard Goat	Aggregate	50 Diesel	2.06E-06	2.49E-06	2.96E-06	2.35E-05	1.81E-05	0.002519521	7.61E-07	7.00E-07	2.39E-08	0	81.87228585	121.3071661	0.221163404	1459.90739
Sacramento	2027 Industrial - Yard Goat	Aggregate	600 Diesel	2.44E-05	2.95E-05	3.51E-05	0.000152693	0.000128312	0.075118418	5.58E-06	5.13E-06	7.12E-07	0	2440.986105	339.1870916	0.316190009	49933.28342
Sacramento	2027 Industrial - Yard Goat	Aggregate	75 Diesel	2.82E-06	3.41E-06	4.06E-06	2.91E-05	3.01E-05	0.004518447	1.04E-06	9.55E-07	4.28E-08	0	146.8277097	115.885634	0.142176474	2618.1614
Sacramento	2027 Industrial - Yard Goat	Aggregate	9999 Diesel	4.98E-06	6.03E-06	7.17E-06	3.01E-05	7.28E-05	0.015571664	1.67E-06	1.53E-06	1.48E-07	0	505.0039423	15.24069971	0.015797386	10030.81892
Sacramento	2027 Light Commercial - Misc - Chainsaws	Agg

Sacramento	2027 Light Commercial - Misc - Pressure Washers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	65218.14687	0
Sacramento	2027 Light Commercial - Misc - Pressure Washers	Aggregate	50 Gasoline	2.63E-05	2.42E-05	2.90E-05	0.001892988	4.38E-05	0.023834285	1.64E-06	1.24E-06	2.90E-07	3.58E-07	1022	405.15	3.56	11740.35	
Sacramento	2027 Light Commercial - Misc - Pressure Washers	Aggregate	50 Diesel	3.15E-06	3.75E-06	4.54E-06	5.07E-05	5.16E-05	0.009313867	1.04E-06	9.56E-07	1.16E-07	7.62E-08	302.95	463.55	3.19	17614.9	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	100 Gasoline	0.000673258	0.000619263	0.000740879	0.035924222	0.001755872	1.33617263	9.32E-05	7.04E-05	1.29E-05	1.85E-05	52782.65	8906	40.35	828258	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	15 Gasoline	0.012843349	0.012071782	0.014133321	0.83964604	0.007203138	1.913841843	2.37E-05	3.14E-05	5.12E-05	4.31E-05	122265.6464	0	3087.289739	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	15 Diesel	0.000748352	0.000900103	0.001057568	0.004656564	0.005645074	0.768638072	0.000159097	0.00021057	7.29E-06	6.28E-06	25001.34127	0	185.9281216	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	175 Gasoline	2.55E-05	2.35E-05	2.81E-05	0.002019573	8.65E-05	0.060660344	4.35E-06	3.29E-06	6.03E-07	8.43E-07	2405.35	262.8	1.22	37843.2	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	2 Gasoline	0.005991205	0.006051116	0.006592953	0.056074472	0.000357096	0.166114515	1.62E-06	2.14E-06	2.71E-06	3.74E-06	10261.94894	0	1119.052674	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	87893.34966	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	25 Gasoline	9.54E-05	9.63E-05	0.000104957	0.0069152	6.85E-05	0.015760617	1.97E-07	2.61E-07	2.56E-07	3.53E-07	1005.152474	0	10.28068509	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	25 Diesel	0.000607947	0.000731226	0.000879933	0.003471917	0.004503017	0.602836255	0.000125328	0.000162169	5.70E-06	4.91E-06	19543.91358	0	55.52992172	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	5 Gasoline	0.009896135	0.009995097	0.010890093	0.446296792	0.003296179	1.036107923	1.22E-05	1.61E-05	1.71E-05	2.35E-05	660902.12821	0	3189.541881	0	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	50 Gasoline	0.000450895	0.000414733	0.000496183	0.036125297	0.000705212	0.35539297	2.45E-05	1.85E-05	4.32E-06	5.49E-06	15658.5	7022.6	31.81	217700.6	
Sacramento	2027 Light Commercial - Misc - Pumps	Aggregate	50 Diesel	0.000617628	0.000735028	0.000889384	0.007645454	0.006648415	1.121928162	0.000168373	0.000155231	1.42E-05	9.18E-06	36492.7	23297.95	57.86	862024.15	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	100 Gasoline	0.000756757	0.000696062	0.000832761	0.034637287	0.002115318	1.11941173	7.80E-05	5.90E-05	1.08E-05	1.56E-05	44519.05	13410.1	64.53	938707	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	15 Gasoline	0.064457335	0.065101908	0.070931365	3.827309256	0.02915608	6.851802303	0.000124605	0.000164919	0.000124565	0.000171945	488266.4761	0	10085.47875	0	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	15 Diesel	0.004451281	0.005421792	0.006648724	0.023808243	0.003404256	0.463554419	9.59E-05	0.000128547	4.40E-06	3.79E-06	15077.94205	0	84.0495006	0	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	43139.02555	0	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	175 Gasoline	7.18E-05	6.60E-05	7.90E-05	0.004705411	0.00029098	0.139375096	9.99E-06	7.55E-06	1.38E-06	1.95E-06	5566.25	930.75	4.45	120997.5	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	25 Diesel	0.000748574	0.000903369	0.001076886	0.003045376	0.005653979	0.738784916	0.000150879	0.000199692	7.02E-06	6.05E-06	24062.81542	0	73.98850677	0	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	50 Gasoline	0.001080906	0.000994218	0.001189472	0.079407721	0.001684455	0.713081693	4.92E-05	3.71E-05	8.67E-06	1.12E-05	31857.2	13136.35	63.24	591135.75	
Sacramento	2027 Light Commercial - Misc - Welders	Aggregate	50 Diesel	0.002180647	0.002595151	0.003140132	0.029486877	0.019666605	3.191065328	0.000539603	0.000496435	4.01E-05	2.61E-05	103795.05	87417.5	136.11	4021205	
Sacramento	2027 Locomotive - Line Haul	Aggregate	0 Diesel	0.031292	0.038	0.045	0.223	0.911	0.02	0.009	0.001	0.045	0	0	0	0	0	
Sacramento	2027 Locomotive - Passenger	Aggregate	0 Diesel	0.003919233	0.00000387	0.00000461	0.015254983	0.07944523	0	0.001701135	0.001565045	0.0000602	0.0000532	0	0	0	0	
Sacramento	2027 Locomotive - Short Line	Aggregate	0 Diesel	0.000242451	4.87E-09	5.80E-09	0.000664535	0.006566368	0	0.000111387	0.000102476	0.00000313	0.00000277	0	0	0	0	
Sacramento	2027 Locomotive - Switcher	Aggregate	0 Diesel	0.001727226	0.000003111	0.000000132	0.004615356	0.026964901	0	0.000578051	0.000531807	0.000025155	0.00000138	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - A/C Unit	Aggregate	100 Diesel	2.66E-06	3.16E-06	3.82E-06	6.17E-05	3.63E-05	0.01088488	1.11E-06	1.02E-06	1.25E-07	8.91E-08	354.05	98.55	0.33	9953.55	
Sacramento	2027 Military Tactical Support - Misc - A/C Unit	Aggregate	300 Diesel	1.44E-06	1.72E-06	2.08E-06	1.59E-05	1.25E-05	0.009201651	3.49E-07	3.21E-07	1.03E-07	7.53E-08	299.3	54.75	0.16	11388	
Sacramento	2027 Military Tactical Support - Misc - A/C Unit	Aggregate	600 Diesel	8.48E-07	1.01E-06	1.22E-06	9.36E-06	6.96E-06	0.005498548	2.04E-07	1.88E-07	5.37E-08	4.50E-08	178.85	0	0.09	0	
Sacramento	2027 Military Tactical Support - Misc - Aircraft Support	Aggregate	100 Diesel	4.86E-07	5.78E-07	7.00E-07	1.13E-05	6.64E-06	0.001795444	2.04E-07	1.88E-07	2.28E-08	1.47E-08	58.4	0	0.09	0	
Sacramento	2027 Military Tactical Support - Misc - Aircraft Support	Aggregate	175 Diesel	1.08E-06	1.28E-06	1.55E-06	2.93E-05	1.00E-05	0.005835193	3.71E-07	3.41E-07	6.44E-08	4.77E-08	189.8	51.1	0.16	7154	
Sacramento	2027 Military Tactical Support - Misc - Cart	Aggregate	100 Diesel	2.48E-07	2.95E-07	3.57E-07	5.77E-06	3.39E-06	0.000897722	1.04E-07	9.57E-08	1.16E-08	7.35E-09	29.2	0	0.05	0	
Sacramento	2027 Military Tactical Support - Misc - Cart	Aggregate	175 Diesel	8.82E-08	1.05E-07	1.27E-07	2.40E-06	8.22E-07	0	3.04E-08	2.80E-08	5.27E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Cart	Aggregate	300 Diesel	3.18E-07	3.78E-07	4.58E-07	3.51E-06	2.75E-06	0.001795444	7.68E-08	7.06E-08	2.26E-08	1.47E-08	58.4	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Communications	Aggregate	100 Diesel	1.23E-07	1.46E-07	1.76E-07	2.85E-06	1.67E-06	0	5.14E-08	4.73E-08	5.75E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Communications	Aggregate	50 Diesel	7.14E-08	8.49E-08	1.03E-07	1.04E-06	9.45E-07	0	1.88E-08	1.73E-08	2.11E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Compressor	Aggregate	100 Diesel	2.74E-06	3.26E-06	3.94E-06	6.36E-05	3.74E-05	0.011109311	1.15E-06	1.06E-06	1.28E-07	9.09E-08	361.35	138.7	0.49	9847.7	
Sacramento	2027 Military Tactical Support - Misc - Compressor	Aggregate	175 Diesel	1.28E-07	1.53E-07	1.85E-07	3.49E-06	1.20E-06	0	4.43E-08	4.07E-08	7.68E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Compressor	Aggregate	300 Diesel	2.88E-07	3.42E-07	4.14E-07	3.18E-06	2.49E-06	0.001795444	6.95E-08	6.40E-08	2.05E-08	1.47E-08	58.4	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Compressor	Aggregate	50 Diesel	8.74E-08	1.04E-07	1.26E-07	1.27E-06	1.16E-06	0	2.31E-08	2.12E-08	2.59E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Crane	Aggregate	600 Diesel	1.65E-06	1.97E-06	2.38E-06	1.83E-05	1.36E-05	0.01088488	3.98E-07	3.66E-07	1.05E-07	8.91E-08	354.05	0	0.09	0	
Sacramento	2027 Military Tactical Support - Misc - Crane	Aggregate	100 Diesel	2.55E-07	3.03E-07	3.67E-07	9.63E-06	4.21E-06	0.001683229	3.39E-08	3.12E-08	2.01E-08	1.38E-08	54.75	0	0.06	0	
Sacramento	2027 Military Tactical Support - Misc - Crane	Aggregate	175 Diesel	4.61E-08	5.49E-08	6.64E-08	2.14E-06	2.47E-07	0	7.54E-09	6.93E-09	4.86E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Crane	Aggregate	300 Diesel	4.56E-08	5.42E-08	6.56E-08	7.39E-07	2.18E-07	0	7.06E-09	6.49E-09	4.92E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Deicer	Aggregate	100 Diesel	1.12E-07	1.34E-07	1.62E-07	2.61E-06	1.53E-06	0	4.71E-08	4.33E-08	5.27E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Generator	Aggregate	100 Diesel	1.42E-05	1.69E-05	2.05E-05	0.000331033	0.00019447	0.057903074	5.97E-06	5.49E-06	6.68E-07	4.74E-07	1883.4	660.65	2.22	54833.95	
Sacramento	2027 Military Tactical Support - Misc - Generator	Aggregate	175 Diesel	1.53E-05	1.82E-05	2.20E-05	0.000415605	0.000142408	0.082702646	5.27E-06	4.85E-06	9.14E-07	6.77E-07	2690.05	532.9	1.79	78336.3	
Sacramento	2027 Military Tactical Support - Misc - Generator	Aggregate	300 Diesel	5.14E-06	6.12E-06	7.41E-06	5.68E-05	4.45E-05	0.033103501	1.24E-06	1.14E-06	3.66E-07	2.71E-07	1076.75	127.75	0.47	28488.25	
Sacramento	2027 Military Tactical Support - Misc - Generator	Aggregate	50 Diesel	4.58E-07	5.45E-07	6.59E-07	6.65E-06	6.06E-06	0.001234368	1.21E-07	1.11E-07	1.35E-08	1.01E-08	40.15	0	0.07	0	
Sacramento	2027 Military Tactical Support - Misc - Generator	Aggregate	600 Diesel	3.20E-06	3.80E-06	4.60E-06	3.53E-05	2.62E-05	0.020647608	7.69E-07	7.07E-07	2.02E-07	1.69E-07	671.6	58.4	0.16	20323.2	
Sacramento	2027 Military Tactical Support - Misc - Generator	Aggregate	750 Diesel	1.70E-07	2.02E-07	2.45E-07	1.87E-06	1.41E-06	0.001346583	4.11E-08	3.78E-08	1.10E-08	1.10E-08	43.8	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Hydraulic Unit	Aggregate	100 Diesel	1.62E-06	1.93E-06	2.34E-06	3.78E-05	2.22E-05	0.006508485	6.81E-07	6.27E-07	7.63E-08	5.33E-08	211.7	58.4	0.17	5548	
Sacramento	2027 Military Tactical Support - Misc - Lift	Aggregate	100 Diesel	4.85E-08	5.77E-08	6.98E-08	1.13E-06	6.62E-07	0	2.03E-08	1.87E-08	2.28E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Light	Aggregate	50 Diesel	1.11E-07	1.33E-07	1.61E-07	1.62E-06	1.48E-06	0	2.95E-08	2.71E-08	3.30E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	100 Diesel	3.25E-07	3.84E-07	4.65E-07	7.50E-06	4.41E-06	0.001683229	1.35E-07	1.25E-07	1.51E-08	1.38E-08	54.75	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	175 Diesel	4.55E-07	5.42E-07	6.55E-07	1.24E-05	4.24E-06	0.001907659	1.57E-07	1.44E-07	2.72E-08	1.56E-08	62.05	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	300 Diesel	2.11E-07	2.51E-07	3.04E-07	2.33E-06	1.83E-06	0.001683229	5.10E-08	4.69E-08	1.50E-08	1.38E-08	54.75	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	50 Diesel	2.25E-08	2.65E-08	3.21E-08	3.24E-07	2.95E-07	0	5.89E-09	5.42E-09	6.60E-10	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	600 Diesel	8.55E-08	1.02E-07	1.23E-07	9.44E-07	7.01E-07	0	2.06E-08	1.89E-08	5.41E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	750 Diesel	9.96E-08	1.19E-07	1.43E-07	1.09E-06	8.28E-07	0	2.41E-08	2.22E-08	6.43E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Pressure Washers	Aggregate	175 Diesel	8.77E-08	1.04E-07	1.26E-07	2.38E-06	8.17E-07	0	3.02E-08	2.78E-08	5.24E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Pump	Aggregate	100 Diesel	1.15E-06	1.37E-06	1.65E-06	2.67E-05	1.57E-05	0.00448861	4.82E-07	4.43E-07	5.39E-08	3.67E-08	146	54.75	0.16	5475	
Sacramento	2027 Military Tactical Support - Misc - Pump	Aggregate	50 Diesel	1.01E-06	1.20E-06	1.45E-06	1.47E-05	1.34E-05	0.001907659	2.66E-07	2.45E-07	2.99E-08	1.56E-08	62.05	58.4	0.16	2277.6	
Sacramento	2027 Military Tactical Support - Misc - Start Cart	Aggregate	100 Diesel	2.55E-08	3.04E-08	3.68E-08	5.94E-07	3.48E-07	0	1.07E-08	9.85E-09	1.20E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Start Cart	Aggregate	600 Diesel	4.48E-08	5.33E-08	6.45E-08	4.95E-07	3.68E-07	0	1.08E-08	9.91E-09	2.84E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Test Stand	Aggregate	100 Diesel	7.75E-07	9.22E-07	1.12E-06	1.80E-05	1.06E-05	0.003029812	3.25E-07	2.99E-07	3.64E-08	2.48E-08	98.55	29.2	0.14	2686.4	
Sacramento	2027 Military Tactical Support - Misc - Test Stand	Aggregate	175 Diesel	5.46E-08	6.50E-08	7.86E-08	1.48E-06	5.09E-07	0	1.88E-08	1.73E-08	3.26E-09	0	0	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Test Stand	Aggregate	300 Diesel	9.85E-07	1.17E-06	1.42E-06	1.09E-05	8.53E-06	0.005947409	2.38E-07	2.19E-07	7.02E-08	4.87E-08	193.45	14.6	0.13	2876.2	
Sacramento	2027 Military Tactical Support - Misc - Test Stand	Aggregate	600 Diesel	6.52E-07	7.76E-07	9.38E-07	7.20E-06	5.35E-06	0.003027534	1.57E-07	1.44E-07	4.13E-08	3.21E-08	127.75	0	0	0	
Sacramento	2027 Military Tactical Support - Misc - Welder	Aggregate	100 Diesel	9.18E-07	1.09E-06	1.32E-06	2.13E-05	1.25E-05	0.003703104	3.85E-07	3.54E-07	4.31E-08	3.03E-08	120.45	58.4	0.16	3620.8	
Sacramento	2027 Military Tactical Support - Misc - Welder	Aggregate	50 Diesel	3.28E-07	3.90E-07	4.72E-07	4.77E-06	4.34E-06	0	8.66E-08	7.97E-08	9.70E-09	0	0	0	0	0	
Sacramento	2027 Ocean Going Vessels - Bulk Cargo	Aggregate	0 Diesel	0.001071254	0.001327284	0.001585938	0.002514202	0.024266349	1.110631739	0.000339834	0.000312648	0.000706059	3.15E-05	36125.26384	846.0599586	0	600398.7571	
Sacramento	2027 Ocean Going Vessels - General Cargo	Aggregate	0 Diesel	0.0014863	0.001913474	0.002286521	0.002534346	0.034508967	1.664258525	0.000479091	0.000440127	0.000102756	4.38E-05	54132.95531	968.9575	0	888050.0279	
Sacramento	2027 Ocean Going Vessels - Tanker	Aggregate	Handysize	0.001036668	0.001348937	0.001611837	0.002452767	0.024460419	1.117497037	0.000338047	0.000311003	0.000684687	3.21E-05	36348.5698	452.0129241	0	609428.2095	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	100 Diesel	1.38E-05	1.67E-05	1.99E-05	0.002787371	0.000144611	0.045923579	1.23E-05	1.14E-05	4.35E-07	0	1492.294715	591.6630602	1.119387066	266093.8465	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	175 Diesel	0.000176064	0.000210704	0.000249023	0.002364805	0.001284045	0.553543826	0.000148035	0.000136705	5.23E-06	0	17955.00857	4873.144843	7.290075692	339536.4523	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	300 Diesel	0.000282243	0.000341514	0.00040643	0.002161581	0.001781562	0.945173325	8.61E-05	7.92E-05	8.95E-06	0	30713.57211	4991.632155	7.682249757	579165.2419	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	50 Diesel	1.82E-05	2.20E-05	2.62E-05	0.002202787	0.00017499	0.028207268	6.22E-06	5.72E-06	2.67E-07	0	916.6000932	714.0824073	1.698380376	163443.37388	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	600 Diesel	0.000656044	0.000790133	0.000951054	0.002440318	0.00440206	2.147679395	0.000221935	0.000204217	2.03E-05	0	69788.97612	6425.385549	10.81053941	1376366.565	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	75 Diesel	2.66E-05	3.22E-05	3.83E-05	0.003078259	0.000321655	0.063260159	4.75E-06	4.37E-06	5.99E-07	0	2055.649902	1114.944476	2.238974181	35220.73873	
Sacramento	2027 Oil Drilling - Drill Rig	Aggregate	750 Diesel	8.43E-05	0.000101976	0.00012136	0.000653	0.000610021	0.338809475	2.84E-05	2.61E-05	3.21E-06	0	11009.67299	651.8453199	1.119387066	218251.3353	
Sacramento	9999 Diesel	Aggregate	7.07E-05	8.55E-05	0.000101805	0.000308333	0.001271139	0.308815521	2.92E-05	2.69E-05	2.93E-06	0	10035.01422	460.0483331	0.771991008	198930.0914		
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	100 Diesel	1.33E-05	1.61E-05	1.92E-05	0.000199762	0.00014414	0.031293394	1.05E-05	9.65E-06	2.96E-07	0	1016.884283	410.492134	0.771991008	18132.59353	
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	175 Diesel	0.000211885	0.000256381	0.000305115	0.003768493	0.001629571	0.647743651	7.58E-05	6.98E-05	6.14E-06	0	21048.54296	5545.560044	8.609424024	391428.6861	
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	300 Diesel	0.000221327	0.000267806	0.000318711	0.00167398	0.001473434	0.733623817	7.58E-05	6.95E-05	6.95E-06	0	23839.23392	3910.240284	6.257342549	447710.467	
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	50 Diesel	1.66E-05	2.00E-05	2.38E-05	0.000137982	0.00014186	0.02286754	5.52E-06	5.08E-06	2.17E-07	0	743.0846906	666.839261	1.543982116	13250.33032	
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	600 Diesel	0.000732364	0.00087515	0.001041501	0.005766911	0.005344188	2.377739012	0.000243142	0.000223693	2.25E-05	0	77264.39414	7208.045591	12.35647963	1513053.965	
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	75 Diesel	2.67E-05	3.23E-05	3.84E-05	0.000347008	0.000323617	0.065443948	7.96E-06	7.32E-06	5.35E-07	0	1834.159833	995.8014258	1.960877254	32705.79013	
Sacramento	2027 Oil Drilling - Drill Rig (Mobile)	Aggregate	750 Diesel	0.000142738	0.000172713	0.000205542	0.001222633	0.001268346	0.434289534	6.03E-05	5.54E-05	4.11E-06	0	14112.33418	849.0060288	1.544940149	278759.0101	
Sacramento	9999 Diesel	Aggregate	0.000110508	0.000133715	0.000159131	0.00069406	0.001843007	0.364884121	4.18E-05	3.85E-05	3.46E-06	0	11856.97318	614.6094574	1.15798662	235047.8742		
Sacramento	2027 Oil Drilling - Misc - Compressors (Workover)	Aggregate	25 Diesel	4.20E-06	5.00E-06	6.05E-06	3.26E-05	3.83E-05	0.003815319	1.50E-06	1.38E-06	6.32E-08	3.12E-08	124.1	240.9	0.32	5781.6	
Sacramento	2027 Oil Drilling - Misc - Generator (Drilling)	Aggregate	50 Diesel	2.63E-06	3.13E-06	3.78E-06	2.99E-05	2.08E-05	0.003590888	4.89E-07	4.50E-07	4.17E-08	2.94E-08	116.8	116.8	0	3854.4	
Sacramento	2027 Oil Drilling - Workover Rig (Mobile)	Aggregate	100 Diesel	6.63E-06	8.02E-06	9.54E-06	0.000121604	4.27E-05	0.02636409	3.48E-06	3.20E-06	2.50E-07	0	856.7057186	229.1080886	0.231597324	9221.600566	
Sacramento	2027 Oil Drilling - Workover Rig (Mobile)	Aggregate	175 Diesel	3.98E-06	4.82E-06	5.74E-06	6.45E-05	1.04E-05	0.010458236	1.67E-06	1.54E-06	9.91E-08	0	339.8420138	86.13188226	0.154398216	6616.872291	
Sacramento	2027 Oil Drilling - Workover Rig (Mobile)	Aggregate	300 Diesel	8.64E-05	0.000104512	0.000124378	0.00063654	0.000576695	0.246811335	3.20E-05	2.94E-05	2.34E-06	0	8020.173578	1275.403995	1.815015716	151224.8138	
Sacramento	2027 Oil Drilling - Workover Rig (Mobile)	Aggregate	50 Diesel	4.69E-07	5.67E-07	6.75E-07	6.49E-06	4.82E-06	0.000917372	9.94E-08	9.15E-08	6.89E-09	0	29.81014786	21.69633795	0.038599554	531.5602798	
Sacramento	2027 Oil Drilling - Workover Rig (Mobile)	Aggregate	600 Diesel	0.001605162	0.001942246	0.002311443	0.014016868	0.008828886	5.843409134	0.000435084	0.000400275	5.54E-05	0	189882.1093	17843.06761	21.67892534	3710768.101	
Sacramento	2027 Oil Drilling - Workover Rig (Mobile)	Aggregate	750 Diesel	6.68E-05	8.09E-05	9.62E-05	0.000533281	0.000585564	0.193113255	2.72E-05	2.50E-05	1.83E-06	0	6275.248902	382.9305578	0.656530084	124974.3057	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	120 Gasoline	0.328495023	0.331779974	0.361488735	1.214830533	0.026370937	4.213930802	0.016472139	0.012445618	6.93E-05	9.57E-05	271122.1297	0	1456.978411	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	120 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	15 Gasoline	1.68E-06	1.70E-06	1.85E-06	4.22E-05	8.15E-07	0.000103601	8.33E-09	6.29E-09	1.86E-09	2.57E-09	6.557045781	0	0.289857184	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	15 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	175 Gasoline	0.119935511	0.121134461	0.131982273	1.2012711	0.066554246	6.351996567	0.009779265	0.007388779	8.20E-05	0.000113137	321587.948	124.1	1341.241271	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate	250 Gasoline	0.172150277	0.17387178	0.189440879	2.244415859	0.052749826	11.77966905	0.001175821	0.000888398	0.000150491	0.000207733	592133.0302	0	1990.206722	0	
Sacramento	2027 Pleasure Craft - Personal Water Craft	Aggregate

Sacramento	2027 Portable Equipment - Non-Rental Generator	Aggregate	75	Diesel	0.000875482	0.001059334	0.001260695	0.013010564	0.009345722	1.752545168	0.000197605	0.000181797	1.62E-05	1.43E-05	57004.63469	55051.70261	38.84592721	3488481.998
Sacramento	2027 Portable Equipment - Non-Rental Generator	Aggregate	750	Diesel	0.00069398	0.00077365	0.000920707	0.00391276	0.003886719	1.810228165	0.000206577	0.000190051	1.68E-05	1.48E-05	58880.8763	5161.09712	3.641805676	3603301.347
Sacramento	2027 Portable Equipment - Non-Rental Generator	Aggregate	9999	Diesel	0.003407053	0.004122534	0.004906156	0.024611486	0.047901939	11.56459258	0.000978769	0.000900468	0.000107091	9.46E-05	376158.8503	18924.02277	13.35328748	23019591.03
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	100	Diesel	0.000143843	0.00017405	0.000207133	0.006100644	0.002352024	0.956626962	0.000166319	0.000153013	8.86E-06	7.83E-06	31115.98576	21690.57776	65.55250217	1904188.26
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	175	Diesel	0.000548083	0.000663181	0.00078924	0.022963418	0.004456806	4.128944569	0.00017074	0.000157081	3.83E-05	3.38E-05	134301.2329	63063.34645	190.5878304	8216760.386
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	300	Diesel	0.000929998	0.000354528	0.000421918	0.002833792	0.002639921	1.353538024	0.000112205	0.000103229	1.25E-05	1.11E-05	44026.22084	11648.64361	35.20412154	2694248.98
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	600	Diesel	0.000322883	0.000390689	0.000464952	0.003281331	0.002991749	1.58407918	0.000112828	0.000103802	1.47E-05	1.30E-05	51524.98014	7631.869953	23.06476928	3153146.523
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	750	Diesel	0.000177352	0.000214596	0.000255387	0.0042343	0.003294862	0.66389515	5.85E-05	5.38E-05	6.15E-06	5.43E-06	21594.36527	20485.54566	61.9160865	1321498.768
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	750	Diesel	6.90E-05	8.34E-05	9.93E-05	0.001026286	0.000383906	0.548624572	2.18E-05	2.01E-05	5.08E-06	4.49E-06	17844.98562	1606.709464	4.855740902	1092049.996
Sacramento	2027 Portable Equipment - Non-Rental Other	Aggregate	9999	Diesel	0.002595093	0.003140063	0.003736934	0.029625928	0.050487151	15.14857415	0.000692394	0.000637002	0.000140336	0.000123956	492734.1968	10041.93415	30.34838064	30153589.87
Sacramento	2027 Portable Equipment - Non-Rental Pump	Aggregate	100	Diesel	0.000112814	0.000136505	0.000162452	0.003680546	0.001820171	0.579768325	0.000115933	0.000106659	5.37E-06	4.74E-06	18857.99131	13686.22636	41.27379766	1154042.361
Sacramento	2027 Portable Equipment - Non-Rental Pump	Aggregate	175	Diesel	0.000228098	0.000275999	0.000328462	0.007980982	0.00237579	1.427686943	8.04E-05	7.39E-05	1.32E-05	1.17E-05	46438.04571	22944.55595	69.19430785	2841844.13
Sacramento	2027 Portable Equipment - Non-Rental Pump	Aggregate	300	Diesel	5.28E-05	6.39E-05	7.60E-05	0.000665148	0.000448697	0.344961146	1.45E-05	1.34E-05	3.20E-06	2.82E-06	11220.53711	3220.288555	9.711481803	686657.1803
Sacramento	2027 Portable Equipment - Non-Rental Pump	Aggregate	50	Diesel	1.68E-05	2.05E-05	2.43E-05	0.000100534	8.87E-05	0.011032833	5.70E-06	5.24E-06	1.02E-07	9.03E-08	358.8624167	402.5360693	1.219353225	19754.23418
Sacramento	2027 Portable Equipment - Non-Rental Pump	Aggregate	600	Diesel	0.000270664	0.000327504	0.000389756	0.003467371	0.0010222	1.817507206	5.21E-05	4.79E-05	1.68E-05	1.49E-05	59117.64	8453.257456	25.49263973	3617790.449
Sacramento	2027 Portable Equipment - Non-Rental Pump	Aggregate	75	Diesel	0.000157953	0.000191123	0.000227452	0.003786373	0.003041385	0.599021158	6.59E-05	6.06E-05	5.55E-06	4.90E-06	19484.22382	18910.19526	57.05495559	1192365.575
Sacramento	2027 Portable Equipment - Rental Compressor	Aggregate	100	Diesel	2.56E-05	3.10E-05	3.69E-05	0.000980409	0.000272312	0.142933463	2.34E-05	2.15E-05	1.32E-06	1.17E-06	4640.163975	3378.535629	6.009676127	284512.3896
Sacramento	2027 Portable Equipment - Rental Compressor	Aggregate	175	Diesel	0.000145408	0.000175943	0.000209387	0.007571221	0.000643397	1.39401774	2.28E-05	2.10E-05	1.29E-05	1.14E-05	45342.89528	20946.9209	37.63199199	2774824.797
Sacramento	2027 Portable Equipment - Rental Compressor	Aggregate	300	Diesel	0.000110548	0.000133763	0.000159189	0.001859016	0.000223693	0.993870678	1.65E-05	1.52E-05	9.21E-06	8.13E-06	32327.40359	8108.48551	14.56722271	1978322.746
Sacramento	2027 Portable Equipment - Rental Compressor	Aggregate	600	Diesel	0.000313646	0.000379512	0.00045165	0.003807787	0.000502772	1.957422137	3.57E-05	3.28E-05	1.81E-05	1.60E-05	63668.62088	7432.778384	13.35328748	3896294.38
Sacramento	2027 Portable Equipment - Rental Compressor	Aggregate	75	Diesel	2.43E-05	2.95E-05	3.51E-05	0.00057344	0.000434958	0.089624946	3.67E-06	3.37E-06	8.30E-07	7.33E-07	2915.210045	2702.828503	4.855740902	178400.5427
Sacramento	2027 Portable Equipment - Rental Compressor	Aggregate	750	Diesel	0.000164616	0.000199185	0.000237047	0.002177803	0.000896556	1.139469567	4.72E-05	4.34E-05	1.06E-05	9.32E-06	37063.26526	3378.535629	6.069676127	2268140.728
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	100	Diesel	0.000719457	0.000870542	0.001036017	0.020726265	0.00512918	2.831016347	0.000681831	0.000443284	2.62E-05	2.32E-05	92083.81935	60805.20293	40.05862244	5635204.012
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	175	Diesel	0.000886049	0.001072119	0.00127591	0.029422142	0.002742262	4.818905874	0.000106862	9.83E-05	4.46E-05	3.94E-05	156743.446	70018.11246	46.12953857	9592144.441
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	300	Diesel	0.000661656	0.000800603	0.000952784	0.005871817	0.001358096	2.607515056	6.88E-05	6.33E-05	2.41E-05	2.13E-05	84814.04414	25796.1467	16.99509316	5190319.485
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	600	Diesel	0.0012327	0.001491566	0.001775087	0.011207565	0.001908181	5.34314451	0.000113005	0.000119646	4.95E-05	4.37E-05	173794.9107	25796.1467	16.99509316	10035633.76
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	75	Diesel	0.000482791	0.000584177	0.000695218	0.008393921	0.006058607	1.202000843	5.09E-05	4.68E-05	1.11E-05	9.84E-06	39097.20571	3685.163814	24.27870451	2392610.689
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	750	Diesel	0.000516764	0.000625285	0.000744141	0.002721811	0.003963043	1.259238978	0.000198643	0.000182751	1.17E-05	1.03E-05	40958.97741	3685.163814	2.427870451	2506544.532
Sacramento	2027 Portable Equipment - Rental Generator	Aggregate	9999	Diesel	0.000398	0.00048158	0.000573121	0.003305057	0.007205163	1.529075902	0.000159561	0.000146796	1.42E-05	1.25E-05	49735.90115	3685.163814	2.427870451	3043661.217
Sacramento	2027 Portable Equipment - Rental Other	Aggregate	100	Diesel	6.68E-05	8.09E-05	9.62E-05	0.002010041	0.000456237	0.266376178	4.54E-05	4.17E-05	2.47E-06	2.18E-06	8664.356844	6374.374144	4.855740902	530227.99
Sacramento	2027 Portable Equipment - Rental Other	Aggregate	175	Diesel	0.000281802	0.00034098	0.000405794	0.0062792	0.001855562	0.964926096	6.51E-05	5.99E-05	8.94E-06	7.90E-06	31385.92981	12748.74829	9.711481803	1920707.881
Sacramento	2027 Portable Equipment - Rental Other	Aggregate	75	Diesel	0.000155012	0.000187564	0.000223217	0.002430104	0.001737532	0.334738206	2.04E-05	1.88E-05	3.10E-06	2.74E-06	10887.95285	11155.15475	8.497546578	666304.1998
Sacramento	2027 Portable Equipment - Rental Other	Aggregate	100	Diesel	0.000262139	0.000317188	0.00037748	0.008182396	0.002080743	1.116883595	0.000197076	0.00018131	1.03E-05	9.14E-06	36328.6165	27350.42595	26.70657496	2223182.823
Sacramento	2027 Portable Equipment - Rental Pump	Aggregate	175	Diesel	0.000233044	0.000279563	0.000332704	0.006116672	0.001763095	0.977732894	5.16E-05	4.74E-05	9.06E-06	8.00E-06	31802.49359	16161.61533	15.78115793	1946200.111
Sacramento	2027 Portable Equipment - Rental Pump	Aggregate	300	Diesel	0.000342293	0.000414175	0.000492902	0.002575469	0.0017212	1.158567505	8.37E-05	7.70E-05	1.07E-05	9.48E-06	37684.45949	11188.81062	10.92541703	2306155.618
Sacramento	2027 Portable Equipment - Rental Pump	Aggregate	600	Diesel	9.43E-05	0.000114088	0.000135775	0.000860483	0.000111101	0.410709115	8.48E-06	7.80E-06	3.80E-06	3.36E-06	13359.04119	2486.402359	2.427870451	817526.0655
Sacramento	2027 Portable Equipment - Rental Pump	Aggregate	75	Diesel	0.000169678	0.00020531	0.000244336	0.003964889	0.003184633	0.618515568	8.24E-05	7.58E-05	5.73E-06	5.06E-06	20118.31726	17404.81651	16.99509316	1233169.851
Sacramento	2027 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	120	Gasoline	0.003948956	0.003988446	0.004345585	0.008488684	0.002088942	1.623585164	0.000205331	0.000155139	2.02E-05	2.34E-05	66256.34667	0	2059.314021	0
Sacramento	2027 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	15	Gasoline	0.001803419	0.001821453	0.001984552	0.023957105	0.000495446	0.350009903	5.54E-05	4.18E-05	4.84E-06	5.27E-06	14693.41444	0	687.9258873	0
Sacramento	2027 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	25	Gasoline	0.001040971	0.001051379	0.001145523	0.010014663	0.000190271	0.136080527	2.45E-05	1.85E-05	1.94E-06	2.09E-06	5797.932674	0	321.3372597	0
Sacramento	2027 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	50	Gasoline	0.008625722	0.00871198	0.009492082	0.169935189	0.003730524	2.962548652	0.000372643	0.000281552	3.61E-05	4.34E-05	121578.9187	0	4876.969525	0
Sacramento	2027 Recreational - Golf Carts	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Golf Carts	Aggregate	15	Gasoline	0.001872961	0.001891691	0.00206108	0.052749067	0.00147926	0.640767814	0.000142646	0.000107777	5.38E-06	9.58E-06	27234.59376	0	726.4129158	0
Sacramento	2027 Recreational - Golf Carts	Aggregate	25	Gasoline	0.000554951	0.000560501	0.000610689	0.015629354	0.000438299	0.189857131	4.23E-05	3.19E-05	1.59E-06	2.83E-06	8069.509248	0	121.0688193	0
Sacramento	2027 Recreational - Golf Carts	Aggregate	5	Gasoline	4.32E-05	4.36E-05	4.75E-05	0.001227456	3.42E-05	0.005780612	3.29E-06	2.49E-06	1.71E-07	1.17E-07	330.4626246	0	17.29554561	0
Sacramento	2027 Recreational - Golf Carts	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Minibikes	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Minibikes	Aggregate	15	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Minibikes	Aggregate	25	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Minibikes	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Minibikes	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Off-Road Motorcycles Active	Aggregate	120	Gasoline	0.006873309	0.006942041	0.007563657	0.036572132	0.000257023	0.277920619	0.000100302	7.58E-05	4.76E-06	5.18E-06	13403.81299	0	453.3584294	0
Sacramento	2027 Recreational - Off-Road Motorcycles Active	Aggregate	15	Gasoline	0.000627044	0.000633316	0.000690024	0.007478004	9.19E-05	0.053170108	1.61E-05	1.22E-05	1.49E-06	1.11E-06	2503.018691	0	122.5292979	0
Sacramento	2027 Recreational - Off-Road Motorcycles Active	Aggregate	25	Gasoline	0.00189354	0.001912476	0.002083725	0.004462458	2.15E-05	0.0208985	2.30E-05	1.73E-05	7.06E-07	5.62E-07	1287.437774	0	54.24267628	0
Sacramento	2027 Recreational - Off-Road Motorcycles Active	Aggregate	5	Gasoline	0.001996613	0.002016579	0.002197151	0.013723325	6.19E-05	0.074466478	5.73E-05	4.33E-05	2.02E-06	1.71E-06	3841.601816	0	184.8732088	0
Sacramento	2027 Recreational - Off-Road Motorcycles Active	Aggregate	50	Gasoline	0.009073492	0.009164226	0.009984825	0.029340317	0.000233498	0.212085916	0.000114537	8.65E-05	5.10E-06	4.52E-06	10810.79517	0	382.4586386	0
Sacramento	2027 Recreational - Snowmobiles Active	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	1.26E-08	0	0	0	0
Sacramento	2027 Recreational - Snowmobiles Active	Aggregate	15	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Snowmobiles Active	Aggregate	25	Gasoline	0	0	0	0	0	0	0	0	0	1.05E-08	0	0	0	0
Sacramento	2027 Recreational - Snowmobiles Active	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2027 Recreational - Snowmobiles Active	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	8.18E-08	0	0	0	0
Sacramento	2027 Transport Refrigeration Unit - Instate Genset	Aggregate	25	Diesel	0.00023519	0.00240279	0.000338559	0.000261099	0.00364926	0.583335807	0.000092324	8.50E-05	915.7	1.31E-08	18974.03	40309.15	51.53	0
Sacramento	2027 Transport Refrigeration Unit - Instate Genset	Aggregate	50	Diesel	0.000105845	0.0016186	0.00022804	0.00017597	0.001486927	0.286707915	0.000022149	2.04E-05	450.16	6.43E-09	9328.61	18055.58	23.03	0
Sacramento	2027 Transport Refrigeration Unit - Instate Trailer	Aggregate	25	Diesel	0.00471195	0.0480767	0.00678325	0.00523424	0.04773896	7.629084142	0.001114233	0.001025524	11976.65	1.71E-07	248149.47	378192.1	213.89	0
Sacramento	2027 Transport Refrigeration Unit - Instate Trailer	Aggregate	50	Diesel	0.006773726	0.0662593	0.009745185	0.007520974	0.060588172	11.43360385	0.000676108	0.00062226	17949.28	2.56E-07	371898.21	498007.47	281.69823	0
Sacramento	2027 Transport Refrigeration Unit - Instate Truck	Aggregate	23	Diesel	0.000479478	0.00483226	0.00068157	0.000525872	0.00610411	0.9755183	0.000314332	0.000289199	1531.35	2.19E-08	31730.46	57275.52	105.18	0
Sacramento	2027 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	25	Diesel	0.000212165	0.002167647	0.000305677	0.000235795	0.003199433	0.511506973	8.25E-05	7.60E-05	802.93837	1.15E-08	16637.67	35345.71	284.9729	0
Sacramento	2027 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	50	Diesel	0.00010676	0.0010886	0.00015374	0.00011849	0.00102879	0.183428293	2.23E-05	2.05E-05	287.88	4.11E-09	5966.33	11430.12	92.08	0
Sacramento	2027 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	25	Diesel	0.004572902	0.046683127	0.006580523	0.005083258	0.047279563	7.557452377	0.001145093	0.001054144	11864.22	1.69E-07	245819.52	374641.09	1377.25	0
Sacramento	2027 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	50	Diesel	0.0020821	0.02128	0.0029997	0.0023166	0.01678	3.03122109	0.00027714	0.00025502	4711.48	6.73E-08	97620.03	130970	483.4	0
Sacramento	2027 Transport Refrigeration Unit - Railcar TRU	Aggregate	25	Diesel	0.000200219	0.00204358	0.000288357	0.000222486	0.00211103	0.337305542	5.59E-05	5.14E-05	529.45	7.56E-09	10971.46	16721.1	51	0
Sacramento	2027 Transport Refrigeration Unit - Railcar TRU	Aggregate	50	Diesel	4.25E-05	0.000434215	6.13E-05	4.73E-05	0.000372786	0.073598453	3.24E-06	2.98E-06	115.48	1.65E-09	2393.92	3250.19	9.89526	0

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	Equipment Type	Horsepower HP	Gas Fuel (Gal/Yr)	Gas Population	Gas Hrs/Yr	Gas Gal/Hr	Diesel Fuel (Gal/Yr)	Diesel Population	Diesel Hrs/Yr	Diesel Gal/Hr	Natural Gas Fuel (Gal/Yr)	Natural Gas Population	Natural Gas Hrs/Yr	Natural Gas Gal/Hr	
Air Compressors25	Air Compressors	25	29193.63728	103.1171386	0	0	2641.280314	5.006156793	0	0	0	0	0	0	
Air Compressors50	Air Compressors	50	13012.25	11.83	5715.9	2.276500639	22089.8	26.62	21673.7	1.019198383	0	0	0	0	
Air Compressors75	Air Compressors	75	0	0	0	0	0	0	0	0	0	0	0	0	
Air Compressors100	Air Compressors	100	69919.4	38.39	18548.3	3.769382133	0	0	0	0	0	0	0	0	
Air Compressors175	Air Compressors	175	8555.6	2.58	1244.45	6.873902393	0	0	0	0	0	0	0	0	
Air Compressors300	Air Compressors	300	0	0	0	0	0	0	0	0	0	0	0	0	
Air Compressors600	Air Compressors	600	0	0	0	0	0	0	0	0	0	0	0	0	
Air Compressors750	Air Compressors	750	0	0	0	0	0	0	0	0	0	0	0	0	
Air Compressors9999	Air Compressors	9999	0	0	0	0	0	0	0	0	0	0	0	0	
Aerial Lifts25	Aerial Lifts	25	2334.222552	13.82769861	0	0	18.07089124	8.429661302	0	0	0	0	0	0	
Aerial Lifts50	Aerial Lifts	50	6602.85	11.35	4098.85	1.610863758	10014.00724	50.02893303	11678.4384	0.857478277	0	0	0	0	
Aerial Lifts75	Aerial Lifts	75	0	0	0	0	19393.87584	54.55206419	15926.86218	1.217683409	0	0	0	0	
Aerial Lifts100	Aerial Lifts	100	11749.35	11.35	4098.85	2.866429207	3943.045888	9.422324812	2690.719691	1.465424251	0	0	0	0	
Aerial Lifts175	Aerial Lifts	175	0	0	0	0	5563.805845	6.670171515	2086.766963	1.863918865	0	0	0	0	
Aerial Lifts300	Aerial Lifts	300	0	0	0	0	116.8552819	0.07898693	31.89620679	3.663610619	0	0	0	0	
Aerial Lifts600	Aerial Lifts	600	0	0	0	0	69.73006517	0.031594772	11.83610861	5.891299875	0	0	0	0	
Bore/Drill rigs25	Bore/Drill rigs	25	408.0339588	4.588538038	0	0	25.21118275	3.966556319	0	0	0	0	0	0	
Bore/Drill rigs50	Bore/Drill rigs	50	240.9	0.85	83.95	2.869565217	1550.467183	2.690162896	1269.066488	1.221738339	0	0	0	0	
Bore/Drill rigs75	Bore/Drill rigs	75	0	0	0	0	5624.130672	6.266882213	3030.664791	1.855741579	0	0	0	0	
Bore/Drill rigs100	Bore/Drill rigs	100	2730.2	3.96	419.75	6.504347826	4338.833605	3.31413503	1705.161037	2.544530512	0	0	0	0	
Bore/Drill rigs175	Bore/Drill rigs	175	941.7	0.98	98.55	9.555555556	29866.70292	13.13240138	8494.68728	3.515927301	0	0	0	0	
Bore/Drill rigs300	Bore/Drill rigs	300	0	0	0	0	3510.000021	10.27550412	6341.224667	5.536785409	0	0	0	0	
Bore/Drill rigs600	Bore/Drill rigs	600	0	0	0	0	50414.84964	8.827007472	5114.552263	9.857138425	0	0	0	0	
Bore/Drill rigs750	Bore/Drill rigs	750	0	0	0	0	20903.78195	2.293452069	1302.861764	16.04451257	0	0	0	0	
Bore/Drill rigs9999	Bore/Drill rigs	9999	0	0	0	0	6728.02511	0.5581132	324.9989687	20.70168141	0	0	0	0	
Cement and Mortar Mixers25	Cement and Mortar Mixers	25	182.2626025	2.645757886	0	0	7.20948087	2.791979678	0	0	0	0	0	0	
Cement and Mortar Mixers50	Cement and Mortar Mixers	50	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers75	Cement and Mortar Mixers	75	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers100	Cement and Mortar Mixers	100	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers175	Cement and Mortar Mixers	175	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers300	Cement and Mortar Mixers	300	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers600	Cement and Mortar Mixers	600	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers750	Cement and Mortar Mixers	750	0	0	0	0	0	0	0	0	0	0	0	0	
Cement and Mortar Mixers9999	Cement and Mortar Mixers	9999	0	0	0	0	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws25	Concrete/Industrial Saws	25	6071.605682	29.10401566	0	0	4.929303326	1.030908029	0	0	0	0	0	0	
Concrete/Industrial Saws50	Concrete/Industrial Saws	50	5482.3	3.24	1981.95	2.76611418	1722.8	2.14	1237.35	1.392330383	0	0	0	0	
Concrete/Industrial Saws75	Concrete/Industrial Saws	75	0	0	0	0	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws100	Concrete/Industrial Saws	100	5347.25	1.86	1135.15	4.710610932	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws175	Concrete/Industrial Saws	175	0	0	0	0	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws300	Concrete/Industrial Saws	300	0	0	0	0	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws600	Concrete/Industrial Saws	600	0	0	0	0	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws750	Concrete/Industrial Saws	750	0	0	0	0	0	0	0	0	0	0	0	0	
Concrete/Industrial Saws9999	Concrete/Industrial Saws	9999	0	0	0	0	0	0	0	0	0	0	0	0	
Cranes25	Cranes	25	0	0	0	0	103.8358661	0.065607708	10.26911472	10.11147201	0	0	0	0	
Cranes50	Cranes	50	810.3	0.98	412.45	1.96460177	352.0731605	0.853767303	167.2945548	2.10451058	0	0	0	0	
Cranes75	Cranes	75	0	0	0	0	1052.966762	2.527857424	465.4189476	2.262406306	0	0	0	0	
Cranes100	Cranes	100	2711.95	1.97	824.9	3.287610619	2435.98323	4.960751616	970.8482652	2.509128684	0	0	0	0	
Cranes175	Cranes	175	167.9	0	29.2	5.75	16884.59369	22.30331493	5900.661094	2.861474913	0	0	0	0	
Cranes300	Cranes	300	0	0	0	0	49567.39082	50.16090407	12844.31202	3.859092705	0	0	0	0	
Cranes600	Cranes	600	0	0	0	0	66866.09301	40.08334138	10663.26684	6.270694902	0	0	0	0	
Cranes750	Cranes	750	0	0	0	0	10257.12189	4.626606944	1089.161866	9.417444927	0	0	0	0	
Cranes9999	Cranes	9999	0	0	0	0	3377.191644	1.084280831	263.5628079	12.8192133	0	0	0	0	
Crawler Tractors25	Crawler Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	
Crawler Tractors50	Crawler Tractors	50	0	0	0	0	990.4712799	2.822026419	769.414752	1.287304769	0	0	0	0	
Crawler Tractors75	Crawler Tractors	75	0	0	0	0	7117.270157	11.19075788	3359.794557	2.118364691	0	0	0	0	
Crawler Tractors100	Crawler Tractors	100	0	0	0	0	24534.46094	28.16262918	9978.639653	2.458697958	0	0	0	0	
Crawler Tractors175	Crawler Tractors	175	0	0	0	0	81089.42478	57.82224322	26614.67265	3.046793994	0	0	0	0	
Crawler Tractors300	Crawler Tractors	300	0	0	0	0	97948.34233	46.83944945	20408.82817	4.799312411	0	0	0	0	
Crawler Tractors600	Crawler Tractors	600	0	0	0	0	168062.8378	46.81241253	20587.35573	8.163400876	0	0	0	0	
Crawler Tractors750	Crawler Tractors	750	0	0	0	0	10865.23496	2.138791363	844.5588912	12.86498203	0	0	0	0	
Crawler Tractors9999	Crawler Tractors	9999	0	0	0	0	17033.38092	2.532803317	1004.708866	16.95354893	0	0	0	0	
Crushing/Proc. Equipment25	Crushing/Proc. Equipment	25	73.109568	0.3680036	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment50	Crushing/Proc. Equipment	50	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment75	Crushing/Proc. Equipment	75	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment100	Crushing/Proc. Equipment	100	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment175	Crushing/Proc. Equipment	175	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment300	Crushing/Proc. Equipment	300	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment600	Crushing/Proc. Equipment	600	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment750	Crushing/Proc. Equipment	750	0	0	0	0	0	0	0	0	0	0	0	0	
Crushing/Proc. Equipment9999	Crushing/Proc. Equipment	9999	0	0	0	0	0	0	0	0	0	0	0	0	
Dumpers/Tenders25	Dumpers/Tenders	25	449.3084778	7.544534993	0	0	3.566822839	1.441688443	0	0	0	0	0	0	
Dumpers/Tenders100	Dumpers/Tenders	100	237.25	0.71	76.63	3.095238095	0	0	0	0	0	0	0	0	
Excavators25	Excavators	25	0	0	0	0	77.35075809	2.293581898	12.94445361	5.975590805	0	0	0	0	
Excavators50	Excavators	50	0	0	0	0	89938.03005	245.1610011	114266.8784	0.78708749	0	0	0	0	
Excavators75	Excavators	75	0	0	0	0	69705.00587	101.4045651	51915.72122	1.342659988	0	0	0	0	
Excavators100	Excavators	100	0	0	0	0	55280.76716	53.38481259	27949.64052	1.977870417	0	0	0	0	
Excavators175	Excavators	175	0	0	0	0	304392.3049	151.6851517	107695.3983	2.82641886	0	0	0	0	
Excavators300	Excavators	300	0	0	0	0	323307.2679	113.0227202	72295.0266	4.472054069	0	0	0	0	
Excavators600	Excavators	600	0	0	0	0	370155.622	78.7939162	52054.62114	7.110908002	0	0	0	0	
Excavators750	Excavators	750	0	0	0	0	10513.10369	1.643104159	874.1364043	12.02684574	0	0	0	0	
Excavators9999	Excavators	9999	0	0	0	0	50861.09191	3.054749781	1742.517313	29.18828498	0	0	0	0	
Forklifts25	Forklifts	25	44.42175374	0.10656017	0	0	9.630071564	0.015797386	5.165249596	1.864398617	0	0	0	0	
Forklifts50	Forklifts	50	110109.55	38.53	68550.65	1.606250998	12806.56095	36.09140417	18729.82063	0.683752461	167126.2	69.5	125180.4	1.335082803	
Forklifts75	Forklifts	75	0	0	0	0	126220.2646	246.4180576	97742.06686	1.291360707	0	0	0	0	
Forklifts100	Forklifts	100	52667.1	144.2	24419.6	2.156733034	76901.57679	126.5534195	54570.11869	1.409225023	1045925.75	243.86	439350.5	2.380618094	
Forklifts175	Forklifts	175	36569.35	5.17	8869.5	4.123045267	282472.7464	274.9690291	146396.684	1.929502354	78500.55	8.92	16081.9	4.881298823	
Forklifts300	Forklifts	300	0	0	0	0	9019.359718	7.703255165	3807.37929	2.368915475	0	0	0	0	
Forklifts600	Forklifts	600	0	0	0	0	2691.490312	1.42868322	704.7238516	3.81921274	0	0	0	0	
Forklifts750	Forklifts	750	0	0	0	0	324.4329136	0.080199443	35.2043378	9.215708457	0	0	0	0	
Forklifts9999	Forklifts	9999	0	0	0	0	3094.719156	0.316102797	154.8615691	19.9837776	0	0	0	0	
Generator Sets25	Generator Sets	25	44273.65164	436.1258727	0	0	48581.61665	181.9170656	0	0	4033.35	5.61	646.05	6.242937853	
Generator Sets50	Generator Sets	50	99528.2	389.41	44716.15	2.225777488	60874.7	129.19	43621.15	1.395531755	5818.1	4.66	525.6	11.06944444	
Generator Sets75	Generator Sets	75	0	0	0	0	0	0	0	0	0	0	0	0	
Generator Sets100	Generator Sets	100	44800.1	75.19	8635.9	5.187658405	0	0	0	0	0	0	0	0	
Generator Sets175	Generator Sets	175	7336.5	7.08	810.3	9.054054054	0	0	0	0	5818.1	4.66	525.6	11.06944444	
Generator Sets300	Generator Sets	300	0	0	0	0	0	0	0	0	0	0	0	0	
Generator Sets600	Generator Sets	600	0	0	0	0	0	0	0	0	0	0	0	0	
Generator Sets750	Generator Sets	750	0	0	0	0	0	0	0	0	0	0	0	0	
Generator Sets9999	Generator Sets	9999	0	0	0	0	0	0	0	0	0	0	0	0	
Graders25	Graders	25	0	0	0	0	0	0	0	0	0	0	0	0	
Graders50	Graders	50	0	0	0	0	679.7400977	1.213915394	323.2746062	2.102670871	0	0	0	0	
Graders75	Graders	75	0	0	0	0	1555.743822	2.331923306	579.5120615	2.684575396	0	0	0	0	
Graders100	Graders	100	0	0	0	0	3066.343962	4.037057183	1091.140566	2.810218753	0	0	0	0	
Graders175	Graders	175	0	0	0	0	40404.57614	34.39618728	11425.88932	3.536230311	0	0	0	0	
Graders300	Graders	300	0	0	0	0	119268.9519	64.35007935	25016.98696	4.768318107	0	0	0	0	
Graders600	Graders	600	0	0	0	0	28399.94487	9.517318135	4002.636297	7.095309881	0	0	0	0	
Graders750	Graders	750	0	0	0	0	1073.471424	0.196823118	73.52962773	14.59916849	0	0	0	0	
Graders9999	Graders	9999	0	0	0	0	763.1989444	0.131215412	49.13562199	15.53240791	0	0	0	0	
Off-Highway Tractors25	Off-Highway Tractors	25	0	0	0	0	0	0	0	0	0	0	0	0	
Off-Highway Tractors50	Off-Highway Tractors	50	0	0	0	0	17095.83774	26.38530901	16160.29407	1.0578915	0	0	0	0	
Off-Highway Tractors75	Off-Highway Tractors	75	0	0	0	0	13661.59991	14.24656466	8696.197007	1.570895538	0	0	0	0	
Off-Highway Tractors100	Off-Highway Tractors	100	0	0	0	0	12577.58733	9.416666647	5960.379918	2.110201655	0	0	0	0	
Off-Highway Tractors175	Off-Highway Tractors	175	0	0	0	0	66410.85295	20.83534858	20980.09095	3.165425548	0	0	0	0	
Off-Highway Tractors300	Off-Highway Tractors	300	0	0	0	0	29603.17052	8.140736792	6455.057034	4.586043216	0	0	0	0	
Off-Highway Tractors600	Off-Highway Tractors	600	0	0	0	0	78245.9446	10.52072012	9676.751261	8.085972501	0	0	0	0	
Off-Highway Tractors750	Off-Highway Tractors	750	0	0	0	0	6372.177923	0.689010585	500.951017	12.72016167	0	0	0	0	
Off-Highway Tractors9999	Off-Highway Tractors	9999	0	0	0	0	5750.410712	0.230429913	178.8426833	32.15345803	0	0	0	0	
Off-Highway Trucks25	Off-Highway Trucks	25	0	0	0	0	0	0	0	0	0	0	0	0	
Off-Highway Trucks50	Off-Highway Trucks	50	0	0	0	0	664.238936	1.705940809	1066.06798	0.62307287	0	0	0	0	
Off-Highway Trucks75	Off-Highway Trucks	75	0	0	0	0	793.5703766	0.851112862	460.5813038	1.772975662	0	0	0	0	
Off-Highway Trucks100	Off-Highway Trucks	100	0	0	0	0	340.2457219	0.295234677	187.0705561	1.818805992	0	0	0	0	
Off-Highway Trucks175	Off-Highway Trucks	175	0	0	0	0	17334.37798	6.367459528	5787.459137	2.995162051	0	0	0	0	
Off-Highway Trucks300	Off-Highway Trucks	300	0	0	0	0	39782.69218	12.63713543	9337.460999	4.260540779	0	0	0	0	
Off-Highway Trucks600	Off-Highway Trucks	600	0	0	0	0	291611.0416	43.35916992	35942.90489	8.113174005	0	0	0	0	
Off-Highway Trucks750	Off-Highway Trucks	750	0	0	0	0	36656.52717	5.631146215	3261.109277	11.24050869	0	0	0	0	
Off-Highway Trucks9999	Off-Highway Trucks	9999	0	0	0	0	132540.3363	9.832669923	6556.044365	20.21650997	0	0	0	0	
Pavers25	Pavers	25	1353.328998	4.643187378	0	0	6.709700371	0.893528651	0	0	0	0	0	0	
Pavers50	Pavers	50	2573.25	2.8	1095	2.35	1751.295915	4.363523211	1563.704252	1.119966204	0	0	0	0	
Pavers75	Pavers	75	0	0	0	0	7567.743581	11.31936171	4403.69719	1.71849723	0	0	0	0	
Pavers100	Pavers	100	2205.85	1.55	616.85	3.721893491	7943.346895	8.696173175	3799.484927	2.090637823	0	0	0	0	
Pavers175	Pavers	175	0	0	0	0	25567.02901	15.39070305	8492.093957	3.010686073	0	0	0	0	
Pavers300	Pavers	300	0	0	0	0	305.9054385	11.38580736	6342.35886	4.81375219	0	0	0	0	
Pavers600	Pavers	600	0	0	0	0	5378.901876	1.181805765	685.3021798	7.848049025	0	0	0	0	
Pavers750	Pavers	750	0	0	0	0	219.9158507	0.032803853	16.47590135	13.34772806	0	0	0	0	
Pavers9999	Pavers	9999	0	0	0	0	5049.851884	0.229626971	122.6762441	41.16405683	0	0	0	0	
Paving Equipment25	Paving Equipment	25	1309.866038	9.911426706	0	0	11.35783737	2.213416225	0	0	0	0	0	0	
Paving Equipment50	Paving Equipment	50	3003.95	7.66	1339.55	2.242506812	3801.360886	12.07373444	4630.138391	0.821003729	0	0	0	0	
Paving Equipment75	Paving Equipment	75	0	0	0	0	2819.655188	4.757297617	1944.293161	1.450222124	0	0	0	0	
Paving Equipment100	Paving Equipment	100	1244.65	1.86	343.1	3.627659574	4648.217195	5.418441729	2338.7728	1.987459917	0	0	0	0	
Paving Equipment175	Paving Equipment	175	0	0	0	0	28148.73659	17.49064723	11369.12829	2.475892247	0	0	0	0	
Paving Equipment300	Paving Equipment	300	0	0	0	0	12624.66355	5.5472139	2977.523527	4.23996769	0	0	0	0	
Paving Equipment600	Paving Equipment	600	0	0	0	0	29670.00973	8.008369691	4617.541907	6.425498745	0	0	0	0	
Paving Equipment750	Paving Equipment	750	0	0	0	0	6405.865989	1.082527149	554.5667609	11.55111781	0	0	0	0	
Paving Equipment9999	Paving Equipment	9999	0	0	0	0	4017.146954	0.426450089	221.4021383	18.14411995	0	0	0	0	
Rollers25	Rollers	25	4024.889096	21.72593054	0	0	79.97459316	17.59450516	0	0	0	0	0	0	
Rollers50	Rollers	50	3420.05	1.97	1226.4	2.788690476	43045.80675	122.7315068	44298.6068	0.9717192	0	0	0	0	
Rollers75	Rollers	75	0	0	0	0	15291.25998	24.93644236	9308.634115	1.642696425	0	0	0	0	
Rollers100	Rollers	100	10490.1	3.7	2306.8	4.547468354	23876.13289	29.61605839	11305.47139	2.111909541	0	0	0	0	
Rollers175	Rollers	175	0	0	0	0	122975.6353	80.21987578	47459.6942	2.591159454	0	0	0	0	
Rollers300	Rollers	300	0	0	0	0	10687.04667	3.325179976	2442.007141	4.37633719	0	0	0	0	
Rollers600	Rollers	600	0	0	0	0	8365.363852	2.301113085	1146.678888	7.295297055	0	0	0	0	
Rollers750	Rollers	750	0	0	0	0	206.3432871	0.032803853	15.01308983	13.74422519	0	0	0	0	
Rollers9999	Rollers	9999	0	0	0	0	9030.077168	0.426450089	201.6260569	44.78624096	0	0	0	0	
Rough Terrain Forklifts25	Rough Terrain Forklifts	25	0	0	0	0	0	0	0	0	0	0	0	0	
Rough Terrain Forklifts50	Rough Terrain Forklifts	50	1073.1	0.64	292	3.675	1231.582823	4.06818105	1089.064613	1.130862952	0	0	0	0	
Rough Terrain Forklifts75	Rough Terrain Forklifts	75	0	0	0	0	43981.46977	81.03731301	26836.83482	1.638101887	0	0	0	0	
Rough Terrain Forklifts100	Rough Terrain Forklifts	100	23666.6	11.22	4650.1	5.089481947	33972.52925	47.60313408	15246.22022	2.22825912	0	0	0	0	
Rough Terrain Forklifts175	Rough Terrain Forklifts	175	1321.3	0.32	116.8	11.3125	196440.4002	166.9472152	79170.76952	2.481223833	0	0	0	0	
Rough Terrain Forklifts300	Rough Terrain Forklifts	300	0	0	0	0	1671.564207	1.017358499	389.3614175	4.293091539	0	0	0	0	
Rough Terrain Forklifts600	Rough Terrain Forklifts	600	0	0	0	0	464.845049	0.16413857	69.03554315	6.733416263	0	0	0	0	
Rough Terrain Forklifts750	Rough Terrain Forklifts	750	0	0	0	0	154.7013284	0.032807283	12.26326434	12.61502028	0	0	0	0	
Rough Terrain Forklifts9999	Rough Terrain Forklifts	9999	0	0	0	0	0	0	0	0	0	0	0	0	
Rubber Tired Dozers25	Rubber Tired Dozers	25	0	0	0	0	0	0	0	0	0	0	0	0	
Rubber Tired Dozers50	Rubber Tired Dozers	50	0	0	0	0	431.6960934	0.592676425	228.9928938	1.885194279	0	0	0	0	
Rubber Tired Dozers75	Rubber Tired Dozers	75	0	0	0	0	928.0067609	0.986101039	457.3912238	2.026608399	0	0	0	0	
Rubber Tired Dozers100	Rubber Tired Dozers	100	0	0	0	0	1648.895108	1.643604553	736.7278451	2.238133279	0	0	0	0	
Rubber Tired Dozers175	Rubber Tired Dozers	175	0	0	0	0	4767.405276	2.723917729	1601.897758	2.976098351	0	0	0	0	
Rubber Tired Dozers300	Rubber Tired Dozers	300	0	0	0	0	5727.57945	2.199274872	1257.8474	4.553477394	0	0	0	0	
Rubber Tired Dozers600	Rubber Tired Dozers	600	0	0	0	0	31631.88445	8.030148468	4476.917293	7.065550328	0	0	0	0	
Rubber Tired Dozers750	Rubber Tired Dozers	750	0	0	0	0	1012.467171	0.16441622	87.41121533	11.58280625	0	0	0	0	
Rubber Tired Dozers9999	Rubber Tired Dozers	9999	0	0	0	0	2497.631332	0.164919265	94.975598	26.29761101	0	0	0	0	
Scrapers25	Scrapers	25	0	0	0	0	0	0	0	0	0	0	0	0	
Scrapers50	Scrapers	50	0	0	0	0	77.3288509	0.164188823	41.87293533	1.846750181	0	0	0	0	
Scrapers75	Scrapers	75	0	0	0	0	804.9435988	1.279897733	338.8350193	2.375761265	0	0	0	0	
Scrapers100	Scrapers	100	0	0	0	0	823.5946444	1.018030547	316.6879347	2.600650527	0	0	0	0	
Scrapers175	Scrapers	175	0	0	0	0	7578.263405	6.169878405	1816.662913	4.1720822	0	0	0	0	
Scrapers300	Scrapers	300	0	0	0	0	96371.26665	48.72067478	16009.64155	6.019576787	0	0	0	0	
Scrapers600	Scrapers	600	0	0	0	0

Sweepers/Scrubbers175	Sweepers/Scrubbers	175	237.25	0.06	29.2	8.125	686.8916243	0.632210968	251.0984698	2.735547508	0	0	0	0	FALSE			
Sweepers/Scrubbers300	Sweepers/Scrubbers	300	0	0	0	0	930.5065884	0.458124194	185.2360581	5.023355593	0	0	0	0	FALSE			
Sweepers/Scrubbers600	Sweepers/Scrubbers	600	0	0	0	0	145.4421646	0.047392158	19.90706953	7.306051991	0	0	0	0	FALSE			
Sweepers/Scrubbers750	Sweepers/Scrubbers	750	0	0	0	0	0	0	0	0	0	0	0	0	FALSE			
Sweepers/Scrubbers9999	Sweepers/Scrubbers	9999	0	0	0	0	295.5869684	0.015797386	5.79011595	51.05026755	0	0	0	0	FALSE			
Tractors/Loaders/Backhoes25	Tractors/Loaders/Backhoes	25	0	0.16222956	0	0	129.5371962	16.71094564	15.95627844	8.118258695	0	0	0	0				
Tractors/Loaders/Backhoes50	Tractors/Loaders/Backhoes	50	0	0	0	0	45457.49543	105.9866794	42138.71002	1.078758591	0	0	0	0				
Tractors/Loaders/Backhoes75	Tractors/Loaders/Backhoes	75	0	0	0	0	170594.6758	250.3265082	110666.6363	1.541518578	0	0	0	0				
Tractors/Loaders/Backhoes100	Tractors/Loaders/Backhoes	100	8858.55	3.46	3029.5	2.924096386	384598.5807	415.671975	199836.449	1.924566728	0	0	0	0				
Tractors/Loaders/Backhoes175	Tractors/Loaders/Backhoes	175	0	0	0	0	387418.2782	246.5675517	161396.2715	2.400416531	0	0	0	0				
Tractors/Loaders/Backhoes300	Tractors/Loaders/Backhoes	300	0	0	0	0	179577.8265	67.87072776	41863.84413	4.289568485	0	0	0	0				
Tractors/Loaders/Backhoes600	Tractors/Loaders/Backhoes	600	0	0	0	0	122584.0108	28.91820088	17168.48819	7.140058545	0	0	0	0				
Tractors/Loaders/Backhoes750	Tractors/Loaders/Backhoes	750	0	0	0	0	5600.043409	0.853398294	440.9427217	12.70016066	0	0	0	0				
Tractors/Loaders/Backhoes9999	Tractors/Loaders/Backhoes	9999	0	0	0	0	21512.60994	1.148539807	621.1022798	34.63617932	0	0	0	0				
Trenchers25	Trenchers	25	8263.808298	27.64085842	0	0	118.4896258	11.88266876	0	0	0	0	0	0				
Trenchers50	Trenchers	50	16169.5	17.98	7223.35	2.238504295	12563.55605	28.48434605	8889.683195	1.413273766	0	0	0	0				
Trenchers75	Trenchers	75	0	0	0	0	4118.300514	6.235784552	1882.110127	2.188023142	0	0	0	0				
Trenchers100	Trenchers	100	9953.55	5.97	2401.7	4.1443769	4643.399246	5.121043741	1669.307402	2.781632215	0	0	0	0				
Trenchers175	Trenchers	175	0	0	0	0	6916.589152	5.119194618	2133.778692	3.241474469	0	0	0	0				
Trenchers300	Trenchers	300	0	0	0	0	3968.692545	1.969614457	708.6369936	5.600459164	0	0	0	0				
Trenchers600	Trenchers	600	0	0	0	0	6433.888893	1.740405749	590.5053294	10.89556448	0	0	0	0				
Trenchers750	Trenchers	750	0	0	0	0	310.5298414	0.098697922	21.25287266	14.61119381	0	0	0	0				
Trenchers9999	Trenchers	9999	0	0	0	0	8082.734869	0.885704031	374.0727342	21.60738443	0	0	0	0				
Welders25	Welders	25	0	0	0	0	24175.05926	74.33738468	0	0	0	0	0	0				
Welders50	Welders	50	31152.75	61.85	12840.7	2.426094372	101418.9	133.05	85442.85	1.186979867	0	0	0	0				
Welders75	Welders	75	0	0	0	0	0	0	0	0	0	0	0	0				
Welders100	Welders	100	43515.3	63.11	13118.1	3.317195326	0	0	0	0	0	0	0	0				
Welders175	Welders	175	5442.15	4.35	897.9	6.06097561	0	0	0	0	0	0	0	0				
Welders300	Welders	300	0	0	0	0	0	0	0	0	0	0	0	0				
Welders600	Welders	600	0	0	0	0	0	0	0	0	0	0	0	0				
Welders750	Welders	750	0	0	0	0	0	0	0	0	0	0	0	0				
Welders9999	Welders	9999	0	0	0	0	0	0	0	0	0	0	0	0				

Model Output: OFFROAD2021 (v1.0.5) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2028
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2021 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bi Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total_Activity	Total_Population	Horsepower_Hours_hhpy
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	100 Gasoline	2.32E-07	2.80E-07	3.33E-07	3.67E-06	8.13E-07	0.000119944	9.02E-09	8.30E-09	1.09E-09	9.78E-10	3.887263155	23.06275616	0.01174209	103.7408679
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	100 Diesel	0.009461009	0.011447821	0.013623853	0.096256449	0.080427446	15.74434955	0.006042221	0.005558483	0.000143728	0.000128831	512112.8465	31559.29423	265.4589358	18304687.46
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	175 Gasoline	5.88E-07	7.11E-07	8.47E-07	9.83E-06	4.38E-06	0.000616779	4.64E-08	4.27E-08	5.60E-09	5.03E-09	19.98918462	63.75896716	0.04644369	533.4579245
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	175 Diesel	0.006762127	0.008182174	0.009737463	0.086611102	0.061285605	14.65632991	0.005937635	0.005462824	0.000119929	0.000113857	476723.0814	40924.95496	171.2528342	18943355.17
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	25 Gasoline	4.26E-06	5.15E-06	6.13E-06	6.08E-05	1.08E-06	0.000183954	1.09E-07	1.01E-07	1.55E-09	1.50E-09	5.961751649	235.9502092	0.083542206	159.1032215
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	25 Diesel	0.000533082	0.000651079	0.000774838	0.002203203	0.001611514	0.209776188	9.23E-05	8.50E-05	1.90E-06	1.72E-06	6823.341953	4925.523544	17.70110944	243880.8821
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	300 Diesel	0.003584658	0.004337437	0.005161908	0.025935405	0.025045311	12.17291524	0.001163217	0.001070516	0.000111237	9.96E-05	39594.5.622	26941.27498	57.02331803	157353147
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	50 Gasoline	3.98E-06	4.82E-06	5.74E-06	0.000143785	1.05E-05	0.003595216	2.70E-07	2.49E-07	3.26E-08	2.93E-08	116.5172801	437.2859288	0.410879998	3109.534868
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	50 Diesel	0.01101596	0.013293132	0.015862983	0.048088917	0.036456491	4.791956805	0.002795523	0.002571881	4.30E-05	3.87E-05	153915.2736	26628.88885	204.0485561	55014645.16
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	600 Diesel	0.004776976	0.005760141	0.006878846	0.018303213	0.034003864	16.16393924	0.001548526	0.001424678	0.000047707	0.000132265	525760.5489	22528.71864	43.83317446	20891937.46
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	75 Gasoline	1.71E-07	2.07E-07	2.46E-07	2.99E-06	5.90E-07	9.21E-05	6.93E-09	6.37E-09	8.34E-10	7.51E-10	2.984898284	70.49968588	0.013186097	79.66125416
Sacramento		2028 Agricultural - Agricultural Tractors	Aggregate	75 Diesel	0.007385294	0.008936206	0.010634823	0.043282242	0.062819146	6.294876231	0.003776913	0.003474776	5.74E-05	5.15E-05	204751.9953	30933.25508	180.3579249	73185451.73
Sacramento		2028 Agricultural - ATVs	Aggregate	100 Diesel	0.000149837	0.000181303	0.000215763	0.001338025	0.001139229	0.363862277	6.48E-05	5.96E-05	3.31E-06	2.96E-06	11770.2113	290.9762574	0.74885438	467708.1961
Sacramento		2028 Agricultural - ATVs	Aggregate	100 Gasoline	4.70E-05	5.69E-05	6.78E-05	0.002486836	0.000196505	0.17434003	1.31E-05	1.21E-05	1.59E-06	1.42E-06	5650.182166	301.4123627	6.996994594	180945.9191
Sacramento		2028 Agricultural - ATVs	Aggregate	175 Gasoline	5.21E-05	6.31E-05	7.51E-05	0.00314057	0.0002737	0.24416826	1.84E-05	1.69E-05	2.22E-06	1.99E-06	7913.243648	481.3804673	5.97481408	253419.9973
Sacramento		2028 Agricultural - ATVs	Aggregate	175 Diesel	6.18E-05	7.47E-05	8.89E-05	0.000334967	5.12E-05	0.027407762	2.12E-06	1.95E-06	4.69E-07	2.23E-07	886.0540604	792.7632696	0.425462558	42250.53
Sacramento		2028 Agricultural - ATVs	Aggregate	25 Gasoline	0.008422117	0.010190761	0.012127848	0.107387429	0.004688064	0.431908855	0.000378541	0.000348258	3.68E-06	3.52E-06	13997.72444	3397.799592	78.68013262	448274.2354
Sacramento		2028 Agricultural - ATVs	Aggregate	25 Diesel	0.000219119	0.000265134	0.000315532	0.000519659	0.001307195	0.195761975	5.68E-05	5.23E-05	1.78E-06	1.60E-06	6367.504843	8610.34379	17.73522966	273116.0211
Sacramento		2028 Agricultural - ATVs	Aggregate	25 Electric	0	0	0	0	0	0	0	0	0	0	0	0	10.18927559	59815.0047
Sacramento		2028 Agricultural - ATVs	Aggregate	50 Gasoline	0.000145233	0.000175732	0.000209135	0.008877501	0.000383284	0.331853739	2.50E-05	2.30E-05	3.02E-06	2.71E-06	10755.04043	2828.270141	36.99687396	344427.9507
Sacramento		2028 Agricultural - ATVs	Aggregate	50 Diesel	0.000325953	0.000394402	0.000469317	0.002061197	0.002469989	0.438166903	8.49E-05	7.81E-05	4.08E-06	3.59E-06	14252.15436	8201.932172	26.21370754	611305.6523
Sacramento		2028 Agricultural - ATVs	Aggregate	75 Gasoline	4.66E-05	5.64E-05	6.71E-05	0.002910261	0.000130582	0.12009147	8.03E-06	8.31E-06	1.09E-06	9.79E-07	3892.041788	1113.640487	7.233183171	124641.8347
Sacramento		2028 Agricultural - Bale Wagons (Self Propelled)	Aggregate	75 Diesel	0.000201711	0.00024407	0.000290464	0.002043	0.001915062	0.338142639	9.36E-05	8.62E-05	3.09E-06	2.77E-06	10998.68807	5931.728074	3.17620394	419568.4675
Sacramento		2028 Agricultural - Bale Wagons (Self Propelled)	Aggregate	300 Diesel	2.33E-05	2.82E-05	3.36E-05	0.000134981	0.000233564	0.054639398	1.02E-05	9.34E-06	4.99E-07	4.47E-07	1777.241832	2309.518321	0.447344857	67796.74013
Sacramento		2028 Agricultural - Combine Harvesters	Aggregate	75 Diesel	8.90E-06	1.08E-05	1.28E-05	7.19E-05	8.31E-05	0.011768583	3.64E-06	3.53E-06	1.07E-07	9.63E-08	382.7940023	398.6569389	0.219316878	13135.0886
Sacramento		2028 Agricultural - Combine Harvesters	Aggregate	175 Diesel	9.56E-05	0.000115721	0.000137717	0.001030084	0.000884898	0.177019161	4.07E-05	3.75E-05	1.62E-06	1.45E-06	5757.861662	657.2058948	2.142779372	247499.3959
Sacramento		2028 Agricultural - Combine Harvesters	Aggregate	300 Diesel	0.000143806	0.000174005	0.000207108	0.001859705	0.001294238	0.324935579	6.11E-05	5.62E-05	2.66E-06	2.39E-06	10569.10504	3294.70175	1.969525257	454308.7787
Sacramento		2028 Agricultural - Combine Harvesters	Aggregate	600 Diesel	0.000937358	0.000468803	0.000572195	0.003081677	0.003915503	0.990352135	0.000160234	0.000147415	9.05E-06	8.10E-06	32212.95673	8644.825045	13.92603594	1384661.144
Sacramento		2028 Agricultural - Combine Harvesters	Aggregate	750 Diesel	0.000532896	0.000644805	0.000767371	0.003890097	0.005664409	1.34260769	0.000228891	0.000210579	1.23E-05	1.10E-05	43670.69237	2221.455488	3.656695972	187716735
Sacramento		2028 Agricultural - Combine Harvesters	Aggregate	9999 Diesel	0.001	1.28E-05	1.84E-05	9.53E-05	0.000184655	0.026855525	8.47E-06	7.79E-06	2.20E-07	872.8729665	1646.282727	0.050809378	37520.09756
Sacramento		2028 Agricultural - Construction Equipment	Aggregate	100 Diesel	0.000217733	0.000263457	0.000331536	0.001970869	0.001863462	0.12009147	6.03E-06	8.31E-06	1.09E-06	9.79E-07	3892.041788	1113.640487	7.233183171	124641.8347
Sacramento		2028 Agricultural - Construction Equipment	Aggregate	175 Diesel	0.000503924	0.000609766	0.000767626	0.004563	0.004313551	0.278010998	1.39E-05	1.28E-05	2.52E-06	2.23E-06	9026.148557	1035.975	16.74533792	288618.6387
Sacramento		2028 Agricultural - Construction Equipment	Aggregate	300 Diesel	0.000163893	0.000198302	0.000249604	0.001480968	0.001402581	0.263568036	4.54E-06	4.18E-06	8.19E-07	7.25E-07	2934.178642	456.1.006759	5.442820961	93839.51798
Sacramento		2028 Agricultural - Construction Equipment	Aggregate	50 Diesel	3.67E-05	4.44E-05	5.28E-05	0.000187389	0.00014564	0.022247923	8.27E-06	7.61E-06	2.02E-07	1.82E-07	723.6530948	1181.01682	0.725563467	31039.04306
Sacramento		2028 Agricultural - Construction Equipment	Aggregate	600 Diesel	0.000115206	0.000139399	0.000165896	0.000938283	0.001094856	0.218377913	5.11E-05	4.70E-05	1.99E-06	1.79E-06	7103.128279	3690.260251	1.132732064	338705.0155
Sacramento		2028 Agricultural - Construction Equipment	Aggregate	75 Diesel	7.07E-05	8.55E-05	0.000101741	0.000570296	0.000659385	0.093184645	1.05E-05	9.67E-06	2.80E-05	2.52E-07	3037.500922	2992.568967	2.52748896	130284.9687
Sacramento		2028 Agricultural - Cotton Pickers	Aggregate	600 Diesel	4.55E-05	5.51E-05	6.56E-05	0.0003346	0.000466884	0.114562092	1.85E-05	1.70E-05	1.05E-06	9.37E-07	3726.334881	2801.720232	0.505290541	160175.0255
Sacramento		2028 Agricultural - Forage & Silage Harvesters	Aggregate	600 Diesel	9.39E-05	0.000113605	0.000135199	0.000827997	0.000828863	0.227325619	3.72E-05	3.42E-05	2.08E-06	1.86E-06	7394.168266	292.502533	0.609975824	317835.3843
Sacramento		2028 Agricultural - Forage & Silage Harvesters	Aggregate	750 Diesel	0.000260657	0.00031258	0.000387729	0.002116381	0.002704973	0.528247105	0.000126614	0.000116522	4.82E-06	4.32E-06	17182.17243	4716.779311	1.131824558	589568.8553
Sacramento		2028 Agricultural - Forage & Silage Harvesters	Aggregate	9999 Diesel	0.000155395	0.000188028	0.000223769	0.001255097	0.002114507	0.273960108	7.09E-05	6.52E-05	2.50E-06	2.24E-06	8911.037585	2296.428922	0.507806945	383037.4124
Sacramento		2028 Agricultural - Forklifts	Aggregate	100 Diesel	0.000279327	0.000337986	0.000402231	0.002558802	0.002076247	0.414765299	0.000155324	0.000142821	3.81E-06	3.42E-06	13584.90005	10461.97373	8.467349673	582685.6741
Sacramento		2028 Agricultural - Forklifts	Aggregate	175 Diesel	6.51E-05	7.87E-05	9.37E-05	0.000700476	0.000588913	0.126089652	2.78E-05	2.56E-05	1.10E-06	9.88E-07	3925.644212	3151.423281	1.909214483	187190.3313
Sacramento		2028 Agricultural - Forklifts	Aggregate	50 Diesel	0.000320427	0.000387717	0.000461415	0.001717364	0.001359303	0.204651427	7.68E-05	7.06E-05	1.86E-06	1.67E-06	6656.650017	9192.606112	8.722351194	285518.0821
Sacramento		2028 Agricultural - Forklifts	Aggregate	75 Diesel	0.000899035	0.001087833	0.001294611	0.007326395	0.008437413	1.199627488	0.000390448	0.000359212	1.09E-05	9.82E-06	39200.08813	15391.56433	30.5924271	1673652.337
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	175 Diesel	4.38E-05	5.28E-05	6.19E-05	0.000480604	0.000388882	0.080710047	1.86E-05	1.71E-05	7.37E-07	6.60E-07	2625.237193	2602.020832	1.071562705	119220.5768
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	300 Diesel	0.000100806	0.000121975	0.000145161	0.000580059	0.001018227	0.236380416	4.39E-05	4.04E-05	2.16E-06	1.93E-06	7688.691557	1930.39219	1.978833949	349168.5397
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel	5.86E-06	7.09E-06	8.44E-06	4.29E-05	6.02E-05	0.01482034	2.38E-06	2.19E-06	1.35E-07	1.21E-07	482.057791	398.656964	0.073105626	21891.8155
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	750 Diesel	3.64E-06	4.40E-06	5.24E-06	2.93E-05	3.39E-05	0.004805652	1.57E-06	1.44E-06	4.38E-08	3.93E-08	156.3123437	1508.358126	0.10661564	6385.30829
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	9999 Diesel	0.000145999	0.000186659	0.000224839	0.001256103	0.002114507	0.273960108	7.09E-05	6.52E-05	2.50E-06	2.24E-06	8911.037585	2296.428922	0.507806945	383037.4124
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	600 Diesel	5.86E-06	7.09E-06	8.44E-06	4.29E-05	6.02E-05	0.01482034	2.38E-06	2.19E-06	1.35E-07	1.21E-07	482.057791	398.656964	0.073105626	21891.8155
Sacramento		2028 Agricultural - Hay Squeeze/Stack Retriever	Aggregate	750 Diesel	3.64E-06	4.40E-06	5.24E-06	2.93E-05	3.39E-05	0.004805652	1.57E-06	1.44E-06	4.38E-08	3.93E-08	156.3123437	1508.358126	0.10661564	6385.30829
Sacramento		2028 Agricultural - Hot Harvester	Aggregate	100 Diesel	0.001145999	0.001386659	0.001650239	0.009774018	0.00890875	1.547659127	0.000690892	0.00063562	1.41E-05	1.27E-05	50340.35343	17632.23411	26.01253882	1946413.477
Sacramento		2028 Agricultural - Hot Harvester	Aggregate	175 Diesel	0.000669984	0.00083488	0.000993577	0.007174821	0.006487023	1.206743344	0.000309769	0.000284987	1.10E-05	9.87E-06	39251.46396	13327.08024	16.14958659	1687208.578
Sacramento		2028 Agricultural - Hot Harvester	Aggregate	25 Diesel	7.78E-05	9.43E-05	0.000112267	0.000388222	0.000737979	0.047279258	1.64E-05	1.50E-05	4.30E-07	3.87E-07	1537.841565	312.3873301	3.790757951	59460.79739
Sacramento		2028 Agricultural - Hot Harvester	Aggregate	300 Diesel	0.000375163	0.000453947	0.000540235	0.00193957	0.00348073	0.653435221	0.000173882	0.000159971	5.97E-06	5.35E-06	21254.13756	3567.047832	4.237102476	913600.6604
Sacramento		2028 Agricultural - Hot Harvester	Aggregate	50 Diesel	0.000452666	0.000547729	0.000651843	0.00227809	0.001738127	0.253741205	0.000108843	0.000100136	2.31E-06	2.08E-06	8253.381959	5562.029401	5.914174267	319117.6217
Sacramento		2028 Agricultural - Other Harvesters	Aggregate	175 Diesel	0.000120309	0.000145574	0.000173246	0.000590743	0.000113684	0.162107419	5.25E-05	4.84E-05	1.48E-06	1.33E-06	5272.830835	3780.821659	3.252649967	203874.3922
Sacramento		2028 Agricultural - Other Harvesters	Aggregate	100 Diesel	0.000563455	0.00068178	0.000811375	0.004889246	0.004424518	0.785791762	0.00032344	0.000297565	7.17E-06	6.43E-06	25559.26842	11013.10516	12.60546517	988250.9975
Sacramento		2028 Agricultural - Other Harvesters	Aggregate	175 Diesel	0.000657584	0.000795677	0.000946921	0.006899916	0.006163159	1.166551446	0.000291865	0.000268516	1.07E-05	9.55E-06	37944.1513	12954.83058	15.25503173	1633104.277
Sacramento		2028 Agricultural - Other Harvesters	Aggregate	300 Diesel	0.000174081	0.000210637	0.000250576	0.001826055	0.001666701	0.31400592	7.86E-05	7.21E-05	2.97E-06	2.66E-06	13046.33159	2596.648284	2.398111098	530201.5786
Sacramento		2028 Agricultural - Other Harvesters	Aggregate	600 Diesel	0.000185724	0.000224726	0.000267442	0.001361149	0.001907077	0.469779957	7.53E-05	6.93E-05	4.29E-06	3.84E-06	15280.42491	2305.672076	1.890967613	656822.9938
Sacramento		2028 Agricultural - Other Harvesters	Aggregate	75 Diesel	9.11E-05	0.000110241	0.000131196	0.000735406	0.000850286	0.120420887	3.93E-05	3.61E-05	1.10E-06	9.85E-07	3916.902567	3417.662121	2.521135459	151447.327
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	750 Diesel	1.59E-05	1.93E-05	2.29E-05	0.000116256	0.000169282	0.04012408	6.84E-06	6.29E-06	1.67E-07	1.28E-07	1305.100743	1508.358172	0.10661564	56099.49485
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	100 Diesel	8.69E-05	0.000105165	0.000125155	0.00075215	0.000657606	0.120684352	5.02E-05	4.61E-05	1.10E-06	9.88E-07	3925.472239	1632.185486	2.158691396	160354.2609
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	175 Diesel	0.000363752	0.00044014	0.000523803	0.003814739	0.003404446	0.645254828	0.000161119	0.000148229	5.89E-06	5.28E-06	20988.05579	11307.73559	8.117766175	953136.0164
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	25 Diesel	3.07E-06	3.71E-06	4.42E-06	1.57E-05	1.33E-05	0.001863105	6.46E-07	5.94E-07	1.52E-08	1.32E-08	60.60800318	997.4910605	0.178841942	2475.523055
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	300 Diesel	0.000425068	0.000514332	0.000612098	0.002236652	0.003998783	0.780697115	0.000195151	0.000179539	7.13E-06	6.39E-06	25393.55598	9045.328345	5.572236943	1153204.131
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	50 Diesel	0.000143773	0.000173914	0.000206972	0.000742445	0.000577985	0.08810509	3.28E-05	3.02E-05	8.02E-07	7.21E-07	2865.774059	6437.486014	3.766496233	117065.936
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	600 Diesel	0.000553892	0.000652093	0.000776045	0.004431408	0.005078326	1.055172364	0.000236173	0.000217379	8.64E-06	8.63E-06	34321.35844	3834.466378	4.985958836	1586844.743
Sacramento		2028 Agricultural - Sprayers/Spray Rigs	Aggregate	75 Diesel	0.000145944	0.000176924	0.000210596	0.001068198	0.013044595	1.636531621	0.000740921	0.000681644	1.49E-05	1.34E-05	53231.08866	5978.758836	47.74325422	2174472.624
Sacramento		2028 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	100 Diesel	0.000201497	0.000243811	0.000290156	0.001839485	0.001471665	0.299316082	0.000111258	0.000102357	2.73E-06	2.45E-06	9735.785541	3283.131248	4.314254524	347990.7085
Sacramento		2028 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	175 Diesel	5.01E-05	6.06E-05	7.21E-05	0.000519478	0.000470881	0.087278888	2.25E-05	2.07E-05	7.97E-07	7.14E-07	2838.912911	2645.884629	0.939762538	113809.5468
Sacramento		2028 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	300 Diesel	9.50E-05	0.000114985	0.000136841	0.000547566	0.000901402	0.217908755	4.08E-05	3.76E-05	1.99E-06	1.78E-06	7087.86808	2709.818182	1.416542215	281647.7902
Sacramento		2028 Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	50 Diesel	0.000116909	0.000141459	0.000168348	0.000597682	0.000465233	0.070960274	2.64E-05	2.43E-05	6.46E-07	5.81E-07	2308.108571	657.2058948	2.242779357	82499.7973
Sacramento		2028 Airport Ground Support - A/C Tug Narrow Body	Aggregate	75 Diesel	7.57E-05	9.16E-05	0.000109031	0.000613259	0.000776731	0.100246461	3.27E-05	3.01E-05	9.15E-07	8.20E-07	3260.693628	1998.400661	2.260977416	116548.4879
Sacramento		2028 Airport Ground Support - A/C Tug Narrow Body	Aggregate	100 Diesel	2.25E-05	2.73E-05	3.25E-05	0.000491968	0.000197623	0.085185221	1.59E-05	1.46E-05	8.07E-07	0	2768.10861	1053.867901	2.083274491	48173.40864
Sacramento		2028 Airport Ground Support - A/C Tug Narrow Body	Aggregate	175 Diesel	6.95E-05	8.41E-05	0.000100069	0.001545012	0.000379168	0.265175912	1.81E-05	1.81E-05	2.51E-06	0	8616.935718	2608.730212	3.556478557	179134.0028
Sacramento		2028 Airport Ground Support - A/C Tug Narrow Body	Aggregate	300 Diesel	2.49E-05	3.01E-05	3.59E-05	0.000239551	0.000100248	0.109940722	4.89E-06	4.50E-06	1.04E-06	0	3572.542988	631.2544708	1.058546309	76499.70273
Sacramento		2028 Airport Ground Support - A/C Tug Narrow Body	Aggregate	50 Diesel	9.75E-06	1.18E-05	1.40E-05	0.000140076	0.000103607	0

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Sacramento	2028 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Gasoline	4.76E-05	4.37E-05	5.23E-05	0.004934306	0.000472746	0.148312429	1.06E-05	8.03E-06	1.31E-06	2.07E-06	5913	886.95	4.69	110957.445
Sacramento	2028 Airport Ground Support - Misc - Passenger Stand	Aggregate	175 Nat Gas	0	0	9.53E-09	9.95E-06	1.00E-06	0.000405297	0	0	0	0	3.65	0	0.17	0
Sacramento	2028 Airport Ground Support - Misc - Service Truck	Aggregate	300 Gasoline	0.000854536	0.000786003	0.000940365	0.055587662	0.005203186	1.332524018	9.83E-05	7.43E-05	1.36E-05	1.89E-05	53848.45	16746.2	19.9	3014316
Sacramento	2028 Airport Ground Support - Misc - Service Truck	Aggregate	300 Nat Gas	0	0	1.11E-05	0.006549786	0.000555207	0.186047914	0	0	0	0	10183.5	2533.1	1.96	455958
Sacramento	2028 Airport Ground Support - Misc - Sweeper	Aggregate	100 Gasoline	6.38E-06	5.87E-06	7.02E-06	0.000416923	3.56E-05	0.010442562	7.28E-07	5.52E-07	8.62E-08	1.47E-07	419.75	153.3	0.42	8170.89
Sacramento	2028 Airport Ground Support - Misc - Sweeper	Aggregate	50 Nat Gas	0	0	9.20E-08	2.65E-05	7.32E-06	0.00221352	0	0	0	0	113.15	51.1	0.15	2299.5
Sacramento	2028 Airport Ground Support - Misc - Water Truck	Aggregate	175 Gasoline	1.40E-05	1.29E-05	1.54E-05	0.001282214	0.000122285	0.037043287	2.66E-06	2.01E-06	3.68E-07	5.20E-07	1485.55	547.5	1.74	82125
Sacramento	2028 Airport Ground Support - Other	Aggregate	100 Diesel	6.28E-06	7.59E-06	9.04E-06	0.000108313	5.79E-05	0.018331407	4.42E-06	4.06E-06	1.74E-07	0	595.6822539	349.4488899	0.714075905	10419.51654
Sacramento	2028 Airport Ground Support - Other	Aggregate	175 Diesel	2.08E-05	2.52E-05	2.99E-05	0.000430564	0.000228833	0.072519507	5.52E-06	5.08E-06	6.87E-07	0	2356.534032	1071.97805	1.522406192	47042.35194
Sacramento	2028 Airport Ground Support - Other	Aggregate	300 Diesel	3.86E-05	4.67E-05	5.56E-05	0.000301486	0.000243892	0.131126146	1.16E-05	1.07E-05	1.24E-06	0	4260.967001	1103.623983	1.833141374	86301.24907
Sacramento	2028 Airport Ground Support - Other	Aggregate	50 Diesel	2.26E-05	2.77E-05	3.30E-05	0.000180448	0.000208132	0.043644438	7.32E-06	6.94E-06	1.26E-07	0	1116.678411	1604.608485	3.60100309	18239.9272
Sacramento	2028 Airport Ground Support - Other	Aggregate	600 Diesel	2.77E-05	3.35E-05	3.99E-05	0.000222011	0.000118646	0.113333524	6.15E-06	5.66E-06	1.06E-06	0	3650.297463	622.9720865	0.931346839	73162.36863
Sacramento	2028 Airport Ground Support - Other	Aggregate	75 Diesel	2.11E-05	2.56E-05	3.04E-05	0.000307253	0.000270049	0.05428488	7.16E-06	6.59E-06	5.14E-07	0	1763.996642	1296.901073	2.796009566	27543.2312
Sacramento	2028 Airport Ground Support - Other	Aggregate	750 Diesel	2.30E-06	2.79E-06	3.32E-06	2.13E-05	1.16E-05	0.005925232	6.11E-07	5.62E-07	1.03E-07	0	355.0173124	35.37062703	0.062191648	7576.38831
Sacramento	2028 Airport Ground Support - Other	Aggregate	9999 Diesel	1.68E-03	2.03E-03	2.41E-05	0.001153538	0.000324718	0.077802478	6.91E-06	6.36E-06	7.37E-07	0	2528.205087	53.92911286	0.093123	50118.12222
Sacramento	2028 Airport Ground Support - Passenger Stand	Aggregate	175 Diesel	7.97E-07	9.65E-07	1.15E-06	1.46E-05	5.13E-06	0.002296256	2.58E-07	2.37E-07	2.18E-08	0	74.61723419	12.29655199	0.062082	1479.182081
Sacramento	2028 Airport Ground Support - Passenger Stand	Aggregate	300 Diesel	5.45E-07	6.60E-07	7.85E-07	6.50E-06	1.15E-06	0.001036996	6.95E-08	6.43E-08	2.88E-08	0	98.68772868	19.51985093	0.031142573	2147.178652
Sacramento	2028 Airport Ground Support - Passenger Stand	Aggregate	50 Diesel	3.25E-06	3.93E-06	4.68E-06	3.84E-05	3.08E-05	0.006012746	8.38E-07	7.71E-07	5.70E-08	0	195.385233	188.4211278	0.466123232	2924.509524
Sacramento	2028 Airport Ground Support - Passenger Stand	Aggregate	75 Diesel	5.39E-06	6.52E-06	7.76E-06	7.62E-05	6.76E-05	0.013683505	1.26E-06	1.16E-06	1.30E-07	0	444.6478975	327.6309963	0.621793736	7076.899937
Sacramento	2028 Cargo Handling Equipment - Port Forklift	Aggregate	175 Diesel	0.000113739	0.000166625	0.000191975	0.016531751	0.001125152	0.357107407	0.000088681	0.000075	0.000002436	5.76E-09	8362.873656	3640.618624	0	0
Sacramento	2028 Cargo Handling Equipment - Port Tractors/Loaders/Backhoes	Aggregate	300 Diesel	0.0001726	0.00020891	0.000248622	0.001220746	0.00013138	0.530653485	0.00001122	0.00001124	0.00000504	1.19E-08	17260.44421	2131.680198	0	0
Sacramento	2028 Commercial Harbor Craft - AE - Commercial Fishing	Aggregate	75 Diesel	0.000129408	0.000156583	0.000186347	0.000436141	0.000184201	0.084789822	5.56E-05	4.93E-05	0	0	2891.207677	1880.540873	1.583454022	49420.61304
Sacramento	2028 Commercial Harbor Craft - AE - Excursion	Aggregate	75 Diesel	9.77E-06	1.18E-05	1.41E-05	3.12E-05	0.000234919	0.014862017	7.39E-06	7.17E-06	0	0	1187.482813	963.4008189	5.102426052	20965.52788
Sacramento	2028 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	100 Diesel	6.72E-06	8.13E-06	9.67E-06	2.37E-05	0.000133878	0.0125824	8.78E-06	8.39E-06	0	0	428.5863136	235.4687796	1.541667	7579.740223
Sacramento	2028 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	175 Diesel	6.33E-06	7.66E-06	9.12E-06	2.64E-05	0.000113466	0.014605046	5.13E-06	4.90E-06	0	0	492.627338	235.4687835	1.541666889	8712.344936
Sacramento	2028 Commercial Harbor Craft - AE - Tugboat-Push/Tow	Aggregate	50 Diesel	0.000138047	0.000167037	0.000198788	0.000400404	0.002298387	0.222439716	5.50E-05	5.26E-05	0	0	7295.312279	8882.677046	7.708333023	113826.9892
Sacramento	2028 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	300 Diesel	0.000200222	0.000249529	0.00029696	0.000822849	0.000242132	0.169720585	7.76E-05	7.42E-05	0	0	5781.084883	1578.696639	1.583454026	106562.0236
Sacramento	2028 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	50 Diesel	7.58E-06	9.17E-06	1.09E-05	7.22E-05	0.000142812	0.020404793	6.20E-06	5.93E-06	0	0	695.0355465	1578.696655	1.583454013	11508.69921
Sacramento	2028 Commercial Harbor Craft - ME - Commercial Fishing	Aggregate	600 Diesel	0.000109409	0.000132385	0.000159549	0.000547577	0.003045218	0.288910433	5.36E-05	5.12E-05	0	0	9840.973267	1578.696655	1.583454013	181155.4374
Sacramento	2028 Commercial Harbor Craft - ME - Excursion	Aggregate	600 Diesel	3.63E-05	4.39E-05	5.22E-05	0.000142694	0.000937292	0.12920725	1.41E-05	1.35E-05	0	0	4400.966219	1100.157689	5.10242596	82707.39844
Sacramento	2028 Commercial Harbor Craft - ME - Excursion	Aggregate	800 Diesel	0.000423179	0.000512046	0.000609377	0.001673056	0.01053998	1.454991659	0.000172146	0.000164572	0	0	49560.46029	5461.563943	5.102426	914812
Sacramento	2028 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	600 Diesel	0.000877394	0.001061646	0.001263447	0.003221782	0.017859165	1.513000178	0.000371112	0.000354384	0	0	50077.70084	7876.983931	9.249999945	924362.3101
Sacramento	2028 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	800 Diesel	3.30E-05	4.00E-05	4.76E-05	0.000236238	0.000698346	0.183549593	2.85E-05	2.72E-05	0	0	6184.698559	471.4464467	3.083333011	114160.7531
Sacramento	2028 Commercial Harbor Craft - ME - Tugboat-Push/Tow	Aggregate	9999 Diesel	0.000249262	0.000301607	0.000358937	0.002137852	0.005437717	1.611361963	0.000308495	0.000294921	0	0	54886.80289	2489.793787	3.083333042	1081068.468
Sacramento	2028 Commercial Harbor Craft - ME - Work Boat	Aggregate	300 Diesel	0.000160884	0.000194967	0.000231673	0.000240047	0.00292112	0.227478275	6.07E-05	5.80E-05	0	0	8156.263634	1960.344748	3.068023	150142.7858
Sacramento	2028 Commercial Harbor Craft - ME - Work Boat	Aggregate	600 Diesel	0.000461661	0.000558657	0.000664801	0.001492859	0.008144647	0.72079783	7.47E-05	7.14E-05	0	0	25129.17755	3920.688978	6.136045	463484.2436
Sacramento	2028 Commercial Harbor Craft - ME - Work Boat	Aggregate	9999 Diesel	0.004891541	0.005918765	0.007043819	0.022340763	0.045659449	8.31526363	0.001796751	0.001717694	0	0	298144.8055	11762.07104	18.40814087	5816402.549
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	50 Diesel	4.74E-05	5.73E-05	6.82E-05	0.000947353	0.000440802	0.133523398	3.46E-05	3.18E-05	1.26E-06	0	4338.833605	1705.161037	3.31413503	74868.66789
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	175 Diesel	0.000280563	0.000339482	0.000404011	0.005374946	0.00186149	0.919111942	8.63E-05	7.94E-05	8.71E-06	0	29866.70292	8494.68728	13.13240138	594451.313
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	300 Diesel	0.000313671	0.000378332	0.000450246	0.002357565	0.002202099	1.080468124	9.55E-05	8.79E-05	1.02E-05	0	35110.00021	6341.224667	10.27550412	716739.325
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	50 Diesel	3.53E-05	4.27E-05	5.08E-05	0.000365297	0.000287177	0.047713767	1.19E-05	1.09E-05	4.52E-07	0	1550.467383	1269.066488	2.690162896	25203.30443
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	600 Diesel	0.000429148	0.00051927	0.000617974	0.003483819	0.002765709	1.5514565	0.000126971	0.000116812	1.47E-05	0	50414.84964	5114.552263	8.829207472	1038412.789
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	75 Diesel	7.35E-05	8.89E-05	0.000105849	0.001023206	0.000905012	0.173075872	2.16E-05	1.99E-05	1.64E-06	0	5624.130672	3030.664795	6.266882113	96432.70068
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	750 Diesel	0.000168283	0.00020362	0.000242327	0.002442029	0.001188298	0.842288805	5.49E-05	5.06E-05	6.09E-06	0	20903.78195	1302.861764	2.297452869	425669.7529
Sacramento	2028 Construction and Mining - Bore/Drill Rigs	Aggregate	9999 Diesel	5.46E-05	6.60E-05	7.86E-05	0.000396072	0.000894063	0.207046899	1.73E-05	1.59E-05	1.96E-06	0	6728.02511	324.9389687	0.5581132	138592.8527
Sacramento	2028 Construction and Mining - Bucket	Aggregate	100 Diesel	3.87E-06	4.69E-06	5.58E-06	6.21E-05	3.45E-05	0.01058279	2.63E-06	2.42E-06	1.00E-07	0	343.8896074	185.405717	0.360842383	5786.708769
Sacramento	2028 Construction and Mining - Bucket	Aggregate	175 Diesel	5.27E-06	6.38E-06	7.59E-06	9.73E-05	3.63E-05	0.015448604	1.50E-06	1.38E-06	1.50E-07	0	514.9448365	209.2061321	0.360842383	8208.85256
Sacramento	2028 Construction and Mining - Bucket	Aggregate	300 Diesel	1.30E-05	1.57E-05	1.87E-05	9.18E-05	6.02E-05	0.041350279	3.13E-06	2.88E-06	3.92E-07	0	1343.684524	285.010548	0.426450089	26636.66233
Sacramento	2028 Construction and Mining - Bucket	Aggregate	50 Diesel	2.38E-06	2.88E-06	3.43E-06	2.89E-05	2.19E-05	0.004577507	6.66E-07	6.13E-07	4.34E-08	0	148.7468755	127.4699525	0.295515583	1972.968708
Sacramento	2028 Construction and Mining - Bucket	Aggregate	75 Diesel	4.34E-06	5.01E-06	5.96E-06	5.82E-05	5.24E-05	0.009585831	9.94E-07	9.14E-07	9.08E-08	0	311.4925257	214.6629447	0.425450088	5554.398499
Sacramento	2028 Construction and Mining - Bucket	Aggregate	750 Diesel	7.42E-05	8.97E-06	1.07E-05	6.50E-05	3.72E-05	0.033094575	2.27E-06	2.09E-06	3.13E-07	0	1075.413992	75.20310092	0.131215412	21318.57505
Sacramento	2028 Construction and Mining - Compactor	Aggregate	100 Diesel	1.08E-06	1.31E-06	1.56E-06	2.76E-05	1.33E-05	0.0046435	1.15E-06	1.05E-06	4.40E-08	0	150.8913381	88.15104293	0.196823118	2690.620076
Sacramento	2028 Construction and Mining - Compactor	Aggregate	175 Diesel	2.12E-05	2.56E-05	3.05E-05	0.000485015	0.000114479	0.081248858	4.57E-06	4.21E-06	7.92E-07	0	2640.196145	1054.340619	1.574584944	51770.65678
Sacramento	2028 Construction and Mining - Compactor	Aggregate	300 Diesel	5.33E-06	6.45E-06	7.68E-06	4.18E-05	2.64E-05	0.020569398	1.28E-06	1.18E-06	1.95E-07	0	668.4061816	156.0447442	0.262430824	13250.21569
Sacramento	2028 Construction and Mining - Compactor	Aggregate	50 Diesel	3.13E-06	3.78E-06	4.50E-06	3.57E-05	2.84E-05	0.004925286	6.50E-07	5.98E-07	4.67E-08	0	163.0482255	236.1685435	0.557665505	2853.899741
Sacramento	2028 Construction and Mining - Compactor	Aggregate	600 Diesel	1.17E-05	1.41E-05	1.68E-05	0.000320384	4.86E-05	0.053446097	2.24E-06	2.06E-06	4.97E-07	0	1704.245061	216.6608526	0.361086017	14380.51133
Sacramento	2028 Construction and Mining - Compactor	Aggregate	75 Diesel	2.00E-06	2.42E-06	2.88E-06	3.14E-05	2.74E-05	0.005307499	3.72E-07	3.43E-07	5.03E-08	0	172.4681215	126.7917774	0.292534677	3075.368943
Sacramento	2028 Construction and Mining - Compactor	Aggregate	9999 Diesel	3.14E-06	3.80E-06	4.53E-06	2.95E-05	5.05E-05	0.015026487	9.48E-07	8.72E-07	1.42E-07	0	484.2883186	177.0816648	0.032803853	9679.631512
Sacramento	2028 Construction and Mining - Concrete Mixer	Aggregate	175 Diesel	1.32E-05	1.59E-05	1.90E-05	1.24E-05	7.73E-06	0.004550879	3.84E-07	3.53E-07	1.54E-08	0	147.8815956	61.88301985	0.039411559	2931.545356
Sacramento	2028 Construction and Mining - Concrete Mixer	Aggregate	300 Diesel	1.25E-06	1.52E-06	1.81E-06	1.13E-05	5.04E-06	0.005444534	2.39E-07	2.20E-07	5.16E-08	0	176.9210753	42.17427053	0.065607706	3507.212337
Sacramento	2028 Construction and Mining - Concrete Mixer	Aggregate	50 Diesel	8.88E-07	1.07E-06	1.28E-06	1.41E-05	1.15E-05	0.00225346	1.12E-07	1.03E-07	2.13E-08	0	73.19403853	132.8092494	0.32803853	1305.161834
Sacramento	2028 Construction and Mining - Concrete Mixer	Aggregate	600 Diesel	6.88E-07	8.32E-07	9.90E-07	8.05E-06	1.46E-06	0.003887904	8.65E-08	7.96E-08	3.68E-08	0	126.33812	22.81973045	0.032919728	2752.059492
Sacramento	2028 Construction and Mining - Concrete Mixer	Aggregate	75 Diesel	3.77E-07	4.57E-07	5.43E-07	4.20E-06	3.25E-06	0.000623421	6.14E-08	5.65E-08	5.91E-09	0	20.25817547	17.00725437	0.032803853	361.2340828
Sacramento	2028 Construction and Mining - Concrete Pump	Aggregate	100 Diesel	1.31E-06	1.59E-06	1.89E-06	2.52E-05	1.38E-05	0.004298761	1.02E-06	9.41E-07	4.07E-08	0	139.6889957	70.44251014	0.131322753	2338.759977
Sacramento	2028 Construction and Mining - Concrete Pump	Aggregate	175 Diesel	1.88E-05	2.28E-05	2.71E-05	0.000425338	9.89E-05	0.069787574	3.69E-06	3.39E-06	6.61E-07	0	2267.759407	832.7712489	1.149839171	44981.14698
Sacramento	2028 Construction and Mining - Concrete Pump	Aggregate	300 Diesel	7.27E-06	8.80E-06	1.05E-05	6.14E-05	2.40E-05	0.027869845	1.51E-06	1.39E-06	2.64E-07	0	905.6354796	240.9660588	0.393646236	17952.95401
Sacramento	2028 Construction and Mining - Concrete Pump	Aggregate	50 Diesel	1.66E-07	2.01E-07	2.39E-07	3.23E-06	2.06E-06	0.000733955	2.31E-08	2.13E-08	6.95E-09	0	23.85009232	12.90676089	0.032919728	227.675262
Sacramento	2028 Construction and Mining - Concrete Pump	Aggregate	600 Diesel	1.77E-05	2.14E-05	2.55E-05	0.000128144	0.0001792	0.067746398	5.74E-06	5.28E-06	6.42E-07	0	2201.410034	313.6429829	0.590469354	43640.28464
Sacramento	2028 Construction and Mining - Concrete Pump	Aggregate	75 Diesel	2.32E-06	2.80E-06	3.34E-06	2.92E-05	2.50E-05	0.004899178	5.95E-07	5.47E-07	4.64E-08	0	159.1096312	110.9452899	0.229626971	2632.839658
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	100 Diesel	1.70E-06	2.06E-06	2.45E-06	3.88E-05	1.98E-05	0.007235646	1.40E-06	1.29E-06	6.94E-08	0	238.0804497	144.6349379	0.689004388	3801.319573
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	175 Diesel	1.43E-05	1.73E-05	2.06E-05	0.000259759	0.000141152	0.048764708	6.71E-06	6.18E-06	4.62E-07	0	1584.617702	680.9633655	1.246368814	26525.56767
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	300 Diesel	2.85E-06	3.44E-06	4.10E-06	2.30E-05	3.04E-05	0.01227439	1.09E-06	1.01E-06	1.16E-07	0	398.8584421	117.3467178	0.426450088	7906.809559
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	50 Diesel	1.05E-06	1.27E-06	1.51E-06	1.98E-05	1.87E-05	0.003543244	3.67E-07	3.37E-07	3.35E-08	0	114.8458612	187.1877559	1.115331003	2047.476994
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	600 Diesel	2.09E-06	2.52E-06	3.00E-06	2.25E-05	1.51E-05	0.010384003	7.27E-07	6.69E-07	9.84E-08	0	337.429992	56.6536913	0.229626971	6084.973256
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	75 Diesel	2.03E-06	2.45E-06	2.92E-06	3.73E-05	3.24E-05	0.007118645	6.53E-07	6.01E-07	6.74E-08	0	231.3216246	167.0743294	0.787674398	3408.525021
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	750 Diesel	3.18E-07	3.84E-07	4.57E-07	3.78E-06	2.03E-06	0.00211508	1.52E-07	1.39E-07	2.00E-08	0	68.74063364	7.789552586	0.032803853	1362.853819
Sacramento	2028 Construction and Mining - Crane less than 35ton	Aggregate	9999 Diesel	3.97E-06	4.80E-06	5.72E-06	5.40E-05	5.68E-05	0.002504214	2.85E-06	2.62E-06	2.37E-08	0	81.37486363	5.562560735	0.032803853	1613.142613
Sacramento	2028 Construction and Mining - Cranes	Aggregate	100 Diesel	2.63E-05	3.18E-05	3.79E-05	0.000362454	0.000024514	0.074964461	1.69E-05	1.55E-05	7.10E-07	0	2435.98323	970.8482653	4.960751616	240893.7082
Sacramento	2028 Construction and Mining - Cranes	Aggregate	175 Diesel	0.000167638	0.000202842	0.000241898	0.002057634	0.000156916	0.519003109	9.60E-05	8.91E-05	4.92E-06	0	16884.59969	5900.661094	22.30331493	248738.5138
Sacramento	2028 Construction and Mining - Cranes	Aggregate	25 Diesel	1.10E-06	1.33E-06	1.59E-06	1.33E-05	8.53E-06	0.003195424	5.41E-07	4.97E-07	3.03E-08	0	103.8358661	10.26911472	0.065607706	64.77244107
Sacramento	2028 Construction and Mining - Cranes	Aggregate	300 Diesel	0.000397765	0.000459515	0.000546861	0.003720627	0.003237347	1.525376972	0.000162993	0.000149953	1.44E-05	0	49567.39082	12844.31202	50.16090407	889238.145
Sacramento	2028 Construction and Mining - Cranes	Aggregate	50 Diesel	4.01E-06	4.86E-06	5.78E-06	4.47E-05	3.40E-05	0.010834629	1.47E-06	1.35E-06	1.03E-07	0	352.0716691	167.2945548	0.853761703	1941.133804
Sacramento	2028 Construction and Mining - Cranes	Aggregate	600 Diesel	0.000425885	0.000515336	0.000613268	0.004907602	0.003427359	2.057723773	0.000155216	0.000142799	1.95E-05	0	66866.03901	10663.26884	40.08334136	1290707.787
Sacramento	2028 Construction and Mining - Cranes	Aggregate	75 Diesel	1.49E-05	1.80E-05	2.14E-05	0.000154992	0.000158489	0.032403789	8.64E-06	7.94E-06	3.07E-07	0	1052.966762	465.4189476	2.527857424	82783.31674
Sacramento	2028 Construction and Mining - Cranes	Aggregate	750 Diesel	5.80E-05	7.02E-05	8.36E-05	0.000621681	0.000514435	0.315600618	2.35E-05	2.16E-05	2.99E-06	0	10257.12189	1089.161866	4.626606944	202819.0468
Sacramento	2028 Construction and Mining - Cranes	Aggregate	9999 Diesel	1.70E-05	2.05E-05	2.44E-05	0.000200296	0.000381808	0.10392902	6.81E-06	6.27E-06	9.84E-07	0	3377.191644	263.5628079	1.084280831	69185.58968
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	100 Diesel	0.000268351	0.000324704	0.000386425	0.004155893	0.002451112	0.755018594	0.000182459	0.000167862	7.15E-06	0	24534.46094	9978.639653	28.16262918	377098.0597
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	175 Diesel	0.000076178	0.000092754	0.000109653	0.001473373	0.000319369	2.495405784	0.000029406	0.000026913	2.36E-05	0	81089.42478	26614.67265	57.82224322	1540058.744
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	300 Diesel	0.000784479	0.000949218	0.001129648	0.006828752	0.00531044	3.014242697	0.000260363	0.000239534	2.86E-05	0	97948.34233	20408.82817	46.83944945	1926925.111
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	50 Diesel	3.22E-05	3.90E-05	4.64E-05	0.000217408	0.000171354	0.039480565	1.06E-05	9.75E-06	2.89E-07	0	990.4712799	769.454752	2.822026419	12958.16895
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	600 Diesel	0.001265902	0.001531742	0.001823899	0.012475144	0.008271372	5.171932159	0.000930819	0.000855178	4.90E-05	0	168062.8378	20687.35573	46.81241253	3449747.52
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	75 Diesel	0.000119192	0.000144222	0.000171636	0.00121057	0.001345511	0.219025448	6.25E-05	5.75E-05	2.07E-06	0	7117.270157	3359.794557	11.19075788	961887.7416
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	750 Diesel	6.99E-05	8.45E-05	0.000100615	0.000679484	0.000438644	0.334364567	2.23E-05	2.05E-05	3.17E-06	0	10865.23496	844.5588912	2.138791363	234340.9781
Sacramento	2028 Construction and Mining - Crawler Tractors	Aggregate	9999 Diesel	0.000104557	0.000127601	0.000151856	0.001004332	0.001954448	0.541618158	3.99E-05	3.67E-05	4.97E-06	0	17033.38092	1004.708866	2.530803317	368109.68
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	100 Diesel	2.14E-06	2.59E-06	3.09E-06	5.25E-05	2.31E-05	0.008859768	1.70E-06	1.56E-06	8.39E-08	0	287.8997132	165.96964	0.32803853	5133.689802
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	175 Diesel	3.16E-05	3.83E-05	4.55E-05	0.000767811	0.000163912	0.126821065	6.00E-06	5.52E-06	1.20E-06	0	4121.072647	1739.368093	2.591678862	81638.98373
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	300 Diesel	1.55E-05	1.88E-05	2.24E-05	0.000127414	6.64E-05	0.062257675	3.23E-06	2.97E-06	5.90E-07	0	2023.074007	504.5715501	0.885704031	40104.60656
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	50 Diesel	1.16E-06	1.41E-06	1.67E-06	1.78E-05	1.53E-05	0.002787563	2.87E-07	2.64E-07	2.64E-08	0	90.58233425	108.3033387	0.295234677	1615.220802
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	600 Diesel	8.02E-05	9.70E-05	0.000115492	0.000674407	0.000243169	0.341567263	1.47E-05	1.35E-05	3.24E-06	0	11099.28779	1601.080855	2.788375705	220027.8232
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	75 Diesel	4.99E-06	6.04E-06	7.19E-06	8.17E-05	7.50E-05	0.017535889	8.84E-07	8.24E-07	1.38E-07	0	446.9350128	325.6188931	0.754488619	7903.531099
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	750 Diesel	8.01E-06	9.69E-06	1.15E-05	6.38E-05	4.61E-05	0.032526119	2.34E-06	2.15E-06	3.08E-07	0	1056.941913	83.98324102	0.164019265	20952.39196
Sacramento	2028 Construction and Mining - Crushing/Processing Equipment	Aggregate	9999 Diesel	1.43E-05	1.73E-05	2.06E-05	0.000136602	0.000241401	0.06981495	5.37E-06	4.94E-06	6.61E-07	0	2268.64899	134.337025	0.262430824	44972.7864
Sacramento	2028 Construction and Mining - Excavators	Aggregate	100 Diesel

Sacramento	2028 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	15 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.16222956	0
Sacramento	2028 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.16222956	0
Sacramento	2028 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.16222956	0
Sacramento	2028 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	25 Diesel	0.000341138	0.000410314	0.000490391	0.001400462	0.002592865	0.003748363	8.72E-05	6.59E-05	3.56E-08	3.06E-08	121.9221459	0	16.64533793	0
Sacramento	2028 Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.16222956	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	100 Gasoline	0.000211501	0.000194538	0.000323744	0.011299948	0.00054749	0.244522501	1.70E-05	1.29E-05	2.36E-06	3.49E-06	9953.55	2401.7	5.97	158512.2
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	15 Gasoline	0.002359008	0.002382598	0.002595944	0.07639319	0.001759796	3.02E-06	0.000977746	0.000738742	1.22E-06	1.68E-06	4784.571404	0	34.91615922	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	9.65E-05	0.000116061	0.000138712	0.000608791	0.000726823	0.001393322	2.56E-05	1.93E-05	1.32E-08	1.14E-08	45.32025851	0	13.93880332	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.036340114	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	25 Gasoline	0.004055526	0.004096082	0.004462858	0.131986828	0.002648888	4.91E-06	0.001591522	0.001202484	2.10E-06	2.90E-06	8263.808298	0	27.06408582	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	25 Diesel	0.000315134	0.000398762	0.000476585	0.001361094	0.002519867	0.003642014	8.47E-05	6.40E-05	3.46E-08	2.98E-08	118.4896258	0	11.88266876	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.036340114	0
Sacramento	2028 Construction and Mining - Misc - Trenchers	Aggregate	50 Gasoline	0.000649205	0.000597139	0.000714411	0.054851199	0.000906294	0.33871723	2.34E-05	1.76E-05	4.12E-06	5.66E-06	16169.5	7223.35	17.98	216700.5
Sacramento	2028 Construction and Mining - Nurse Rig Other	Aggregate	175 Diesel	3.37E-07	4.08E-07	4.86E-07	6.06E-06	2.99E-06	0.000409491	2.26E-07	1.68E-07	2.31E-06	9.95E-09	34.11702895	18.78276272	0.032803853	676.3221621
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	100 Diesel	0.000150218	0.000181764	0.000216314	0.002341922	0.00135284	0.387060157	9.97E-05	9.17E-05	3.67E-06	0	12577.58733	5960.379918	9.416666647	220111.4505
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000638027	0.000772012	0.000918758	0.012689115	0.003352701	2.043714307	0.000156291	0.000143787	1.94E-05	0	66410.85295	20980.09095	20.83534858	132437907
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000274698	0.000332185	0.000395565	0.005200368	0.001491505	0.911002049	4.91E-05	4.52E-05	1.94E-07	0	29603.17052	6455.057034	8.140736792	604248.567
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	0.000377662	0.000456971	0.000543833	0.003805007	0.002940988	0.526103892	0.000107437	9.88E-05	4.98E-06	0	17095.83774	16160.29407	26.38530901	259245.8067
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.000681755	0.000824924	0.000981727	0.004958049	0.002655595	2.40792505	0.000135128	0.000124318	2.28E-05	0	78245.9446	96767.75126	10.57072012	1601146.341
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	0.000216388	0.000262183	0.000311579	0.002474721	0.002272141	0.204919178	7.27E-05	6.49E-05	1.98E-06	0	13661.59991	8696.197007	14.24656666	222493.3591
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	6.01E-05	7.28E-05	8.66E-05	0.000445847	0.000303131	0.196096129	1.75E-05	1.61E-05	1.86E-06	0	6372.177923	500.951017	0.689010585	127432.6331
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	9999 Diesel	4.85E-05	5.87E-05	6.99E-05	0.000361048	0.000719431	0.176961989	1.61E-05	1.48E-05	1.68E-06	0	5750.410712	178.8426833	0.230242913	124236.7805
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	25 Diesel	4.26E-06	5.16E-06	6.14E-06	6.06E-05	3.47E-05	0.004064513	2.51E-06	2.31E-06	9.92E-08	0	340.3457219	187.0705561	0.295234677	6067.08876
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	175 Diesel	0.000163967	0.0001984	0.000236112	0.003154286	0.00097246	0.533444681	5.30E-05	4.88E-05	5.05E-06	0	17334.37798	5787.459137	6.36745928	346951.0487
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	300 Diesel	0.000361957	0.000437968	0.000521219	0.002798616	0.002001298	1.224264613	9.82E-05	9.03E-05	1.16E-05	0	39782.69218	9337.460999	12.63713543	815020.1131
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	50 Diesel	1.54E-05	1.86E-05	2.21E-05	0.000160164	0.000131188	0.029441128	4.91E-06	4.52E-06	1.94E-07	0	664.238036	1066.06798	1.705940809	11390.30082
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	600 Diesel	0.002425059	0.002934321	0.003492085	0.018838238	0.009449759	8.973979873	0.000484825	0.000445511	8.50E-05	0	291611.0416	35942.90489	43.35916992	5926120.899
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	75 Diesel	1.17E-05	1.42E-05	1.69E-05	0.000141492	0.000121697	0.024421176	3.25E-06	2.99E-06	2.31E-07	0	793.5703766	460.5813038	0.853112982	11895.56495
Sacramento	2028 Construction and Mining - Off-Highway Tractors	Aggregate	750 Diesel	0.000296859	0.000359199	0.000427476	0.002582412	0.001854999	1.128006536	9.52E-05	8.91E-05	1.07E-05	0	36656.52737	3261.109277	5.631146215	853209.8401
Sacramento	2028 Construction and Mining - Off-Highway Trucks	Aggregate	9999 Diesel	0.001001438	0.00121174	0.001442071	0.008328925	0.015947289	4.078769801	0.003316335	0.003091028	3.86E-05	0	132540.3363	6556.044365	9.832665923	2964051.238
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	100 Diesel	0.000124756	0.000150955	0.000179649	0.002181566	0.001191579	0.402423466	8.73E-05	8.04E-05	3.81E-06	0	13076.82075	5565.699474	17.03976822	200160.333
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	175 Diesel	0.000326479	0.00039504	0.000470137	0.006709924	0.002405104	1.099373198	0.000125921	0.000115934	1.14E-05	0	38993.33842	11862.54662	30.03948255	735852.0293
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	300 Diesel	0.000300163	0.000363197	0.000432234	0.002601705	0.002338524	1.109083714	0.000111071	0.000102185	1.05E-05	0	36039.8688	7185.803545	18.65750165	700739.2084
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	50 Diesel	0.000018834	0.000227892	0.00027121	0.002100248	0.00173468	0.340919726	6.23E-05	5.73E-05	3.23E-06	0	11078.18748	9260.473536	30.05786389	151524.8044
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	600 Diesel	0.000797208	0.000964622	0.001147918	0.006767884	0.004964313	1.971843809	0.000388681	0.000355951	3.29E-05	0	112818.1703	13402.15113	32.11705621	2282576.787
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	75 Diesel	0.000196324	0.000237552	0.000282707	0.002803625	0.002615553	0.507360899	7.06E-05	6.49E-05	4.81E-06	0	16486.78094	9407.785107	29.01146442	256468.4743
Sacramento	2028 Construction and Mining - Other Construction Equipment	Aggregate	750 Diesel	0.000107247	0.000129769	0.000154435	0.001072527	0.000710653	0.546427131	3.46E-05	3.18E-05	5.18E-06	0	17756.24496	1323.20918	3.512940555	359358.2261
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	0.000142884	0.00017301	0.000205856	0.001393373	0.002779518	0.710955074	1.70E-05	1.52E-05	6.73E-06	0	23102.60917	971.5027972	2.560957939	85340.9124
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	100 Diesel	4.21E-05	5.10E-05	6.07E-05	0.000723038	0.00038556	0.131784967	2.80E-05	2.58E-05	1.25E-06	0	4282.375498	1883.956665	4.792647485	64477.67239
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	175 Diesel	0.000143443	0.000173565	0.000206557	0.002837781	0.001072495	0.496175036	5.01E-05	4.61E-05	4.70E-06	0	16123.29437	5970.994882	11.64950766	308905.1975
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	300 Diesel	0.000133656	0.000161724	0.000192465	0.001500052	0.000850001	0.463683723	4.23E-05	3.89E-05	4.68E-06	0	16042.33871	3406.635932	7.286293422	291321.3339
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	50 Diesel	3.22E-05	3.89E-05	4.64E-05	0.000393728	0.000322303	0.063553138	1.05E-05	9.68E-06	6.02E-07	0	2065.17031	2106.348682	6.103574706	28560.25655
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	600 Diesel	0.000210279	0.000254438	0.000302802	0.001835855	0.001205535	0.837458671	5.60E-05	5.15E-05	8.26E-06	0	28318.20155	3564.884186	7.022249299	565417.3136
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	75 Diesel	2.87E-05	3.48E-05	4.14E-05	0.000404116	0.000371569	0.088037312	6.68E-06	6.80E-06	6.71E-07	0	2303.17859	1440.430542	3.838785514	37207.11
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	750 Diesel	3.06E-05	3.70E-05	4.41E-05	0.000307982	0.000257247	0.094739694	1.44E-05	1.33E-05	8.97E-07	0	3078.582875	222.7726298	0.623273207	61028.59042
Sacramento	2028 Construction and Mining - Other Material Handling Equipment	Aggregate	9999 Diesel	6.63E-05	8.03E-05	9.55E-05	0.000604029	0.001209464	0.310393027	2.56E-05	2.35E-05	2.95E-06	0	10103.73523	532.2520084	1.143705581	206219.4092
Sacramento	2028 Construction and Mining - Pavers	Aggregate	100 Diesel	8.46E-05	0.000102345	0.000121799	0.001402592	0.000780939	0.244446969	5.83E-05	5.36E-05	2.32E-06	0	7943.346895	3799.484927	8.698637175	133662.4999
Sacramento	2028 Construction and Mining - Pavers	Aggregate	175 Diesel	0.000226953	0.000274612	0.000326812	0.004614046	0.001516629	0.786794637	6.67E-05	6.14E-05	7.45E-06	0	25567.02901	8492.093957	15.39070305	499050.0834
Sacramento	2028 Construction and Mining - Pavers	Aggregate	300 Diesel	0.000237394	0.000287247	0.000341847	0.001914723	0.001350524	0.93954085	5.67E-05	5.21E-05	8.90E-06	0	30530.54585	6342.35886	11.38580736	606814.4225
Sacramento	2028 Construction and Mining - Pavers	Aggregate	50 Diesel	4.26E-05	5.16E-05	6.14E-05	0.000362968	0.000208675	0.053894043	1.15E-05	1.15E-05	5.11E-07	0	1751.295915	1563.704252	4.363523211	24288.53339
Sacramento	2028 Construction and Mining - Pavers	Aggregate	600 Diesel	3.88E-05	4.69E-05	5.58E-05	0.000326113	0.000187855	0.165529251	8.96E-06	8.24E-06	1.57E-06	0	5378.901876	685.3021798	1.181805765	108827.4227
Sacramento	2028 Construction and Mining - Pavers	Aggregate	75 Diesel	0.000109016	0.000131909	0.000156983	0.001337187	0.001285158	0.232888227	4.03E-05	3.71E-05	2.21E-06	0	7567.743581	4403.69719	11.31936371	122384.8135
Sacramento	2028 Construction and Mining - Pavers	Aggregate	750 Diesel	1.31E-06	1.58E-06	1.88E-06	1.31E-05	4.20E-06	0.007676946	1.19E-07	1.04E-07	6.41E-08	0	219.9158507	16.47580135	0.032803853	4359.523497
Sacramento	2028 Construction and Mining - Pavers	Aggregate	9999 Diesel	4.18E-05	5.06E-05	6.02E-05	0.000304755	0.000717625	0.155403132	1.63E-05	1.50E-05	1.47E-06	0	5049.851884	122.6762441	0.229626971	100106.2355
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	100 Diesel	4.16E-05	5.03E-05	5.99E-05	0.000781609	0.000382526	0.140433306	2.79E-05	2.57E-05	1.36E-06	0	4648.217195	2338.1728	5.418441729	72679.20155
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	175 Diesel	0.000232843	0.00028174	0.000335293	0.005155961	0.001196884	0.864234359	6.38E-05	5.87E-05	8.21E-06	0	28148.73659	11369.12829	17.49064723	552714.2119
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	300 Diesel	9.75E-05	0.000118015	0.000140448	0.000820875	0.000572497	0.388507025	2.58E-05	2.38E-05	3.68E-06	0	12624.60355	2977.523527	5.5472135	250402.3847
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	50 Diesel	6.63E-05	8.02E-05	9.55E-05	0.000794546	0.000634106	0.11698232	1.89E-05	1.74E-05	1.11E-06	0	3801.360886	4630.138391	12.07373446	61426.77524
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	600 Diesel	0.000215857	0.000261187	0.000310834	0.001827763	0.000895958	0.915058475	4.87E-05	4.48E-05	6.65E-06	0	29670.00973	4617.541907	8.008369693	591947.8573
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	75 Diesel	3.72E-05	4.50E-05	5.36E-05	0.000496913	0.000463453	0.086771505	1.23E-05	1.14E-05	8.22E-07	0	2819.655188	1944.293161	4.757297617	45813.2803
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	750 Diesel	4.36E-05	5.27E-05	6.28E-05	0.000386846	0.000233699	0.197133839	1.37E-05	1.26E-05	1.68E-06	0	6405.865989	554.5667609	1.082527149	126387.3145
Sacramento	2028 Construction and Mining - Paving Equipment	Aggregate	9999 Diesel	3.28E-05	3.97E-05	4.73E-05	0.00023932	0.000534962	0.123622877	1.26E-05	1.16E-05	1.17E-06	0	4017.146954	221.4021383	0.426450089	79634.30777
Sacramento	2028 Construction and Mining - Rollers	Aggregate	100 Diesel	0.000233915	0.000290297	0.000345478	0.004032463	0.002216158	0.734759338	0.000165108	0.000151899	6.96E-06	0	23876.13289	11305.47139	29.61058339	368474.9409
Sacramento	2028 Construction and Mining - Rollers	Aggregate	175 Diesel	0.001003078	0.001230457	0.001440544	0.016796717	0.006363891	3.784479206	0.000683241	0.000628582	3.58E-05	0	122975.6353	47459.6942	80.21987578	2393842.284
Sacramento	2028 Construction and Mining - Rollers	Aggregate	300 Diesel	8.44E-05	0.000102111	0.000121519	0.000779147	0.000570787	0.328881037	2.79E-05	2.57E-05	3.12E-06	0	10687.04667	2442.007141	5.323517976	207355.9696
Sacramento	2028 Construction and Mining - Rollers	Aggregate	50 Diesel	0.000753311	0.000911506	0.001084768	0.008321062	0.00650757	1.324683048	0.000223408	0.000205536	1.25E-05	0	43945.80675	42498.6068	122.7315068	588339.7093
Sacramento	2028 Construction and Mining - Rollers	Aggregate	600 Diesel	6.01E-05	7.28E-05	8.66E-05	0.000589502	0.000324747	0.094734634	1.68E-05	1.50E-05	2.44E-06	0	8365.363852	1146.678986	2.301113084	173374.5161
Sacramento	2028 Construction and Mining - Rollers	Aggregate	75 Diesel	0.000192673	0.000233134	0.000277449	0.002646608	0.002454397	0.470570176	6.36E-05	5.85E-05	4.46E-06	0	15291.25998	9308.634115	24.93644236	238751.2188
Sacramento	2028 Construction and Mining - Rollers	Aggregate	750 Diesel	1.51E-06	1.83E-06	2.17E-06	1.19E-05	1.08E-05	0.006349967	4.83E-07	4.44E-07	6.02E-08	0	206.3432871	15.01308981	0.032803853	4090.466448
Sacramento	2028 Construction and Mining - Rollers	Aggregate	9999 Diesel	6.60E-05	7.99E-05	9.50E-05	0.000537786	0.001077154	0.277889666	2.51E-05	2.30E-05	2.63E-06	0	9030.073568	201.6260569	0.426450089	179008.9456
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	100 Diesel	0.000234962	0.00030204	0.000359452	0.005570372	0.00240134	0.685463821	0.000174004	0.000160084	9.90E-06	0	33972.52925	15246.22022	47.60313408	525294.818
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	175 Diesel	0.001467277	0.001775405	0.002112879	0.034660167	0.010085414	6.045217588	0.004241014	0.003987333	5.73E-05	0	196440.4002	79170.76952	166.9472152	3831578.794
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	300 Diesel	1.17E-05	1.41E-05	1.68E-05	0.000209424	8.21E-05	0.051440283	3.65E-06	3.35E-06	1.47E-07	0	1671.564207	380.3614175	1.017158499	32543.80515
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	50 Diesel	1.81E-05	2.19E-05	2.60E-05	0.000226409	0.000191977	0.037900483	5.20E-06	4.78E-06	1.59E-07	0	1231.582823	1089.064613	4.106818105	19229.81773
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	600 Diesel	2.62E-04	3.17E-04	3.77E-04	2.75E-03	1.31E-03	0.014305049	5.03E-07	4.63E-07	1.36E-07	0	464.845049	69.03554315	0.16413857	9314.148533
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	75 Diesel	0.000640307	0.000508304	0.000606407	0.007652923	0.004581885	1.352861478	7.39E-05	6.80E-05	1.28E-05	0	43961.49077	26836.84403	111.1071303	955351.8486
Sacramento	2028 Construction and Mining - Rough Terrain Forklifts	Aggregate	750 Diesel	7.19E-07	8.70E-07	1.04E-06	8.94E-06	1.49E-06	0.004760748	1.24E-07	1.14E-07	4.51E-08	0	154.7013284	12.26326434	0.032807283	3065.816084
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	100 Diesel	1.74E-05	2.10E-05	2.50E-05	0.000280182	0.000145899	0.050742768	1.20E-05	1.11E-05	4.81E-07	0	1648.895108	736.7278451	1.641604553	25542.97856
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	175 Diesel	4.78E-05	5.78E-05	6.88E-05	0.000856946	0.000335503	0.146711176	1.58E-05	1.45E-05	1.69E-06	0	4767.405276	1601.897758	2.723912726	91426.3398
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	300 Diesel	4.93E-05	5.97E-05	7.11E-05	0.000418188	0.000261432	0.176259384	1.41E-05	1.30E-05	1.67E-06	0	5727.57945	1257.8474	2.199274872	114559.7995
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	50 Diesel	3.81E-06	4.61E-06	5.48E-06	5.99E-05	3.83E-05	0.013284929	9.29E-07	8.54E-07	1.26E-07	0	431.6960934	228.9928938	0.592676425	3561.018602
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	600 Diesel	0.000230809	0.000280101	0.000334473	0.002401428	0.001263605	0.974433286	6.70E-05	6.22E-05	9.22E-06	0	31631.88445	4476.917293	8.030148468	697973.3942
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	75 Diesel	9.43E-06	1.14E-05	1.36E-05	0.000141829	0.000113522	0.028558294	2.89E-06	2.66E-06	2.71E-07	0	928.0067609	457.9112238	0.986110109	11321.0439
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	750 Diesel	6.70E-06	8.10E-06	9.64E-06	6.39E-05	3.42E-05	0.031157462	1.88E-06	1.73E-06	2.95E-07	0	1012.467171	87.41121533	0.16641622	23475.21018
Sacramento	2028 Construction and Mining - Rubber Tired Dozers	Aggregate	9999 Diesel	2.07E-05	2.51E-05	2.98E-05	0.000158168	0.000404567	0.085861697	1.03E-05	9.45E-06	7.28E-07	0	2497.631832	94.9755598	0.164019265	49512.04037
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	100 Diesel	0.000271435	0.000328436	0.000390866	0.00491556	0.002421787	0.856699063	0.000186393	0.000171482	8.12E-06	0	27838.58553	14767.5612	27.37773158	458945.9725
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	175 Diesel	0.001929809	0.002335068	0.002778924	0.03653652	0.012547912	6.195775375	0.000607106	0.000558538	5.87E-05	0	201332.8018	74261.70864	102.2573436	3940181.518
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	300 Diesel	0.003078843	0.003727288	0.004435614	0.05820493	0.018401364	11.36533237	0.000877003	0.000807503	0.000107663	0	369124.9573	91082.15828	128.4331569	7991161.603
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	50 Diesel	5.35E-05	6.48E-05	7.71E-05	0.000553124	0.000405921	0.082584614	1.65E-05	1.52E-05	7.82E-07	0	2683.601444	2467.265829	5.053182622	35008.89135
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	600 Diesel	0.002277985	0.002756361	0.003280298	0.018473126	0.009558899	8.7051651	0.000490223	0.000451005	8.25E-05	0	282875.8587	41650.3096	57.51401886	5751598.499
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	75 Diesel	0.000245593	0.000297168	0.000353614	0.003100452	0.002779406	0.534192184	7.60E-05	6.99E-05	5.06E-06	0	17358.66822	11560.44276	22.54078128	276450.671
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	750 Diesel	5.66E-05	6.85E-05	8.16E-05	0.000586558	0.000374228	0.227862037	1.88E-05	1.73E-05	2.16E-06	0	7404.416647	777.3683171	1.584743901	190646.0686
Sacramento	2028 Construction and Mining - Rubber Tired Loaders	Aggregate	9999 Diesel	0.000163854	0.000198259	0.000235944	0.001441577	0.002763854	0.733742506	5.28E-05	4.86E-05	6.94E-06	0	23810.59558	1470.494076	2.332508824	502624.8695
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	100 Diesel	7.44E-06	8.99E-06	1.07E-05	0.000153826	7.61E-05	0.025345137	5.56E-06	5.14E-06	2.48E-07	0	821.5964444	316.6870947	1.010830547	12531.92747
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	175 Diesel	8.95E-05	0.000108273	0.000128854	0.001310396	0.000843969	0.233242736	4.89E-05	4.50E-05	2.21E-06	0	7579.263405	1816.662913	6.169878405	130334.2067
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	300 Diesel	0.000749701	0.000907138	0.001079569	0.00735147	0.00598548	2.965710086	0.000303239	0.000278898	2.81E-05	0	96371.26665	16009.64155	48.72067479	1836424.257
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	50 Diesel	1.74E-06	2.10E-06	2.50E-06	1.36E-05	1.08E-05	0.002379703	4.60E-07	4.23E-07	2.25E-08	0	77.32885095	41.87295533	0.164188821	831.4579904
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	600 Diesel	0.002367653	0.002864859	0.003409419	0.02906732	0.011567093	10.49018896	0.000838102	0.000771054	9.94E-05	0	340880.5205	34212.01095	101.7290592	7157851.601
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	75 Diesel	1.14E-05	1.38E-05	1.64E-05	0.000130355	0.000132586	0.024771173	5.63E-06	5.18E-06	2.35E-07	0	804.9435988	338.8150193	1.279897731	10544.55605
Sacramento	2028 Construction and Mining - Scrapers	Aggregate	750 Diesel	0.000238453	0.000294281	0.000349723	0.003825793	0.001651611	1.622884127	8.96E-05	8.24E-05	1.04E-05	0	52670.9125	4339.683553	15.36580493	1225533.335
Sacramento	2028 Construction and Mining - Skid Steer Loaders	Aggregate	100 Diesel	0.001045043	0.001264502	0.001504861	0.022057393	0.010954111	3.762617273	0.000805015	0.000740614	3.56E-05	0	122266.9047	68644.75111	146.7639253	2127893.634
Sacramento	2028 Construction and Mining - Skid Steer Loaders	Aggregate	175 Diesel	0.000275439	0.000333281	0.000396632	0.00462337	0.001495339	1.066464327	5.12E-05	4.71E-05	1.01E-05	0	34654.94438	16482.50884	25.42495307	683039.935
Sacramento	2028 Construction and Mining - Skid Steer Loaders	Aggregate	300 Diesel	2.63E-05	3.18E-05	3.79E-05	0.000394914	0.000164905	0.088214544	7.74E-06	7.12E-06	9.80E-07	0	2866.547002	738.9977477	1.377877705	56902.5938
Sacramento	2028 Construction and Mining - Skid Steer Loaders	Aggregate	50 Diesel	0.000702443	0.000849956	0.001011517	0.007679425	0.00615737	1.15747325	0.000199573	0.000183607	1.

ITEM 11.1. ATTACHMENT 3

Sacramento	2028 Industrial - Boom	Aggregate	175 Diesel	1.49E-05	1.80E-05	2.15E-05	0.000317474	8.53E-05	0.052656335	3.59E-06	3.30E-06	4.99E-07	0	1711.076809	880.1461648	1.137538719	340581.1418
Sacramento	2028 Industrial - Boom	Aggregate	300 Diesel	1.91E-06	2.31E-06	2.75E-06	1.66E-05	8.21E-06	0.007819634	3.60E-07	3.32E-07	7.41E-08	0	254.1003628	71.1094218	0.110772864	5302.893878
Sacramento	2028 Industrial - Boom	Aggregate	50 Diesel	0.000163422	0.000197741	0.000235328	0.002483243	0.002033234	0.382281151	3.72E-05	3.43E-05	3.62E-06	0	12422.29269	13550.53113	33.68354755	219942.2649
Sacramento	2028 Industrial - Boom	Aggregate	600 Diesel	1.81E-06	2.19E-06	2.61E-06	1.53E-05	7.86E-06	0.00771979	4.35E-07	4.00E-07	7.31E-08	0	250.8559097	40.77884559	0.063189544	5181.358007
Sacramento	2028 Industrial - Boom	Aggregate	75 Diesel	0.000239034	0.000289231	0.000344209	0.003812806	0.003254056	0.638778599	5.54E-05	5.26E-05	6.05E-06	0	20757.22203	16087.03262	31.23814592	369718.2501
Sacramento	2028 Industrial - Boom	Aggregate	9999 Diesel	1.16E-06	1.40E-06	1.66E-06	1.01E-05	1.72E-05	0.005069197	3.32E-07	3.05E-07	4.80E-08	0	164.7244271	9.604208479	0.015797386	3265.430883
Sacramento	2028 Industrial - Forklifts	Aggregate	100 Diesel	0.000239989	0.000290386	0.000345584	0.005157842	0.002329468	0.903030926	0.000172386	0.000158595	8.55E-06	0	29344.14749	28861.92474	70.48293578	486402.1986
Sacramento	2028 Industrial - Forklifts	Aggregate	175 Diesel	0.000703224	0.000848848	0.001009762	0.014963147	0.004487842	2.526735213	0.000394447	0.000378892	2.39E-05	0	82106.70158	64074.49123	166.1167994	1618427.883
Sacramento	2028 Industrial - Forklifts	Aggregate	25 Diesel	1.29E-07	1.56E-07	1.86E-07	1.57E-06	1.13E-06	0.000296354	6.40E-08	5.89E-08	2.81E-09	0	9.630071564	5.165249596	0.015797386	1.239659903
Sacramento	2028 Industrial - Forklifts	Aggregate	300 Diesel	6.54E-05	7.91E-05	9.42E-05	0.000515819	0.000424389	0.226119589	1.99E-05	1.83E-05	2.14E-06	0	7347.795511	3418.017872	6.686096666	146669.6208
Sacramento	2028 Industrial - Forklifts	Aggregate	50 Diesel	8.07E-05	9.77E-05	0.000116244	0.000980715	0.000776594	0.151355646	2.31E-05	2.12E-05	1.43E-06	0	4918.328108	8448.149907	23.30087193	71527.51712
Sacramento	2028 Industrial - Forklifts	Aggregate	600 Diesel	1.96E-05	2.37E-05	2.82E-05	0.000191553	0.000138572	0.068522336	6.67E-06	6.14E-06	4.49E-07	0	2226.645263	635.6883084	1.26454465	45172.96265
Sacramento	2028 Industrial - Forklifts	Aggregate	75 Diesel	0.000491332	0.000594512	0.000707519	0.007775838	0.006793392	1.330621773	0.000100882	0.000100115	1.26E-05	0	43238.78666	55513.66771	132.7219175	737561.4179
Sacramento	2028 Industrial - Forklifts	Aggregate	750 Diesel	1.01E-06	1.22E-06	1.45E-06	1.01E-05	3.90E-06	0.001223186	3.72E-07	2.51E-07	4.95E-08	0	169.7315852	22.94107346	0.047392158	3364.690774
Sacramento	2028 Industrial - Forklifts	Aggregate	9999 Diesel	2.28E-05	2.76E-05	3.28E-05	0.001183303	0.000403736	0.095236268	8.53E-06	7.85E-06	9.02E-07	0	3094.719156	154.8615691	0.316102797	62778.44021
Sacramento	2028 Industrial - Garbage Refuse	Aggregate	175 Diesel	2.31E-07	2.79E-07	3.33E-07	3.37E-06	2.67E-06	0.000570654	1.28E-07	1.18E-07	5.41E-09	0	18.54349775	8.794230898	0.015797386	367.5988515
Sacramento	2028 Industrial - Garbage Refuse	Aggregate	300 Diesel	6.59E-07	7.98E-07	9.50E-07	5.51E-06	3.29E-06	0.002793179	1.41E-07	1.30E-07	2.65E-08	0	90.76465414	20.06335915	0.031594772	1799.282049
Sacramento	2028 Industrial - Garbage Refuse	Aggregate	50 Diesel	3.81E-08	4.61E-08	5.48E-08	6.41E-07	5.95E-07	0.000101469	1.14E-08	1.05E-08	9.61E-10	0	3.297237162	6.188921466	0.015797386	58.79475393
Sacramento	2028 Industrial - Garbage Refuse	Aggregate	600 Diesel	9.73E-06	1.18E-05	1.40E-05	8.02E-05	3.77E-05	0.040883572	1.77E-06	1.62E-06	3.87E-07	0	1328.51879	144.1665012	0.20542182	26666.81042
Sacramento	2028 Industrial - Garbage Refuse	Aggregate	75 Diesel	2.29E-07	2.77E-07	3.30E-07	2.69E-06	2.20E-06	0.000408254	7.21E-08	6.63E-08	1.87E-09	0	13.26628501	8.412448104	0.015797386	236.5580407
Sacramento	2028 Industrial - Garbage Refuse	Aggregate	9999 Diesel	2.12E-06	2.57E-06	3.06E-06	2.02E-05	3.49E-05	0.010290072	7.32E-07	6.73E-07	9.75E-08	0	334.377686	18.46861037	0.031594772	6628.568948
Sacramento	2028 Industrial - Garbage Transfer	Aggregate	300 Diesel	9.29E-07	1.12E-06	1.34E-06	6.20E-06	6.09E-06	0.002918813	2.27E-07	2.09E-07	2.76E-08	0	94.84734422	21.55493766	0.031594772	1880.215657
Sacramento	2028 Industrial - Garbage Transfer	Aggregate	600 Diesel	1.66E-06	2.01E-06	2.39E-06	1.42E-05	4.03E-06	0.007209627	2.55E-07	2.34E-07	6.73E-08	0	231.0285718	22.42260767	0.031594772	4571.817616
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	100 Gasoline	0.000156641	0.000144079	0.000172374	0.009008404	0.000339264	0.295906582	2.06E-05	1.56E-05	2.86E-06	4.12E-06	11749.35	4098.95	11.35	274629.65
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	15 Gasoline	2.48E-05	2.50E-05	2.73E-05	0.000703988	0.000018479	2.78E-08	9.01E-06	6.81E-06	1.13E-08	1.57E-08	44.48706969	0	0.410997114	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	15 Diesel	0.000027349	3.29E-05	3.93E-05	0.000172547	0.00002	0.000394903	7.24E-06	5.47E-06	3.75E-09	3.23E-09	12.84492425	0	5.985975133	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	15 Electric	2.96E-06	2.68E-07	2.93E-06	0.000010425	2.85E-06	9.58E-09	2.66E-07	2.01E-07	2.18E-10	1.96E-09	5.610936131	0	0.141513612	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.130154548	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	25 Gasoline	0.001387952	0.00140183	0.001527356	0.036743102	0.000906262	1.37E-06	0.000443054	0.000334754	5.94E-07	8.20E-07	2334.222552	0	13.82769861	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	25 Diesel	5.06E-05	6.08E-05	7.27E-05	0.000207554	0.000384444	0.00055557	1.31E-05	9.91E-06	5.27E-09	4.54E-09	18.07089124	0	8.429661302	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	25 Electric	0.000253423	2.29E-05	0.000250862	0.006415056	0.000176355	5.64E-07	1.73E-05	1.31E-05	1.37E-08	1.23E-07	352.5409949	0	5.701921371	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.130154548	0
Sacramento	2028 Industrial - Misc - Aerial Lifts	Aggregate	50 Gasoline	0.000197371	0.000181542	0.000217195	0.016778567	0.000293843	0.147401013	1.02E-05	7.68E-06	1.79E-06	2.31E-06	6602.85	4098.95	11.35	135265.35
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	100 Gasoline	0.009991595	0.009190269	0.010995141	0.948739737	0.050377433	11.76661178	0.000820397	0.000619855	0.000113682	0.000176215	503006.5	239549.5	132.98	16768465
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	100 Nat Gas	0	0	0.010300304	0.849204546	0.085181485	18.79853911	0.001718321	0	0	0	1065925.75	439930.5	243.86	30754335
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	175 Gasoline	0.00052151	0.000479685	0.00057389	0.036527921	0.00311971	0.872337767	6.25E-05	4.73E-05	8.67E-06	1.23E-05	35248.05	8752.7	4.85	1277894.2
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	175 Nat Gas	0	0	8.26E-05	0.049744097	0.004236084	1.434830109	0.000127605	0	0	0	78500.55	16081.9	8.92	2347957.4
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	25 Gasoline	8.83E-06	8.92E-06	9.72E-06	0.000738178	4.94E-06	2.00E-07	7.79E-08	1.35E-08	1.13E-08	1.56E-08	44.42175374	0	0.106560112	0
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	25 Electric	4.60E-05	4.17E-06	4.56E-05	0.000606604	1.84E-05	5.11E-08	2.04E-06	1.54E-06	1.49E-09	1.34E-08	38.33249157	0	0.19624527	0
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	50 Gasoline	0.004732893	0.004353315	0.00520826	0.558034771	0.011138667	1.986199332	0.000136927	0.000103456	2.41E-05	3.82E-05	109036.45	68258.65	37.89	2798604.65
Sacramento	2028 Industrial - Misc - Forklifts	Aggregate	50 Nat Gas	0	0	0.003039513	0.250374324	0.025137313	5.317394189	0.000790002	0	0	0	167126.2	125180.4	69.5	9132396.4
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	100 Gasoline	4.56E-05	4.19E-05	5.02E-05	0.003320321	0.000274325	0.084913054	5.92E-06	4.47E-06	8.20E-07	1.20E-06	3416.4	850.45	1.18	67185.55
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	15 Gasoline	0.000286012	0.000288872	0.000314739	0.016930698	0.000147923	6.65E-06	1.43E-06	1.08E-06	2.63E-07	3.63E-07	1029.789723	0	14.29929973	0
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	15 Diesel	1.57E-05	1.89E-05	2.26E-05	0.000111381	0.000131976	0.000246168	4.68E-06	3.53E-06	2.34E-09	2.01E-09	8.007050377	0	1.463784577	0
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	175 Gasoline	6.40E-06	5.88E-06	7.04E-06	0.000619222	5.53E-05	0.017602481	1.26E-06	9.53E-07	1.75E-07	2.46E-07	700.8	76.65	0.11	13337.1
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.012714942	0
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	25 Gasoline	0.000253582	0.000256118	0.000279052	0.02237465	0.000141934	6.05E-06	5.42E-07	4.09E-07	3.42E-07	4.72E-07	1344.621166	0	4.79895365	0
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	25 Diesel	0.000045306	5.45E-05	6.51E-05	0.001859983	0.000344354	0.000497814	1.16E-05	8.75E-06	4.72E-09	4.07E-09	16.19229741	0	1.510301454	0
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.012714942	0
Sacramento	2028 Industrial - Misc - Other General Industrial Equipment	Aggregate	50 Gasoline	0.000147377	0.000135558	0.000162818	0.014155818	0.000331107	0.099238174	6.84E-06	5.17E-06	1.21E-06	1.62E-06	4613.6	2591.5	3.62	77745
Sacramento	2028 Industrial - Misc - Other Material Handling Equipment	Aggregate	100 Gasoline	8.27E-05	7.61E-05	9.10E-05	0.005331584	0.000428544	0.11739274	8.18E-06	6.18E-06	1.13E-06	1.67E-06	4774.2	1752	4.56	94608
Sacramento	2028 Industrial - Misc - Other Material Handling Equipment	Aggregate	50 Gasoline	3.57E-06	3.29E-06	3.93E-06	0.000328716	7.84E-06	0.002037158	1.40E-07	1.06E-07	2.48E-08	3.58E-08	102.2	14.6	0.04	598.6
Sacramento	2028 Industrial - Misc - Other Material Handling Equipment	Aggregate	100 Gasoline	0.000203895	0.000201786	0.000224295	0.015152157	0.001536241	0.154501257	1.59E-05	1.21E-05	4.97E-06	7.15E-06	20403.5	4558.85	8.82	310081.8
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	15 Gasoline	0.000115889	0.000117047	0.000127528	0.007154864	5.84E-05	2.94E-06	2.96E-07	2.24E-07	1.11E-07	1.53E-07	434.543095	0	6.356796704	0
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	15 Diesel	6.25E-06	7.52E-06	8.99E-06	4.43E-05	5.28E-05	9.78E-05	1.86E-06	1.40E-06	9.28E-10	8.00E-10	3.182113107	0	0.683212202	0
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	175 Gasoline	1.85E-06	1.70E-06	2.26E-06	0.000201901	1.82E-05	0.005899559	4.29E-07	3.24E-07	5.65E-08	8.31E-08	237.25	29.2	0.06	4088
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	2 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009012822	0
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	25 Gasoline	0.000254578	0.000257124	0.000280148	0.024328918	0.000142489	6.58E-06	5.89E-07	4.45E-07	3.71E-07	5.12E-07	1459.311532	0	6.32052589	0
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	25 Diesel	9.06E-06	1.09E-05	1.30E-05	0.00003718	6.88E-05	9.95E-06	2.31E-06	1.75E-06	9.44E-10	8.14E-10	3.236838835	0	0.157991245	0
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	5 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0.009012822	0
Sacramento	2028 Industrial - Misc - Sweepers/Scrubbers	Aggregate	50 Gasoline	0.000409401	0.000370567	0.000445052	0.035455752	0.000901773	0.320768012	2.21E-05	1.67E-05	3.90E-06	5.01E-06	14304.35	5456.75	10.58	190986.35
Sacramento	2028 Industrial - Mower	Aggregate	100 Diesel	2.52E-05	3.05E-05	3.63E-05	0.000517717	0.000283543	0.084712614	2.11E-05	1.94E-05	8.02E-07	0	2752.751185	1436.912369	2.622518272	49150.7732
Sacramento	2028 Industrial - Mower	Aggregate	175 Diesel	7.62E-06	9.22E-06	1.10E-05	0.000160388	4.85E-05	0.025837876	1.75E-06	1.61E-06	2.45E-07	0	839.6062914	360.367462	0.584731282	16773.69416
Sacramento	2028 Industrial - Mower	Aggregate	300 Diesel	3.39E-07	4.10E-07	4.88E-07	2.18E-06	1.83E-06	0.001106182	1.29E-07	1.18E-07	9.93E-08	0	35.94557432	10.71534609	0.015797386	712.5706706
Sacramento	2028 Industrial - Mower	Aggregate	50 Diesel	0.000192462	0.000232879	0.000277145	0.002221265	0.001735504	0.27743696	6.18E-05	5.69E-05	2.63E-06	0	9015.362408	11896.80895	21.08788217	97389.3514
Sacramento	2028 Industrial - Mower	Aggregate	75 Diesel	8.61E-05	0.000104179	0.000123981	0.001138197	0.000973049	0.182511181	1.95E-05	1.80E-05	1.73E-06	0	5930.797648	4817.020816	9.525959034	105728.2608
Sacramento	2028 Industrial - Mower	Aggregate	9999 Diesel	1.54E-05	1.87E-05	2.22E-05	0.000145909	0.000243809	0.048949627	6.71E-06	6.17E-06	4.64E-07	0	1590.426673	57.50191567	0.126379084	31531.94413
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	100 Diesel	2.56E-05	3.10E-05	3.69E-05	0.00442228	0.000240272	0.075499119	1.83E-05	1.68E-05	7.15E-07	0	2453.357056	1476.787275	3.619638554	43128.18364
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	175 Diesel	7.08E-05	8.57E-05	0.000101964	0.001367805	0.000503186	0.229839151	2.42E-05	2.23E-05	2.18E-06	0	7468.663807	3373.403998	5.92625229	149975.8108
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	300 Diesel	4.96E-05	5.97E-05	7.11E-05	0.000565518	0.000377932	0.151926199	1.80E-05	1.66E-05	4.64E-06	0	4936.87891	1257.048964	2.655236	100126.7279
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	50 Diesel	0.000131931	0.000168565	0.000200605	0.00147374	0.001235479	0.207845387	4.37E-05	4.02E-05	1.97E-06	0	6753.972121	9269.659861	23.26333684	69241.4058
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	600 Diesel	0.000127593	0.000154387	0.000183734	0.001091461	0.000790668	0.484212406	3.75E-05	3.45E-05	4.59E-06	0	15734.56663	2441.599471	4.761941168	333677.3766
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	75 Diesel	4.53E-05	5.48E-05	6.53E-05	0.000501894	0.000356323	0.108534084	1.79E-05	1.59E-05	4.09E-07	0	3396.532963	2911.230258	6.81022107	59500.0788
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	750 Diesel	2.91E-05	3.52E-05	4.19E-05	0.000236425	0.000213078	0.113219483	2.04E-05	1.82E-05	9.23E-06	0	3679.086841	324.7669495	0.710143873	73760.42398
Sacramento	2028 Industrial - Other General Industrial Equipment	Aggregate	9999 Diesel	4.44E-05	5.38E-05	6.40E-05	0.000350957	0.000780854	0.180300505	1.74E-05	1.60E-05	1.71E-06	0	5858.896379	323.437848	0.63197568	118902.021
Sacramento	2028 Industrial - Other Truck	Aggregate	100 Diesel	2.44E-05	2.96E-05	3.58E-05	4.43E-05	2.31E-05	0.010484456	2.03E-06	1.87E-06	9.93E-08	0	340.7020327	208.8346	0.315947172	6075.235476
Sacramento	2028 Industrial - Other Truck	Aggregate	175 Diesel	2.54E-05	3.08E-05	3.66E-05	0.000522592	0.000121125	0.082887078	4.69E-06	4.32E-06	7.85E-07	0	2693.430058	937.3511656	1.012293505	54216.87489
Sacramento	2028 Industrial - Other Truck	Aggregate	300 Diesel	4.78E-05	5.78E-05	6.88E-05	0.000328587	0.000297972	0.149077024	1.26E-05	1.16E-05	1.41E-06	0	4844.283893	1112.779801	1.437922333	98435.69861
Sacramento	2028 Industrial - Other Truck	Aggregate	50 Diesel	6.22E-06	7.52E-06	8.95E-06	6.99E-05	5.25E-05	0.008538518	1.65E-06	1.52E-06	8.09E-08	0	277.4606277	461.9467523	1.807666684	4947.549031
Sacramento	2028 Industrial - Other Truck	Aggregate	600 Diesel	0.0001678	0.000203038	0.000241632	0.001134228	0.000741482	0.546255107	3.67E-05	3.37E-05	5.17E-06	0	17750.65502	2266.247638	3.683389609	359241.3812
Sacramento	2028 Industrial - Other Truck	Aggregate	75 Diesel	8.91E-06	1.08E-05	1.28E-05	0.000117811	0.000106088	0.019366303	2.41E-06	2.22E-06	1.83E-07	0	629.3114044	449.4766499	0.71088237	11251.65041
Sacramento	2028 Industrial - Other Truck	Aggregate	750 Diesel	1.58E-05	1.91E-05	2.28E-05	4.47E-05	0.000128862	0.042649856	5.63E-06	5.18E-06	4.04E-07	0	1385.917969	104.8212564	0.179137264	27473.87721
Sacramento	2028 Industrial - Other Truck	Aggregate	9999 Diesel	1.38E-05	1.67E-05	1.99E-05	9.65E-05	0.000218413	0.048159261	4.90E-06	4.51E-06	4.56E-07	0	1564.94359	37.86779172	0.063189544	31022.83118
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	100 Diesel	3.19E-07	3.87E-07	4.60E-07	5.76E-06	2.03E-06	0.000995428	1.42E-07	1.31E-07	9.43E-09	0	32.34660636	16.721041	0.031654234	578.7109279
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	175 Diesel	8.05E-06	9.74E-06	1.16E-05	0.000152466	5.58E-05	0.032749432	2.46E-06	2.27E-06	2.34E-07	0	803.5872095	288.7020908	0.505667933	16223.13955
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	300 Diesel	7.16E-06	8.66E-06	1.03E-05	5.63E-05	2.98E-05	0.027141785	1.39E-06	1.28E-06	2.57E-07	0	881.97703	209.6047978	0.316007182	17599.52558
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	50 Diesel	1.85E-07	2.24E-07	2.66E-07	1.30E-06	1.03E-06	0.00017186	2.88E-08	2.65E-08	1.63E-09	0	5.584634045	8.31934166	0.015797386	99.58251967
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	600 Diesel	2.57E-06	3.11E-06	3.70E-06	2.19E-05	5.71E-06	0.011125362	3.75E-07	3.45E-07	1.05E-07	0	361.5205756	59.73706829	0.094784316	7166.638689
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	75 Diesel	4.88E-07	5.90E-07	7.03E-07	8.33E-06	6.92E-06	0.001443721	5.89E-08	5.41E-08	1.37E-08	0	46.91396792	40.32527112	0.079111392	793.7626367
Sacramento	2028 Industrial - Railcars or Track Cars	Aggregate	9999 Diesel	1.47E-06	1.78E-06	2.12E-06	1.01E-05	2.79E-05	0.004758322	7.69E-07	7.07E-07	4.51E-08	0	154.6224073	10.50292723	0.015797386	3065.174284
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	100 Diesel	2.67E-05	3.23E-05	3.84E-05	0.000550443	0.000271728	0.093860313	2.10E-05	1.93E-05	8.89E-07	0	3050.007251	1404.489365	4.601993495	53431.59491
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	175 Diesel	6.39E-06	7.73E-06	9.20E-06	0.000122531	5.61E-05	0.021138265	2.70E-06	2.48E-06	2.00E-07	0	686.8916243	251.098408	0.632210968	13747.07587
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	300 Diesel	6.38E-06	7.72E-06	9.19E-06	5.72E-05	3.86E-05	0.028635224	1.64E-06	1.51E-06	2.71E-07	0	930.5065884	185.2360581	0.458124194	18627.39092
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	50 Diesel	4.52E-05	5.47E-05	6.51E-05	0.000541981	0.000464272	0.087339011	1.31E-05	1.21E-05	2.27E-06	0	2838.096401	2927.830782	11.08130889	44765.07804
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	600 Diesel	1.02E-06	1.23E-06	1.47E-06	9.16E-06	5.26E-06	0.004475808	2.82E-07	2.59E-07	4.24E-08	0	145.4421646	19.90706953	0.047392158	2948.376272
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	75 Diesel	2.50E-05	3.02E-05	3.60E-05	0.000412692	0.000376812	0.073300205	7.04E-06	6.47E-06	6.85E-07	0	2349.407761	1297.202049	4.283466954	40884.39226
Sacramento	2028 Industrial - Sweepers/Scrubbers	Aggregate	9999 Diesel	1.52E-06	1.84E-06	2.19E-06	1.73E-05	1.05E-05	0.003906334	6.22E-07	5.72E-07	6.62E-08	0	295.5869644	5.790115595	0.015797386	5859.597341
Sacramento	2028 Industrial - Tow Tractor	Aggregate	600 Diesel	5.06E-07	6.12E-07	7.28E-07	3.97E-06	4.95E-06	0.002088256	1.47E-07	1.35E-07	1.98E-08	0	67.85824214	8.455025377	0.015797386	1345.194537
Sacramento	2028 Industrial - Yard Goat	Aggregate	100 Diesel	3.96E-06	4.79E-06	5.70E-06	6.56E-05	3.04E-05	0.010750618	2.03E-06	1.86E-06	1.02E-07	0	349.3432113	182.5749205	0.189568632	6300.675175
Sacramento	2028 Industrial - Yard Goat	Aggregate	175 Diesel	0.000486404	0.000588549	0.000700424	0.009168457	0.002720811	1.438721311	0.000115578	0.000106538	1.36E-05	0	46751.5	14728.31391	11.83302995	933775.4291
Sacramento	2028 Industrial - Yard Goat	Aggregate	300 Diesel	0.00027892	0.000337493	0.000401644	0.001932457	0.001179735	0.893086838	5.50E-05	5.06E-05	8.46E-06	0	29021.01263	7555.756195	6.935797052	583591.5275
Sacramento	2028 Industrial - Yard Goat	Aggregate	50 Diesel	2.03E-06	2.45E-06	2.92E-06	2.32E-05	1.77E-05	0.002511693	7.19E-07	6.61E-07	2.38E-08	0	81.61790123	120.9338115	0.221163404	1455.373126
Sacramento	2028 Industrial - Yard Goat	Aggregate	600 Diesel	2.36E-05	2.85E-05	3.39E-05	0.000152065	0.000110756	0.074496527	4.95E-06	4.55E-06	7.06E-07	0	2420.777651	338.5214497	0.316234501	49827.55469
Sacramento	2028 Industrial - Yard Goat	Aggregate	75 Diesel	2.53E-06	3.06E-06	3.65E-06	2.86E-05	2.71E-05	0.004460078	7.04E-07	6.48E-07	4.22E-08	0	144.9310199	115.7506299	0.142176474	2615.051462
Sacramento	2028 Industrial - Yard Goat	Aggregate	9999 Diesel	4.80E-06	5.80E-06	6.91E-06	3.03E-05	6.98E-05	0.015575183	1.52E-06	1.40E-06	1.48E-07	0	505.1182767	15.24414343	0.015797386	10033.08544
Sacramento	2028 Lawn and Garden - Misc - Chainsaws	Aggregate	2 Gasoline	0.206369177

Sacramento	2028 Light Commercial - Misc - Pressure Washers	Aggregate	5 Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	658720.40991	0
Sacramento	2028 Light Commercial - Misc - Pressure Washers	Aggregate	50 Gasoline	2.55E-05	2.34E-05	2.80E-05	0.001845616	4.23E-05	0.023311312	1.61E-06	1.21E-06	2.83E-07	3.50E-07	1000.1	401.5	3.45	11643.5		
Sacramento	2028 Light Commercial - Misc - Pressure Washers	Aggregate	50 Diesel	2.85E-06	3.39E-06	4.10E-06	4.93E-05	4.89E-05	0.009089436	8.32E-07	7.65E-07	1.14E-07	7.44E-08	295.65	452.6	3.11	17198.8		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	100 Gasoline	0.0006442	0.000592535	0.000708903	0.034898881	0.001662056	1.306854394	9.11E-05	6.88E-05	1.26E-05	1.81E-05	51607.35	8705.25	39.43	809588.25		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	15 Gasoline	0.013074973	0.013205724	0.014388211	0.855133278	0.007328779	1.949019362	2.39E-05	3.17E-05	3.18E-05	4.38E-05	1245115.5498	0	3132.260884	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	15 Diesel	0.000747493	0.00089907	0.001074533	0.004672994	0.005640863	0.777251305	0.000156817	0.000207552	7.33E-06	6.31E-06	25118.84108	0	186.8091112	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	175 Gasoline	2.47E-05	2.27E-05	2.71E-05	0.001974176	8.16E-05	0.059329334	4.25E-06	3.21E-06	5.89E-07	8.29E-07	2365.2	255.5	1.18	36792		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	2 Gasoline	0.006102037	0.006163056	0.006714919	0.057091216	0.000363825	0.169167795	1.64E-06	2.17E-06	2.76E-06	3.81E-06	10449.84497	0	1135.35515	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	2 Electric	0	0	0	0	0	0	0	0	0	0	0	0	88947.02213	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	25 Gasoline	9.71E-05	9.81E-05	0.000106862	0.007042426	6.97E-05	0.016050306	1.98E-07	2.62E-07	2.60E-07	3.59E-07	1024.039326	0	10.43045613	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	25 Diesel	0.000606721	0.000729752	0.000872172	0.002475692	0.004609472	0.623600872	0.000213362	0.000160626	5.73E-06	4.93E-06	19633.18711	0	55.78637241	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	5 Gasoline	0.010073098	0.01017383	0.01108483	0.454676371	0.003353657	1.055152185	1.23E-05	1.63E-05	1.74E-05	2.40E-05	67314.59915	0	3438.921395	0		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	50 Gasoline	0.000435851	0.000400896	0.000479628	0.035212878	0.000678879	0.347594961	2.40E-05	1.81E-05	4.23E-06	5.37E-06	15315.4	6872.95	31.12	213061.45		
Sacramento	2028 Light Commercial - Misc - Pumps	Aggregate	50 Diesel	0.000568089	0.000667409	0.000807565	0.00741029	0.006239378	1.096118653	0.000135022	0.000125048	1.38E-05	8.97E-06	35653.2	22776	56.55	842712		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	100 Gasoline	0.000700869	0.000644659	0.000771264	0.033571221	0.001928934	1.094849579	7.63E-05	5.77E-05	1.06E-05	1.52E-05	43515.3	13118.1	63.11	918267		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	15 Gasoline	0.065038361	0.065734699	0.071620819	3.887564665	0.029187243	6.94121341	0.000114348	0.000151343	0.000126277	0.000174309	495214.4563	0	10214.80904	0		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	15 Diesel	0.000450806	0.000542121	0.000648041	0.002818452	0.003401031	0.465784141	9.46E-05	0.000121354	4.42E-06	3.81E-06	15150.45393	0	84.45868381	0		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	15 Electric	0	0	0	0	0	0	0	0	0	0	0	0	43741.2685	0		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	175 Gasoline	6.84E-05	6.29E-05	7.52E-05	0.004602306	0.000264184	0.13631693	9.77E-06	7.38E-06	1.35E-06	1.91E-06	5442.15	897.9	4.35	116727		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	25 Diesel	0.000747111	0.000898861	0.001073983	0.003048446	0.005664863	0.743235765	0.000149405	0.000197801	7.05E-06	6.08E-06	24175.05026	0	74.33738468	0		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	50 Gasoline	0.001025885	0.000943609	0.001128924	0.077701391	0.001592683	0.697435267	4.81E-05	3.63E-05	8.48E-06	1.09E-05	31152.75	12840.7	61.85	577831.5		
Sacramento	2028 Light Commercial - Misc - Welders	Aggregate	50 Diesel	0.001994362	0.002373456	0.002871882	0.024179314	0.011603023	3.118013195	0.000431791	0.000397248	3.92E-05	2.55E-05	101418.9	85442.85	133.05	3930371.1		
Sacramento	2028 Locomotive - Line Haul	Aggregate	0 Diesel	0.03155	0.038	0.045	0.228	0.925	0	0.021	0.03	0.001	0.001	0	0	0	0		
Sacramento	2028 Locomotive - Passenger	Aggregate	0 Diesel	0.003919232	0.00000387	0.00000461	0.015254983	0.07944523	0	0.001701135	0.001565045	0.0000602	0.0000532	0	0	0	0		
Sacramento	2028 Locomotive - Short Line	Aggregate	0 Diesel	0.000242451	4.87E-09	5.80E-09	0.000646535	0.006566368	0	0.000111387	0.000102476	0.00000313	0.00000277	0	0	0	0		
Sacramento	2028 Locomotive - Switcher	Aggregate	0 Diesel	0.001760454	0.000000116	0.000000138	0.004756432	0.027555432	0	0.000090711	0.000144554	0.000002159	0.000001541	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - A/C Unit	Aggregate	100 Diesel	2.49E-06	2.97E-06	3.59E-06	6.17E-05	3.43E-05	0.01088488	9.23E-07	8.50E-07	1.25E-07	8.91E-08	354.05	98.55	0.33	9953.55		
Sacramento	2028 Military Tactical Support - Misc - A/C Unit	Aggregate	300 Diesel	1.39E-06	1.65E-06	2.00E-06	1.59E-05	1.09E-05	0.009201651	3.17E-07	2.92E-07	1.03E-07	7.53E-08	299.3	54.75	0.16	11388		
Sacramento	2028 Military Tactical Support - Misc - A/C Unit	Aggregate	600 Diesel	8.18E-07	9.73E-07	1.18E-06	9.36E-06	6.07E-06	0.005498548	1.86E-07	1.71E-07	5.37E-08	4.50E-08	178.85	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Aircraft Support	Aggregate	100 Diesel	4.57E-07	5.43E-07	6.57E-07	1.13E-05	6.27E-06	0.001795444	1.69E-07	1.55E-07	2.28E-08	1.47E-08	58.4	0	0.09	0		
Sacramento	2028 Military Tactical Support - Misc - Aircraft Support	Aggregate	175 Diesel	1.01E-06	1.20E-06	1.45E-06	2.93E-05	8.63E-06	0.005835193	3.38E-07	2.92E-07	6.44E-08	4.77E-08	189.8	51.1	0.16	7154		
Sacramento	2028 Military Tactical Support - Misc - Cart	Aggregate	100 Diesel	2.33E-07	2.77E-07	3.36E-07	5.76E-06	3.20E-06	0.000897722	8.63E-08	7.94E-08	1.16E-08	7.55E-09	29.2	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Cart	Aggregate	175 Diesel	8.24E-08	9.80E-08	1.19E-07	2.40E-06	7.07E-07	0	2.60E-08	2.39E-08	5.27E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Cart	Aggregate	300 Diesel	3.05E-07	3.63E-07	4.40E-07	3.51E-06	2.39E-06	0.001795444	6.99E-08	6.43E-08	2.26E-08	1.47E-08	58.4	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Communications	Aggregate	100 Diesel	1.15E-07	1.37E-07	1.66E-07	2.85E-06	1.58E-06	0	4.26E-08	3.92E-08	5.75E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Communications	Aggregate	50 Diesel	6.68E-08	7.95E-08	9.61E-08	1.03E-06	9.19E-07	0	1.55E-08	1.42E-08	2.11E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Compressor	Aggregate	100 Diesel	2.57E-06	3.06E-06	3.70E-06	6.36E-05	3.53E-05	0.011109311	9.52E-07	8.76E-07	1.28E-07	9.09E-08	361.35	138.7	0.49	9847.7		
Sacramento	2028 Military Tactical Support - Misc - Compressor	Aggregate	175 Diesel	1.20E-07	1.43E-07	1.73E-07	3.49E-06	1.03E-06	0	3.79E-08	3.48E-08	7.68E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Compressor	Aggregate	300 Diesel	2.76E-07	3.29E-07	3.98E-07	3.18E-06	2.17E-06	0.001795444	6.33E-08	5.83E-08	2.05E-08	1.47E-08	58.4	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Compressor	Aggregate	50 Diesel	8.18E-08	9.73E-08	1.18E-07	1.26E-06	1.13E-06	0	1.89E-08	1.74E-08	2.59E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Crane	Aggregate	600 Diesel	1.59E-06	1.90E-06	2.30E-06	1.83E-05	1.18E-05	0.01088488	1.63E-07	1.34E-07	1.05E-07	8.91E-08	354.05	0	0.09	0		
Sacramento	2028 Military Tactical Support - Misc - Crane	Aggregate	100 Diesel	2.53E-07	3.02E-07	3.65E-07	9.63E-06	4.16E-06	0.001683229	3.16E-08	2.91E-08	2.01E-08	1.38E-08	54.75	0	0.06	0		
Sacramento	2028 Military Tactical Support - Misc - Crane	Aggregate	175 Diesel	4.54E-08	5.41E-08	6.54E-08	2.14E-06	2.28E-07	0	7.16E-09	6.59E-09	4.86E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Crane	Aggregate	300 Diesel	4.52E-08	5.38E-08	6.52E-08	7.39E-07	2.10E-07	0	6.97E-09	6.41E-09	4.92E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Deicer	Aggregate	100 Diesel	1.06E-07	1.26E-07	1.52E-07	2.61E-06	1.45E-06	0	3.91E-08	3.59E-08	5.27E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Generator	Aggregate	100 Diesel	1.34E-05	1.59E-05	1.93E-05	0.000330645	0.000183716	0.057903074	4.95E-06	4.55E-06	6.68E-07	4.74E-07	1883.4	660.65	2.22	54833.95		
Sacramento	2028 Military Tactical Support - Misc - Generator	Aggregate	175 Diesel	1.43E-05	1.70E-05	2.06E-05	0.000415605	0.000122551	0.082702646	4.51E-06	4.15E-06	9.14E-07	6.77E-07	2690.05	532.9	1.79	78336.3		
Sacramento	2028 Military Tactical Support - Misc - Generator	Aggregate	300 Diesel	4.94E-06	5.88E-06	7.12E-06	5.68E-05	3.88E-05	0.033103501	1.13E-06	1.04E-06	3.66E-07	2.71E-07	1076.75	127.75	0.47	28488.25		
Sacramento	2028 Military Tactical Support - Misc - Generator	Aggregate	50 Diesel	4.28E-07	5.10E-07	6.17E-07	6.61E-06	5.89E-06	0.001234368	9.91E-08	9.12E-08	1.35E-08	1.01E-08	40.15	0	0.07	0		
Sacramento	2028 Military Tactical Support - Misc - Generator	Aggregate	600 Diesel	3.08E-06	3.67E-06	4.44E-06	3.53E-05	2.29E-05	0.020647608	7.02E-07	6.46E-07	2.02E-07	1.69E-07	671.6	58.4	0.16	20323.2		
Sacramento	2028 Military Tactical Support - Misc - Generator	Aggregate	750 Diesel	1.64E-07	1.95E-07	2.36E-07	1.87E-06	1.23E-06	0.001346583	3.75E-08	3.45E-08	1.10E-08	1.10E-08	43.8	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Hydraulic Unit	Aggregate	100 Diesel	1.53E-06	1.82E-06	2.20E-06	3.77E-05	2.10E-05	0.006508485	5.65E-07	5.20E-07	7.63E-08	5.33E-08	211.7	58.4	0.17	5548		
Sacramento	2028 Military Tactical Support - Misc - Lift	Aggregate	100 Diesel	4.56E-08	5.42E-08	6.56E-08	1.13E-06	6.26E-07	0	1.69E-08	1.55E-08	2.28E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Light	Aggregate	50 Diesel	1.04E-07	1.24E-07	1.50E-07	1.61E-06	1.44E-06	0	2.41E-08	2.22E-08	3.30E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	100 Diesel	3.03E-07	3.61E-07	4.36E-07	7.49E-06	4.16E-06	0.001683229	1.12E-07	1.03E-07	1.51E-08	1.38E-08	54.75	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	175 Diesel	4.25E-07	5.06E-07	6.12E-07	1.24E-05	3.65E-06	0.001907659	1.34E-07	1.24E-07	2.72E-08	1.56E-08	62.05	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	300 Diesel	2.03E-07	2.41E-07	2.92E-07	2.33E-06	1.59E-06	0.001683229	4.64E-08	4.27E-08	1.50E-08	1.38E-08	54.75	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	50 Diesel	2.09E-08	2.48E-08	3.00E-08	3.23E-07	2.87E-07	0	4.83E-09	4.44E-09	6.60E-10	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	600 Diesel	8.24E-08	9.81E-08	1.19E-07	9.44E-07	6.12E-07	0	1.88E-08	1.73E-08	4.54E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Other Tactical Support Equipment	Aggregate	750 Diesel	9.60E-08	1.14E-07	1.38E-07	1.09E-06	7.22E-07	0	2.20E-08	2.02E-08	6.43E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Pressure Washers	Aggregate	175 Diesel	8.16E-08	9.74E-08	1.18E-07	2.38E-06	7.03E-07	0	2.59E-08	2.38E-08	5.24E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Pump	Aggregate	100 Diesel	1.08E-06	1.28E-06	1.55E-06	2.67E-05	1.48E-05	0.00448861	3.99E-07	3.67E-07	5.39E-08	3.67E-08	146	54.75	0.16	5475		
Sacramento	2028 Military Tactical Support - Misc - Pump	Aggregate	50 Diesel	9.44E-07	1.12E-06	1.36E-06	1.46E-05	1.30E-05	0.001907659	2.18E-07	2.01E-07	2.99E-08	1.56E-08	62.05	58.4	0.16	2277.6		
Sacramento	2028 Military Tactical Support - Misc - Start Cart	Aggregate	100 Diesel	2.40E-08	2.85E-08	3.45E-08	5.93E-07	3.29E-07	0	8.88E-09	8.17E-09	1.20E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Start Cart	Aggregate	600 Diesel	4.32E-08	5.14E-08	6.22E-08	4.95E-07	3.21E-07	0	9.84E-09	9.05E-09	2.84E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Test Stand	Aggregate	100 Diesel	7.28E-07	8.66E-07	1.05E-06	1.80E-05	1.00E-05	0.003029812	2.69E-07	2.48E-07	3.64E-08	2.48E-08	98.55	29.2	0.14	2686.4		
Sacramento	2028 Military Tactical Support - Misc - Test Stand	Aggregate	175 Diesel	5.10E-08	6.07E-08	7.34E-08	1.48E-06	4.38E-07	0	1.61E-08	1.48E-08	3.26E-09	0	0	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Test Stand	Aggregate	300 Diesel	9.46E-07	1.13E-06	1.36E-06	1.09E-05	7.42E-06	0.005947409	2.17E-07	1.99E-07	7.02E-08	4.87E-08	193.45	14.6	0.13	2876.2		
Sacramento	2028 Military Tactical Support - Misc - Test Stand	Aggregate	600 Diesel	6.28E-07	7.48E-07	9.05E-07	7.20E-06	4.67E-06	0.003927534	1.43E-07	1.32E-07	4.13E-08	3.21E-08	127.75	0	0	0		
Sacramento	2028 Military Tactical Support - Misc - Welder	Aggregate	100 Diesel	8.62E-07	1.03E-06	1.24E-06	2.13E-05	1.18E-05	0.003703104	3.19E-07	2.94E-07	4.31E-08	3.03E-08	120.45	58.4	0.16	3620.8		
Sacramento	2028 Military Tactical Support - Misc - Welder	Aggregate	50 Diesel	3.07E-07	3.65E-07	4.42E-07	4.74E-06	4.22E-06	0	1.29E-07	1.18E-07	1.78E-08	0	0	0	0	0		
Sacramento	2028 Ocean Going Vessels - Bulk Cargo	Aggregate	0 Diesel	0.00107312	0.001329596	0.001588701	0.002518582	0.024308453	1.112566658	0.000340426	0.000331192	0.000707289	3.15E-05	36188.20048	847.5700084	0	601444.7586		
Sacramento	2028 Ocean Going Vessels - General Cargo	Aggregate	0 Diesel	0.001546966	0.000991563	0.001194717	0.003787838	0.035917268	1.732176461	0.000501814	0.000478949	0.000104944	4.56E-05	56342.10643	1008.500054	0	924291.1071		
Sacramento	2028 Ocean Going Vessels - Tanker	Aggregate	Handysize 0.0010752	0.001399074	0.001671746	0.002549332	0.02536957	1.159032452	0.000350611	0.000332562	0.000701036	3.32E-05	37699.58271	468.8134558	0	628968.0878		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	100 Diesel	1.25E-05	1.51E-05	1.80E-05	0.000287019	0.000117129	0.051699675	9.91E-06	9.12E-06	4.90E-07	0	1679.989952	591.5211445	1.119532356	26602.22539		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	175 Diesel	0.000163709	0.000203035	0.000243628	0.003790791	0.001509871	0.568500556	4.73E-05	4.35E-05	3.99E-06	0	18473.52514	4856.609859	14.65625	338390.4948		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	300 Diesel	0.000258899	0.000313258	0.000372803	0.002166937	0.001261875	0.973585313	6.18E-05	5.69E-05	9.22E-06	0	31636.8246	4982.465656	7.682284025	578087.9139		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	50 Diesel	1.89E-05	2.28E-05	2.72E-05	0.00023141	0.000174079	0.034069997	5.89E-06	5.42E-06	3.23E-07	0	1107.110501	711.5911602	1.698846002	162881.1351		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	600 Diesel	0.000597974	0.000723548	0.000861037	0.008610703	0.003139894	2.195507634	0.000164204	0.000151102	2.08E-05	0	71343.40328	6411.533223	10.81158919	1373561.573		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	75 Diesel	2.73E-05	3.31E-05	3.94E-05	0.000380909	0.000319576	0.064521433	4.61E-06	4.24E-06	6.11E-07	0	2096.635214	1106.007319	2.239119471	34937.37035		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	750 Diesel	7.92E-05	9.58E-05	0.000114063	0.000653805	0.000472091	0.337069042	2.41E-05	2.21E-05	3.19E-06	0	10953.11734	651.3569444	1.119955284	218100.17		
Sacramento	2028 Oil Drilling - Drill Rig	Aggregate	9999 Diesel	6.57E-05	7.95E-05	9.46E-05	0.000620504	0.001159005	0.831329743	2.50E-05	2.29E-05	3.29E-06	0	9850.253827	458.4562397	0.772528019	198270.1668		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	100 Diesel	1.23E-05	1.49E-05	1.77E-05	0.000198669	0.000124778	0.031151148	9.47E-06	8.71E-06	2.95E-07	0	1012.261999	408.6799464	0.771990108	18050.17117		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	175 Diesel	0.000204087	0.000246945	0.000293885	0.003812089	0.001376245	0.670459842	6.40E-05	5.89E-05	6.35E-06	0	21786.70953	5535.97541	8.610111957	390743.7846		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	300 Diesel	0.000199098	0.000240909	0.000286701	0.001880313	0.000976291	0.765912387	4.83E-05	4.44E-05	7.26E-06	0	24888.47233	3901.666023	6.258358208	446744.7812		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	50 Diesel	1.55E-05	1.88E-05	2.23E-05	0.000190927	0.000147177	0.030829285	5.08E-06	4.67E-06	2.92E-07	0	1001.803001	663.9742402	1.543982116	13191.14934		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	600 Diesel	0.000652212	0.000789176	0.000939185	0.005396711	0.003883572	2.42193929	0.000178827	0.000164521	2.29E-05	0	78701.33977	7227.058995	12.35676627	1517087.045		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	75 Diesel	2.75E-05	3.33E-05	3.97E-05	0.000378911	0.000315466	0.06877902	5.95E-06	5.44E-06	6.52E-07	0	2234.986241	991.2861779	1.968722544	32556.61591		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	750 Diesel	0.000102068	0.000146023	0.000173779	0.000979119	0.000830532	0.434017796	4.20E-05	3.86E-05	4.11E-06	0	14103.48399	847.2651991	1.545069002	278182.8127		
Sacramento	2028 Oil Drilling - Drill Rig (Mobile)	Aggregate	9999 Diesel	0.000102247	0.000123719	0.000147236	0.00069278	0.001659333	0.361579225	3.58E-05	3.29E-05	3.43E-06	0	11749.58	614.9108312	1.158647981	235164.8716		
Sacramento	2028 Oil Drilling - Misc - Compressors (Workover)	Aggregate	25 Diesel	4.39E-06	4.99E-06	6.03E-06	2.06E-05	3.82E-05	0.003815319	1.48E-06	1.26E-06	6.32E-08	124.1	240.9	0.32	5781.6			
Sacramento	2028 Oil Drilling - Misc - Generator (Drilling)	Aggregate	50 Diesel	2.51E-06	2.99E-06	3.62E-06	2.98E-05	2.02E-05	0.003590888	3.99E-07	3.67E-07	4.17E-08	2.94E-08	116.8	116.8	0	3854.4		
Sacramento	2028 Oil Drilling - Workover Rig (Mobile)	Aggregate	100 Diesel	6.71E-06	8.12E-06	9.66E-06	0.000012175	4.11E-05	0.02573708	3.44E-06	3.16E-06	2.44E-07	0	836.3309005	227.3827496	0.231597324	9152.155671		
Sacramento	2028 Oil Drilling - Workover Rig (Mobile)	Aggregate	175 Diesel	4.07E-06	4.93E-06	5.86E-06	6.58E-06	2.86E-05	0.01606621	1.57E-06	1.45E-06	1.00E-07	0	344.6505778	86.18124204	0.154398216	6021.238989		
Sacramento	2028 Oil Drilling - Workover Rig (Mobile)	Aggregate	300 Diesel	8.32E-05	0.000100629	0.000119757	0.000622521	0.000467911	0.248790737	2.68E-05	2.47E-05	2.36E-06	0	8084.498395	1296.703903	1.814727139	153783.4016		
Sacramento	2028 Oil Drilling - Workover Rig (Mobile)	Aggregate	50 Diesel	4.74E-07	5.73E-07	6.82E-07	6.52E-06	4.81E-06	0.00091348	9.31E-08	8.57E-08	6.65E-09	0	29.68368993	21.60429969	0.038599554	529.3053425		
Sacramento	2028 Oil Drilling - Workover Rig (Mobile)	Aggregate	600 Diesel	0.001564617	0.001891186	0.002253048	0.013836694	0.009011856	5.944939252	0.000555619	0.000507166	4.56E-05	0	193170.6036	18183.98553	21.66984722	3790978.914		
Sacramento	2028 Oil Drilling - Workover Rig (Mobile)	Aggregate	750 Diesel	6.40E-05	7.74E-05	9.21E-05	0.000513293	0.000510805	0.195392931	2.41E-05	2.22E-05	1.85E-06	0	6349.327381	386.9785167	0.656391931	126309.012		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	120 Gasoline	0.306647402	0.309713881	0.337446766	1.193972877	0.026630706	4.225610925	0.015191026	0.01147766	6.84E-05	9.44E-05	267492.0662	0	1457.167511	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	120 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	15 Gasoline	1.55E-06	1.56E-06	1.70E-06	3.87E-05	7.48E-07	9.51E-05	7.64E-09	5.78E-09	1.71E-09	2.36E-09	6.017005355	0	0.265984451	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	15 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	175 Gasoline	0.115816515	0.116974311	0.127448807	1.189534624	0.064385783	6.247444487	0.009002239	0.006801676	8.10E-05	0.000111797	317807.1533	0	1326.912461	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	175 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	25 Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	25 Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sacramento	2028 Pleasure Craft - Personal Water Craft	Aggregate	250

Sacramento	2028 Portable Equipment - Non-Rental Generator	Aggregate	75	Diesel	0.000892992	0.00108052	0.001285909	0.013270775	0.009513299	1.78759607	0.000197302	0.000181518	1.65E-05	1.46E-05	58144.72739	56152.73666	39.19554056	3519878.336
Sacramento	2028 Portable Equipment - Non-Rental Generator	Aggregate	750	Diesel	0.000652168	0.000789123	0.000939121	0.003991015	0.003964453	1.846432728	0.000216396	0.000199094	1.71E-05	1.51E-05	60058.49383	5264.319062	3.674581927	3635731.059
Sacramento	2028 Portable Equipment - Non-Rental Generator	Aggregate	9999	Diesel	0.003475194	0.004204985	0.005004279	0.025103716	0.048859978	11.79588443	0.000998345	0.000918477	0.000109233	9.65E-05	383682.0273	19302.50323	13.47346707	23226767.35
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	100	Diesel	0.000146719	0.000177531	0.000211276	0.006222657	0.002267373	0.975759501	0.00016228	0.000149297	9.04E-06	7.98E-06	31738.30547	22124.38932	66.14247469	1921325.955
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	175	Diesel	0.000546073	0.000660749	0.000786345	0.023422686	0.00414659	4.211523461	0.000361672	0.000148739	3.90E-05	3.45E-05	136987.2576	64324.61338	192.3013209	8292726.229
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	300	Diesel	0.000278757	0.000337296	0.00040141	0.002890468	0.002026563	1.380608784	9.40E-05	8.65E-05	1.28E-05	1.13E-05	449067.4526	11881.61648	35.52095863	2718497.22
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	600	Diesel	0.000329341	0.000398502	0.000474251	0.003346958	0.003051584	1.615760764	0.000115085	0.000105878	1.50E-05	1.32E-05	52555.47975	7784.507352	23.27235221	3185124.842
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	75	Diesel	0.000180899	0.000218888	0.000260495	0.004318986	0.003339064	0.677173053	5.61E-05	5.16E-05	6.27E-06	5.54E-06	22026.25258	20895.25658	62.46780277	1333392.257
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	750	Diesel	7.03E-05	8.51E-05	0.000101275	0.001046811	0.000243335	0.559597064	1.81E-05	1.67E-05	5.18E-06	4.58E-06	18201.88533	1638.843653	4.89944257	1101878.446
Sacramento	2028 Portable Equipment - Non-Rental Other	Aggregate	9999	Diesel	0.002646995	0.003202864	0.003811673	0.030218447	0.051496894	15.45154564	0.000706242	0.000649742	0.000143143	0.000126436	502588.8808	10242.77283	30.62151606	30424972.18
Sacramento	2028 Portable Equipment - Non-Rental Pump	Aggregate	100	Diesel	0.00011286	0.000136561	0.000162519	0.003754157	0.001654851	0.591363691	0.000108223	9.96E-05	5.48E-06	4.84E-06	19235.15114	13959.95088	41.64526184	1164428.742
Sacramento	2028 Portable Equipment - Non-Rental Pump	Aggregate	175	Diesel	0.00023266	0.000281519	0.000335031	0.008140602	0.002405578	1.456240681	8.06E-05	7.41E-05	1.35E-05	1.19E-05	47366.80662	23403.44707	69.81705662	2867420.727
Sacramento	2028 Portable Equipment - Non-Rental Pump	Aggregate	300	Diesel	4.75E-05	5.75E-05	6.84E-05	0.00067471	0.000228581	0.351862408	9.69E-06	8.92E-06	3.26E-06	2.88E-06	11444.94785	3284.694326	9.79888514	692837.0949
Sacramento	2028 Portable Equipment - Non-Rental Pump	Aggregate	50	Diesel	1.72E-05	2.09E-05	2.48E-05	0.000102544	9.05E-05	0.012523489	5.81E-06	5.35E-06	1.04E-07	9.21E-08	366.0396651	410.5867907	1.224860642	19932.02229
Sacramento	2028 Portable Equipment - Non-Rental Pump	Aggregate	600	Diesel	0.000276077	0.000334054	0.000397552	0.003536719	0.000887622	1.8538535	4.90E-05	4.51E-05	1.72E-05	1.52E-05	60299.9928	8622.322605	25.72207349	3650350.563
Sacramento	2028 Portable Equipment - Non-Rental Pump	Aggregate	75	Diesel	0.000161112	0.000194946	0.000232001	0.0038621	0.003073011	0.611001582	6.21E-05	5.71E-05	5.66E-06	5.00E-06	19873.9083	19297.57916	57.5684502	1203096.866
Sacramento	2028 Portable Equipment - Rental Compressor	Aggregate	100	Diesel	2.62E-05	3.17E-05	3.77E-05	0.001000018	0.000277758	0.145792133	2.39E-05	2.20E-05	1.35E-06	1.19E-06	4742.147255	3446.106342	6.124303212	287073.0011
Sacramento	2028 Portable Equipment - Rental Compressor	Aggregate	175	Diesel	0.000148316	0.000179462	0.000213575	0.007722645	0.000482024	1.421898095	2.33E-05	2.14E-05	1.32E-05	1.16E-05	46249.75318	21365.85932	37.97067992	2799798.22
Sacramento	2028 Portable Equipment - Rental Compressor	Aggregate	300	Diesel	0.000112759	0.000136438	0.000162373	0.001896197	0.000228167	1.013748092	1.68E-05	1.55E-05	9.39E-06	8.30E-06	32973.95166	8270.65522	14.69832771	1996127.651
Sacramento	2028 Portable Equipment - Rental Compressor	Aggregate	600	Diesel	0.000319919	0.000387102	0.000460683	0.003883943	0.000512827	1.99657058	3.64E-05	3.35E-05	1.85E-05	1.63E-05	64941.99329	7581.433952	13.47346707	3931361.029
Sacramento	2028 Portable Equipment - Rental Compressor	Aggregate	75	Diesel	2.48E-05	3.00E-05	3.58E-05	0.000584909	0.000437533	0.091417444	2.65E-06	2.43E-06	8.47E-07	7.48E-07	2973.514246	2756.885073	4.89944257	180006.1475
Sacramento	2028 Portable Equipment - Rental Compressor	Aggregate	750	Diesel	0.000167908	0.000203169	0.000241788	0.002221359	0.000914487	1.162258959	4.81E-05	4.43E-05	1.08E-05	9.51E-06	37804.53056	3446.106342	6.124303212	2288553.995
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	100	Diesel	0.000733846	0.000887953	0.001056738	0.02114079	0.004989761	2.887636674	0.000476854	0.000438706	2.67E-05	2.36E-05	93925.49574	62021.30699	40.4204012	5685920.848
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	175	Diesel	0.00090377	0.001093561	0.001301428	0.030010585	0.00205446	4.915283991	9.74E-05	8.96E-05	4.55E-05	4.02E-05	159878.315	71418.47471	46.54470441	9678473.741
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	300	Diesel	0.000647492	0.000783465	0.000932388	0.005989253	0.000750522	2.659665357	5.64E-05	5.18E-05	2.46E-05	2.18E-05	86510.32502	26312.06963	17.14804899	5237032.36
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	600	Diesel	0.001257354	0.001521398	0.001810589	0.011431716	0.001946345	5.449997201	0.000332651	0.000220039	5.05E-05	4.46E-05	177270.8089	26312.06963	17.14804899	10731354.46
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	75	Diesel	0.000492446	0.00059586	0.000709123	0.008561799	0.006179779	1.22604086	5.19E-05	4.77E-05	1.13E-05	1.00E-05	39879.14983	37588.6709	24.49721285	2414144.185
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	750	Diesel	0.0005271	0.000637791	0.000759023	0.002776248	0.004042304	1.284423758	0.000202616	0.000186406	1.19E-05	1.05E-05	41778.15696	3758.86709	2.449721285	2529103.432
Sacramento	2028 Portable Equipment - Rental Generator	Aggregate	9999	Diesel	0.00040596	0.000491212	0.000584583	0.003371158	0.007353347	1.55965742	0.000162752	0.000149732	1.44E-05	1.28E-05	50730.61917	3758.86709	2.449721285	3071054.168
Sacramento	2028 Portable Equipment - Rental Other	Aggregate	100	Diesel	6.82E-05	8.25E-05	9.81E-05	0.002050242	0.000465362	0.271703702	4.63E-05	4.26E-05	2.52E-06	2.22E-06	8837.643981	6501.861627	4.89944257	535000.0419
Sacramento	2028 Portable Equipment - Rental Other	Aggregate	175	Diesel	0.000287438	0.000347799	0.00041391	0.006404784	0.001892673	0.984224618	6.64E-05	6.11E-05	9.11E-06	8.05E-06	32013.6484	13003.72325	9.79888514	1937994.252
Sacramento	2028 Portable Equipment - Rental Other	Aggregate	75	Diesel	0.000158112	0.000191315	0.000227681	0.002478706	0.001748426	0.34143297	1.37E-05	1.26E-05	3.16E-06	2.79E-06	11105.71191	11378.25785	8.574024497	672300.9376
Sacramento	2028 Portable Equipment - Rental Other	Aggregate	100	Diesel	0.000267382	0.000323532	0.000385029	0.008346044	0.002020988	1.139221267	0.000395252	0.000179632	1.06E-05	9.32E-06	37055.18883	27897.43447	26.94693413	2243191.468
Sacramento	2028 Portable Equipment - Rental Pump	Aggregate	175	Diesel	0.000235665	0.000285155	0.000339358	0.006239006	0.001798357	0.997287552	5.26E-05	4.84E-05	9.24E-06	8.16E-06	32438.54346	16484.84764	15.92318835	1963715.912
Sacramento	2028 Portable Equipment - Rental Pump	Aggregate	300	Diesel	0.000349139	0.000422458	0.00050276	0.002626979	0.000755653	1.181738855	8.54E-05	7.86E-05	1.09E-05	9.67E-06	38438.14868	11412.58683	11.02374578	2326911.018
Sacramento	2028 Portable Equipment - Rental Pump	Aggregate	600	Diesel	9.62E-05	0.00011637	0.00013849	0.000877692	0.000113323	0.418923298	8.65E-06	7.96E-06	3.88E-06	3.43E-06	13626.22202	2536.130406	2.449721285	824883.8001
Sacramento	2028 Portable Equipment - Rental Pump	Aggregate	75	Diesel	0.000173072	0.000209417	0.000249223	0.004044187	0.003248325	0.630885981	8.40E-05	7.73E-05	5.84E-06	5.16E-06	20520.68361	17752.91284	17.14804899	1242250.38
Sacramento	2028 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	120	Gasoline	0.004156344	0.004197906	0.004573802	0.09350836	0.00219697	1.706945719	0.000215493	0.000162818	2.11E-05	2.46E-05	69686.70241	0	218.139814	0
Sacramento	2028 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	15	Gasoline	0.001668128	0.001684811	0.001835675	0.023453066	0.000490098	0.345839533	5.37E-05	4.06E-05	4.76E-06	5.19E-06	14490.72059	0	678.0785487	0
Sacramento	2028 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	25	Gasoline	0.00090974	0.000918837	0.001001114	0.009503297	0.000818526	0.130719813	2.27E-05	1.71E-05	1.83E-06	2.00E-06	5550.940557	0	305.6129638	0
Sacramento	2028 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - All Terrain Vehicles (Atvs) Active	Aggregate	50	Gasoline	0.008390455	0.008474359	0.009233183	0.169274975	0.003735049	2.9639309	0.000371112	0.000280396	3.60E-05	4.34E-05	121561.1603	0	4860.894339	0
Sacramento	2028 Recreational - Golf Carts	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Golf Carts	Aggregate	15	Gasoline	0.001880975	0.001899785	0.002068899	0.053376484	0.001497685	0.648697658	0.000144281	0.000109013	5.42E-06	9.70E-06	27568.17532	0	739.9605129	0
Sacramento	2028 Recreational - Golf Carts	Aggregate	25	Gasoline	0.000557327	0.000562899	0.000613303	0.015815254	0.000443758	0.192206714	4.27E-05	3.23E-05	1.61E-06	2.87E-06	8168.348237	0	123.3267522	0
Sacramento	2028 Recreational - Golf Carts	Aggregate	5	Gasoline	4.35E-05	4.39E-05	4.78E-05	0.001242226	3.47E-05	0.006864525	3.33E-06	2.51E-06	1.72E-07	1.18E-07	334.4957776	0	17.61810745	0
Sacramento	2028 Recreational - Golf Carts	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Minibikes	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Minibikes	Aggregate	15	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Minibikes	Aggregate	25	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Minibikes	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Minibikes	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Off-Road Motorcycles Active	Aggregate	120	Gasoline	0.007013996	0.00708413 6	0.007718474	0.037842744	0.00026736 7	0.287740417	0.000102778	7.77E-05	4.83E-06	5.35E-06	13862.84957	0	469.6485854	0
Sacramento	2028 Recreational - Off-Road Motorcycles Active	Aggregate	15	Gasoline	0.000605751	0.000611809	0.000666592	0.007529753	9.33E-05	0.053835088	1.60E-05	1.21E-05	1.47E-06	1.11E-06	2528.082837	0	123.9910712	0
Sacramento	2028 Recreational - Off-Road Motorcycles Active	Aggregate	25	Gasoline	0.001916926	0.001936095	0.00210946	0.004427214	2.05E-05	0.020639	2.32E-05	1.75E-05	6.22E-07	5.57E-07	1278.736696	0	53.26920864	0
Sacramento	2028 Recreational - Off-Road Motorcycles Active	Aggregate	5	Gasoline	0.001997984	0.002017964	0.00219866	0.013729559	6.13E-05	0.074269289	5.77E-05	4.36E-05	1.96E-06	1.71E-06	3834.790985	0	184.7662049	0
Sacramento	2028 Recreational - Off-Road Motorcycles Active	Aggregate	50	Gasoline	0.008991702	0.009081619	0.009894819	0.028665395	0.00022552	0.206563042	0.000113281	8.56E-05	4.73E-06	4.41E-06	10554.60255	0	373.9432862	0
Sacramento	2028 Recreational - Snowmobiles Active	Aggregate	120	Gasoline	0	0	0	0	0	0	0	0	0	1.26E-08	0	0	0	0
Sacramento	2028 Recreational - Snowmobiles Active	Aggregate	15	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Snowmobiles Active	Aggregate	25	Gasoline	0	0	0	0	0	0	0	0	0	1.05E-08	0	0	0	0
Sacramento	2028 Recreational - Snowmobiles Active	Aggregate	5	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sacramento	2028 Recreational - Snowmobiles Active	Aggregate	50	Gasoline	0	0	0	0	0	0	0	0	0	8.20E-08	0	0	0	0
Sacramento	2028 Transport Refrigeration Unit - Instate Genset	Aggregate	25	Diesel	0.000254905	0.00260131	0.000367087	0.000283269	0.00384993	0.615406928	8.35E-05	7.67E-05	966.03	1.38E-08	20017.2	42525.24	54.34	0
Sacramento	2028 Transport Refrigeration Unit - Instate Genset	Aggregate	50	Diesel	0.00014722	0.0015029	0.00021211	0.00016365	0.00192259	0.265805668	0.000017109	1.57E-05	417.21	5.96E-09	8645.8	16769.23	21.4	0
Sacramento	2028 Transport Refrigeration Unit - Instate Trailer	Aggregate	25	Diesel	0.005083449	0.05190773	0.007321192	0.005648233	0.0500838	8.005059403	0.000977161	0.000900075	12566.81	1.79E-07	260377.43	396828.14	221.18	0
Sacramento	2028 Transport Refrigeration Unit - Instate Trailer	Aggregate	50	Diesel	0.006685036	0.06250928	0.009612422	0.007428387	0.0590259	11.28652377	0.000565361	0.000520246	17718.41	2.53E-07	367114.17	493390.61	275.05671	0
Sacramento	2028 Transport Refrigeration Unit - Instate Truck	Aggregate	23	Diesel	0.000300045	0.00306471	0.00043222	0.000333543	0.00387614	0.619452826	0.000199492	0.000183673	972.38	1.39E-08	20148.8	36369.91	106.9	0
Sacramento	2028 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	25	Diesel	0.000228463	0.002332731	0.000328954	0.000253913	0.003431321	0.534318645	7.42E-05	6.84E-05	838.73531	1.20E-08	17379.66	36922	297.68189	0
Sacramento	2028 Transport Refrigeration Unit - Out-Of-State Genset	Aggregate	50	Diesel	0.000093071	0.00095121	0.00013407	0.00010341	0.00091295	0.169285481	0.000016574	1.53E-05	265.66	3.80E-09	5506.31	10602.27	85.42	0
Sacramento	2028 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	25	Diesel	0.004718587	0.048195934	0.006798113	0.005241219	0.048476232	7.759322431	0.000947908	0.000872047	12166.99	1.74E-07	252092.96	384202.14	1412.43	0
Sacramento	2028 Transport Refrigeration Unit - Out-Of-State Trailer	Aggregate	50	Diesel	0.00203353	0.020784	0.002929	0.0022597	0.01615	2.953531757	0.00022069	0.00020299	4636.62	6.62E-08	96068.85	129498.7	476	0
Sacramento	2028 Transport Refrigeration Unit - Railcar TRU	Aggregate	25	Diesel	0.000196579	0.00200805	0.000282892	0.000218442	0.002121729	0.339300207	4.63E-05	4.26E-05	532.59	7.60E-09	11036.34	16819.97	51.31	0
Sacramento	2028 Transport Refrigeration Unit - Railcar TRU	Aggregate	50	Diesel	4.53E-05	0.00046218	0.000065148	5.03E-05	0.00039771	0.078595568	3.30E-06	3.04E-06	123.34	1.76E-09	2556.46	3470.85	10.56	0

Appendices

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Appendix 5.6-1 Site Cleanup Plan

SITE CLEANUP PLAN
FORMER LILY COMPANY PROPERTY
10153-10175 FOLSOM BOULEVARD
RANCHO CORDOVA, CALIFORNIA

March 16, 2022

Prepared for:

City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

For Submittal to:

Central Valley Regional Water Quality Control Board
1120 Sun Center Drive, Suite 200
Rancho Cordova, California 95670

Prepared by:

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Tetra Tech Project 117-9040001

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1.0 INTRODUCTION

On behalf of the City of Rancho Cordova (the City) Tetra Tech, Inc. (Tetra Tech) prepared this Cleanup Plan to the Central Valley Regional Water Quality Control Board (RWQCB) for tentatively planned site cleanup activities at the former Lily Company property (now owned by the City), located at 10153 – 10175 Folsom Boulevard, Rancho Cordova, California (the Site) (Figure 1).

This Cleanup Plan was prepared for the purpose of applying for the California Department of Toxic Substances Control (DTSC) Equitable Community Revitalization Grant (ECRG), Site Cleanups category. The City may choose to revise the Cleanup Plan if the City's application for the ECRG is not approved by DTSC.

2.0 BACKGROUND

The cleanup activities proposed in this Cleanup Plan are based on results from previous site investigations and prior site remediation, which are documented in the following reports and summarized in the following subsections.

- *Phase I Environmental Site Assessment, Folsom Mather Center, 10153-10175 (odd) Folsom Boulevard, Rancho Cordova, California (Kleinfelder, 2008).*
- *Initial Findings, 10153 – 10175 Folsom Boulevard, Rancho Cordova, California* (Risk-Based Decisions, Inc., 2008)
- *Remedial Investigation Report for 10153 through 10175 Folsom Blvd, Rancho Cordova, California* (Risk-Based Decisions, Inc., 2010)
- *Installation and Operation of Extraction Well EW-1 at 10153-10175 Folsom Boulevard, Rancho Cordova (Risk-Based Decisions, Inc., 2014)*
- *Second Quarter 2015 Groundwater Monitoring and Remediation Progress Report for 10153 through 10175 Folsom Boulevard, Rancho Cordova, California* (Risk-Based Decisions, July 2015)
- *Groundwater Monitoring and Remediation Progress Report for 10153 through 10175 Folsom Boulevard, Rancho Cordova, California* (Risk-Based Decisions, Inc., July 2019).
- *10153 Folsom Boulevard, Rancho Cordova, CA 95670: Second Phase Soil Gas Sampling Report* (Risk-Based Decisions, Inc., November 2019).
- *Soil Gas Sampling Report 10153 Folsom Boulevard, Rancho Cordova, CA 95670* (Risk-Based Decisions, Inc., August 2020).
- *Additional Soil and Soil Vapor Testing, Former Lily Company Property, 10153-10175 Folsom Boulevard, Rancho Cordova, California* (Tetra Tech, January 2022)

2.1 Site Location and History

The Site is a multi-parcel commercial property, totaling 9.23-acres (APN 076-0020-019, -020 and -021). Figure 1 presents the Site location and parcel boundaries.

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The Site was developed in the early 1970s and was used as a strip mall. Various commercial businesses have operated at the Site. Businesses remained open at the Site until 2007. In the summer and fall of 2008, the onsite structures were demolished and removed. The Site is currently undeveloped and vacant.

The environmental impact observed at the Site is reportedly related to historical operation of a dry cleaner, Veterans Cleaners, which was located onsite as early as 1971 and operated until 2003. Tetrachloroethylene (PCE) was stored and dispensed from an approximate 45-gallon container by Veterans Cleaners, per records from the Sacramento County Environmental Management Department (SCEMD). PCE was stored in an above ground storage tank and drums near the back of the facility, in proximity to four surface drains. Reportedly, Veterans Cleaners generated chlorinated solvent wastes that were disposed by a third-party waste hauler. No release violations were found for the former dry cleaners.

2.2 Previous Site Investigations

The presence of PCE in the subsurface at the Site was initially identified in 2008 during a Phase II environmental site assessment (ESA) which included environmental sampling of soil, groundwater, and soil gas at the Site. Subsequent site investigations have been conducted and included the following:

- Soil gas sampling to a maximum depth of 46 feet below ground surface (bgs) in 2008
- Soil vapor extraction (SVE) pilot test in 2010
- Remedial investigations (RI) in 2010

After the RI, Site remediation activities included SVE and groundwater extraction, which are summarized in the following subsection.

From 2019 to present, additional soil gas sampling was conducted at the Site, which was triggered by the Site closure process and the discovery of rebounded soil gas concentrations.

The data collected from previous investigations can be found in the documents listed in Section 2.0. The current site conditions, summarized using the most recent site investigation data, are discussed in Section 2.4.

2.3 Previous Remediation Activities

Previous remediation activities at the Site included SVE and groundwater extraction.

The SVE was conducted using five (5) SVE wells (SVE-1a, SVE-1b, SVE-1c, SVE-2, and SVE3) (Figure 2):

- Well SVE-1a is screened from 5 to 15 feet bgs. The radius of influence (ROI) estimated for this well was 40 feet, based on a pilot test in 2010.

- Well SVE-1b is screened from 15 to 35 feet bgs. The ROI estimated for this well was 100 feet.
- Well SVE-1c is screened from 35 to 55 feet bgs. The ROI estimated for this well was 200 feet.
- Well SVE-2 is screened from 5 to 55 feet bgs. The ROI estimated for this well was 110 feet.
- Well SVE-3 is screened from 5 to 55 feet bgs. The ROI estimated for this well was 150 feet.

The SVE operational periods are summarized below:

- A 5-day Pilot test: August 16, 2010 through August 20, 2010
- A 9-day source test: June 27, 2011 to July 5, 2011
- Operations of all five SVE wells from August 2011 – April 2015
- Operation of SVE-1c only from April 2015 – January 2016
- Rebound tests from January 2016 – February 2016
- Operation of SVE-1c and SVE-2 only from February 2016 – August 2016
- Permanent system shutdown on August 22, 2016, per approval from the RWQCB

The SVE system operated under Permit-to-Operate (numbers 22850 and 22851) from the Sacramento Metropolitan Air Quality Management District (SMAQMD). The extracted vapor was treated by granular activated carbon. It was estimated that approximately 7.8 pounds of PCE was removed from the subsurface during the SVE operational periods summarized above.

The groundwater extraction was conducted using a 6-inch extraction well that was installed to a total depth of 75 feet (Figure 2). The extraction well has a 0.020-inch wide slot stainless steel wire wrap screen from 55 to 75 feet and 0.020-inch slot PVC screen from 45 to 55 feet. The extraction well had an estimated ROI of over 150 feet.

The extracted groundwater was piped to a nearby sewer cleanout and conveyed to the Sacramento Regional County Sanitation District for treatment through the sewer line system in the Sacramento area. The concentrations of VOCs (PCE) in groundwater fell below the Sanitation District discharge limits, and therefore was discharged without on-site treatment.

Groundwater extraction was conducted from April 2014 to September 2017. Groundwater was extracted at a flow rate of up to 10 gallons per minute (gpm). Groundwater extraction was subsequently discontinued at the Site after the power supply was damaged by vandalism. It was estimated that 11 million gallons of groundwater was extracted during the operational period and a total of 2.72 pounds of PCE was removed through groundwater extraction.

2.4 Summary of Current Site conditions

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Soil

Soil sampling was conducted during the following events:

- Phase II ESA in 2008, where shallow soil samples were collected from depths up to 15 feet at locations near the former dry cleaner (Figure 2), and one deep soil sample collected from a depth of 36.5 – 37 feet bgs at a location near the backdoor of the former dry cleaner. The samples were selectively analyzed for total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and RCRA 8 metals.
- RI in 2010, where composite soil samples were collected from 50 surface soil (immediately below pavement) sampling locations. The composite soil samples were analyzed for pesticides and CAM 17 metals.
- Soil sampling in 2021, where soil samples were collected at 5- and 10- feet bgs along the existing sewer line (Figure 2). The samples were analyzed for VOCs and gasoline range TPH. Composite soil samples were also formed from these soil samples (a 5-foot composite and a 10-foot composite), and the two composite samples were analyzed for VOCs, TPH, SVOCs, pesticides, PCBs, and CAM 17 metals.

The PCE soil data from these events are shown on Figure 2. The data shows during the 2008 Phase II ESA, PCE was detected at four locations with concentrations ranging from 5.0 to 34 microgram per kilogram (µg/kg). During the 2021 soil sampling event, PCE was detected at five locations along the sewer line with concentrations ranging from 1.4 (estimated) to 54 µg/kg. The highest PCE detection locations in 2008 and 2021 are close to each other, located at the northwest corner of the Site.

Based on the available data, the known soil impact historically was within the footprint of the former dry cleaner and near the sewer line section downstream of the former dry cleaner, at the northwest corner of the Site. Recently, soil impact was present at some locations along the sewer line section downstream of the former dry cleaner. The depth of impact was identified to be up to 14 feet bgs. However, only one soil sample was collected at a deeper depth (36.5 – 37 feet bgs). PCE was not detected in this deeper soil sample.

Groundwater

Groundwater sampling was conducted during the following events:

- Phase II ESA in 2008, where a grab groundwater sample was collected at a depth of approximately 56 feet bgs at a location near the former dry cleaner. The sample was analyzed for VOCs and TPH.
- RI in 2010, where grab groundwater samples were collected at depths of approximately 60 to 61 feet bgs at locations near the former dry cleaner but also in the parking lot south of the former strip mall. The samples were analyzed for VOCs and TPH.

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- During the RI in 2010 and during the remediation progress monitoring period from 2010 to 2019, where groundwater samples were collected from five monitoring wells and one extraction well. The samples were analyzed for VOCs and TPH in earlier years, and only VOCs after 2014.

The PCE groundwater data from these events are shown on Figure 3. For the permanent monitoring wells, only the initial PCE data (in 2010, prior to groundwater extraction) and the latest PCE data (in 2019, latest data after groundwater extraction was discontinued) are shown on Figure 3.

Prior to groundwater extraction, the groundwater impact appeared to be limited to the northwest corner of the Site. The highest PCE concentration detected prior to remediation was 320 microgram per liter (µg/L), at a grab groundwater sampling location near the backdoor of the former dry cleaner, near the sewer line where the PCE concentration in the permanent well at that location was 37 µg/L. At the permanent groundwater monitoring wells, the highest PCE concentration detected prior to remediation was at 52 µg/L, found at a location near the western Site boundary and the sewer line (i.e., at MW-3). After approximately five years of SVE and three years of groundwater extraction, the PCE concentration at MW-3 was at 13.7 µg/L in 2019. PCE concentrations also decreased at the other monitoring wells after Site remediation.

Soil Vapor

Soil vapor sampling was conducted during the following events:

- Phase II ESA in 2008, where shallow soil vapor samples were collected from depths up to 15 feet at locations near the former dry cleaner (Figure 2), and one deep soil vapor sample collected from a depth of 35 feet bgs at a location near the backdoor of the former dry cleaner. The samples were analyzed for VOCs.
- Soil vapor sampling in 2008, where soil vapor samples were collected from depths up to 46 feet bgs. The samples were analyzed for VOCs.
- Soil vapor sampling in 2016, where confirmation soil vapor samples were collected from locations near samples collected during the 2008 event. The samples were collected at depths of 5- and 45-feet bgs and analyzed for VOCs.
- Soil vapor sampling in 2019 (two events), where soil vapor samples were collected near the former dry cleaner area at depths of 5- and 10-feet bgs. The samples were analyzed for VOCs.
- Soil vapor sampling in 2020, where soil vapor samples were collected primarily from the former parking lot area of the former strip mall, south and east of the former dry cleaner. The samples were collected at depths of 5- and 15-feet bgs. The samples were analyzed for VOCs.
- Soil vapor sampling in 2021, where soil vapor samples were collected from the remaining area at the overall Site at depths of 5- and 15-feet bgs. The samples were analyzed for VOCs.

The 2019 – 2021 soil vapor samples were collected after the site remediation work described in Section 2.3 and was triggered by the site closure process. The data from

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the first 2019 event suggested that PCE concentrations in soil vapor rebounded after the 2016 confirmation sampling for SVE system shutdown. This finding and the site closure process triggered the subsequent soil vapor sampling events.

The current soil vapor conditions at the Site are reflected by the 2019 – 2021 data. The PCE soil vapor concentrations from 2019-2021 are shown on Figures 2 and 3.

As shown on Figures 2 and 3, the latest soil vapor data show that PCE concentrations in soil vapor exceed the San Francisco Bay RWQCB Environmental Screening Levels (ESLs) for vapor intrusion risk in the former dry cleaner area, primarily the northwest corner of the Site, as well as the former parking lot area just south of the former strip mall.

The elevated soil vapor concentrations in the former dry cleaner area are likely caused by residual PCE in the vadose zone:

- The detections of PCE in the soil in 2021 near the sewer line suggests that there is residual PCE in the soil along the sewer line. Although the 2021 PCE soil concentrations were low, partitioning calculation using the method in Appendix E of the DTSC Vapor Intrusion Guidance (2011) suggests the PCE vapor concentration in equilibrium with the PCE soil concentrations could still be high enough to cause the observed elevated PCE soil vapor concentrations. The locations of the PCE detections in soil correlate well with the locations where elevated PCE soil vapor concentrations were found.
- At the time the SVE system was shut down, the average SVE system influent PCE concentration (third quarter 2016) was 230 $\mu g/m^3$, suggesting there was still residual PCE in the vadose zone.

Compared to the potential impact from the residual PCE in the vadose zone, the elevated soil vapor concentrations detected since 2019 appear less likely a result of the volatilization of residual PCE in the groundwater, due to the concentrations of PCE in groundwater and the depth of the groundwater at the Site (approximately 55 feet bgs).

PCE soil vapor concentrations lower than the ones detected in the former dry cleaner area, but greater than the residential ESL, were found in the northern portion of the former parking lot of the former strip mall. The PCE in this area is likely caused by the migration of the soil vapor plume.

The City intends to redevelop the Site for mixed use, but primarily supporting new residential construction. The recent soil vapor sampling data suggest that in the former dry cleaner area and the former parking lot area, the PCE concentrations exceed the residential ESL for vapor intrusion consideration, which corresponds to a carcinogenic risk of 10^{-6}. As a result, the City intends to conduct additional site remediation to address the residual PCE in the vadose zone, which is believed to be the source of PCE exceedances in the soil vapor.

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3.0 PLAN FOR ADDITONAL SITE REMEDIATION

Due to the time constraint related to the redevelopment schedule, the additional site remediation the City intends to perform includes soil and sewer line excavation in the former dry cleaner area, and contingency in-situ soil treatment at a deeper depth in the former dry cleaner area and in the former parking lot area (Figure 4).

Former Dry Cleaner and Sewer Line Area

This remediation area is approximately 1.1 acres and includes the northwest corner of the Site where PCE vapor intrusion risk is above 10^{-4}, along with the former dry cleaner footprint and on-site sewer lines. Soil from this area will be excavated to a depth of 15 feet bgs and stockpiled and covered just east and south of the excavation area. The portions of the sewer line outside of the excavation area footprint will also be removed to approximately 2-feet below the base of the sewer (between 6- and 10-feet bgs). The excavation work will be completed by a licensed excavation contractor, with oversight provided by the City of Rancho Cordova or their representative (Tetra Tech). The excavation contractor will employ a competent person, as defined by OSHA, to design a safe excavation, implementing soil sloping or shoring as applicable.

As the anticipated PCE concentrations in the excavated soil are low, based on recent soil sampling along the sewer line, onsite soil treatment may be conducted prior to backfill the excavated soil should the profiling sampling results suggest there is still residual PCE in the stockpiled soil. The onsite treatment will be conducted via adding a dry chemical oxidant (potassium permanganate) to the soil as it's returned to the excavation for backfill and compaction. It is anticipated that a pug mill or equivalent will be used to mix the oxidant into the soil during backfill. The oxidant is intended to treat any residual PCE in soil (once activated by water, Section 3.6). The oxidant dosing will be determined via a bench scale test.

Below 15 feet, the excavation footprint may also be treated by in-situ oxidant injections. The purpose of the injections is to treat any residual PCE that may exist in the vadose zone at a deeper depth. A pre-design investigation (PDI) will be conducted to determine locations and depth intervals of the injections in this area (detailed in Section 3.3). A tentative injection plan based on the currently available information is detailed in Section 3.6.

Former Parking Lot Area

This remediation area includes the approximate 2-acre area outside the planned excavation footprint, that previously exhibited soil vapor PCE concentrations above 15 $\mu g/m^3$ (vapor intrusion risk greater than 10^{-6} for residential use). The PCE in soil vapor observed in this area may be caused by the following:

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- Soil vapor plume migrated from the former dry cleaner and sewer line area,
- Residual PCE in the groundwater, and/or
- Residual PCE in the vadose zone soil.

Since the soil vapor concentrations in this area are relatively low, and this area is in a cross-gradient direction of the former dry cleaner area, the PCE in the soil vapor in this area is more likely from migration of the soil vapor plume from the former dry cleaner area.

A PDI will be conducted to verify the soil and groundwater conditions in this area. In situ soil treatment in this area is contingent on the PDI findings. If PCE is detected in soil or groundwater in this area, this area may be selectively treated with one of the following options: oxidant injections, SVE, or SVE with air sparging.

For this cleanup plan, it is assumed there is residual PCE in the vadose zone soil in this area, which caused the concentrations of PCE detected in the soil vapor. Under this scenario, in situ oxidant injections will be performed. The tentative injection plan is detailed in Section 3.6.

The following subsections present the details of the cleanup plan.

3.1 Scope of Work

The proposed scope of work for the additional site remediation includes:

- Health and Safety, including preparation of a site-specific health and safety plan (HASP) and a perimeter air monitoring plan.
- Site preparation, including a utility clearance survey; placement of protective measures for any trees that will remain; surface preparation, to include removal of impervious surfaces in the planned excavation area (i.e., asphalt and concrete), and permitting. As the planned soil excavation area and resultant stockpile footprint will exceed 1-acre, the development of a storm water pollution prevention plan (SWPPP) is needed, and best management practices (BMPs) will be installed as per the SWPPP and maintained throughout the remediation activities
- PDI Sampling
- Soil Excavation and Stockpiling
- Stockpile Profiling
- Backfill and Compaction (with mixing of dry potassium permanganate during backfill)
- In Situ Soil Treatment

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3.2 Health and Safety

3.2.1 Site-Specific Health and Safety Plan

All on-Site work performed by Tetra Tech will be performed under a Site-specific Health and Safety Plan (HASP). A copy of the Tetra Tech HASP is attached as Appendix A. The Tetra Tech HASP was prepared to guide Tetra Tech employees only. Subcontractors operating on-site will also prepare their own HASP. The HASP outlines monitoring protocols and response actions.

3.2.2 Perimeter Air and Dust Monitoring Plan

Perimeter air and dust monitoring will be conducted during the soil disturbance activities such as excavation, stockpile handling, and backfill. The purpose of the perimeter air and dust monitoring is to protect members of the public from being exposed to potentially elevated concentrations of dust and/or contaminants (primarily PCE) while soil is being handled at the Site.

Daily air monitoring will be performed for monitoring of fugitive dust and VOCs. The air monitoring will be conducted at fixed perimeter air monitoring stations using hand-held photoionization detector (PID) instruments, continuous dust monitors, and summa canisters for periodic bulk air samples around the work area perimeter during soil disturbance activities.

The compounds to be monitored at fixed perimeter air monitoring stations are the following:

- PCE
- TCE
- Cis-1,2-DCE
- Concentrations of dust (to be measured as particles less than 10 microns in diameter, referred to as “PM10”)

As a conservative measure, two additional compounds - trans-1,2-DCE and vinyl chloride - will also be analyzed for when bulk air samples are collected. These two chemicals, while not of concern at this Site, are often associated with dry cleaner sites.

Details of the planned air monitoring activities are included in the *Perimeter Air and Dust Monitoring Plan* in Appendix B. The plan includes a description of field monitoring instruments, field monitoring protocols, air sampling procedures, screening levels, and meteorological monitoring. In summary, real-time ambient air monitoring for total VOCs and dust levels will be conducted at four perimeter monitoring locations, at 60-minute intervals each day when soil disturbance activities occur. A daily average dust

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concentration will also be recorded. In addition, quantitative air samples will be collected using Summa canisters for VOC analysis on three occasions throughout the soil excavation phase – from ground surface to 5-feet bgs (Event 1), from 5- to 10-feet bgs (Event 2), and from 10- to 15-feet bgs (Event 3).

The sample results will be compared to screening levels. Should sample results exceed screening levels then work practices will be modified in response to the exceedance. Such modifications could include additional soil wetting, and/or placement of additional visqueen atop the stockpile.

3.3 Site Preparation

The following site preparation tasks will be completed.

3.3.1 Utility Clearance Survey

Underground Service Alert (USA) will be notified, and the USA ticket will be maintained during the life of the project.

In addition, a licensed utility clearance company will be used to scan the proposed excavation and drilling areas for potential underground utility conflicts, supplemented by a prior geophysical investigation of the area in 2010. Based on the 2010 geophysical investigation report and findings from a recent utility survey for the 2021 soil gas sampling, utilities are known to exist in the proposed soil excavation area. Potholing will likely be conducted by the excavation contractor to determine the location of identified utilities and whether the utilities require abandonment and capping prior soil excavation.

3.3.2 Tree Protection

Trees are present in the northwest portion of the excavation area, and in the open area on the eastern half of the site. The City will be contacted to discuss removal/relocation of the trees that fall within the excavation area, or nearby tree roots that could be impacted by excavation. For trees not in the excavation area, the excavation contractor will erect, at a minimum, orange construction fencing around the drip line of each tree in the vicinity of the work area, prior to beginning soil excavation and stockpiling activities. Excavation equipment traffic and soil stockpiles will remain outside of these fenced areas.

3.3.3 SWPPP Preparation

Per the State Water Resources Control Board, Dischargers whose projects **disturb one (1) or more acres of soil** or whose projects disturb less than one acre but are part of a

larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD).

As the planned excavation area covers approximately 1-acre, and the resultant soil stockpile area will cover 1 to 2 acres, a SWPPP will be prepared for this project.

3.3.4 Surface Preparation

The existing surface of the planned soil excavation area consists of both vegetated soil and asphalt paved areas. Prior to soil excavation, the asphalt pavement will be removed and stockpiled on-site. Some concrete curbs and old lighting standards may remain, which should be segregated from the asphalt stockpile. The asphalt and concrete will be recycled.

An approximate 500-foot section of guard rail along the north and west sides of the excavation area will also be removed and properly disposed/recycled to facilitate soil excavation work. The west chain link fence section that is currently located inward from La Loma Avenue, at the top of the slope, will also be relocated to the back of the sidewalk along La Loma Avenue.

Silt fencing and/or straw wattles will be placed around the Site work area, primarily the west half of the Site, and perimeter storm drains protected along La Loma and Folsom Boulevard. The east half of the site is not anticipated to be used during this project. A simple rumble plate construction entrance is anticipated for knocking off loose soil from tires, as site vehicles will mainly operate on the asphalt parking lot areas, and no trucks or heavy equipment will be cycling on-and off-site. Any excavation equipment operating in the excavation will be cleaned of soil before leaving the site. A formal tire wash station is not anticipated.

The entire site is surrounded by a chain link fence with three locking gate entrances off Folsom Boulevard and La Loma Avenue. Any holes in the fencing will be repaired prior to excavation work to deter unauthorized site access afterhours.

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3.3.5 Permitting

Prior to beginning on-site work, applicable permits will be obtained, such as a tree permit, hydrant permit, grading permit, soil boring permit, well destruction permit, as necessary.

3.3.6 Well Abandonment

The existing wells onsite will be properly abandoned after obtaining well destruction permit from the Sacramento County Environmental Management Department.

3.3.7 Geotechnical Soil Evaluation

The selected contractor will perform a geotechnical assessment of the soil in the excavation area. This may include drilling of geotechnical soil borings, or the collection of bulk soil samples for laboratory analysis during excavation. This data will be used to guide backfill and compaction requirements for the excavation, taking into consideration the blending of a dry chemical oxidant into the soil during backfill, and the rebuilding of the slope along the west side of the excavation facing La Loma Avenue.

3.4 Pre-Design Investigation

The purpose of the PDI sampling is to provide current soil and groundwater data in the former dry cleaner and sewer line area and the former parking lot area (approximately three acres in total) (Figure 4). The purpose of the PDI is to supplement soil and groundwater data for the Site, which will be used to refine the in-situ soil treatment planned for the Site (detailed in Section 3.6). The PDI results will lead to an optimized plan for a targeted in-situ soil treatment, leading to cost reduction.

Tetra Tech will drill vertical soil borings to groundwater across the approximate 3-acre area on roughly 50 to100 foot centers, totaling 30 soil borings (Figure 4). Based on cobbly soil conditions between 15 and 25 feet bgs at the site, a sonic drill rig is anticipated for sample collection. A California C-57 licensed driller will be selected for drilling. Soil samples will be collected at 5-foot intervals down to first encountered groundwater (approximately 50-55 feet bgs) using a split-spoon or other appropriate soil coring device. Soil samples will be collected in the same manner as soil samples recently collected along the sewer line in December 2021, utilizing the Terracor field preservation method. The soil samples will be submitted to a California state-certified laboratory for analysis of VOCs by EPA Method 8260B. The samples will be stored in a chilled ice chest under chain of custody protocols prior to delivery to the laboratory.

Upon reaching first encountered groundwater, one grab groundwater sample will be collected from each soil boring. The groundwater sample will be collected through the

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drill rod using a small diameter stainless steel bailer (decontaminated between samples), new disposable bailer, or via new polyethene tubing fitted with a foot valve (positive displacement method). Each sample will be placed in laboratory-supplied containers appropriate for the selected analysis and submitted to a California state-certified laboratory for analysis of VOCs by EPA Method 8260B. The samples will be stored in a chilled ice chest under chain of custody protocols prior to delivery to the laboratory.

Each soil boring will be abandoned to 5-feet bgs (15-feet bgs in the proposed excavation area) with neat cement grout, placed downhole via a tremie pipe or through the drill rods. The grout placement will be observed by the Sacramento County Environmental Management Department. Excess soil cuttings will be used to backfill each boring from top of grout to ground surface.

All reusable drilling equipment will be decontaminated between each soil boring location and all reusable sampling equipment will be decontaminated between each use. Decontamination will consist of washing the equipment in a water/Liquinox solution, rinsing with clean water, and allowing to air dry. Decontamination liquids will be contained and temporarily stored in 55-gallon drums or other appropriate containers, and later applied to the excavated soil stockpile and allowed to absorb.

Excess soil cuttings will be placed on plastic and later incorporated into the soil excavation stockpile.

Two soil samples, one from the former dry cleaner and sewer line area, and one from the former parking lot area, will be analyzed for soil oxidant demand (SOD) for dosing consideration of the onsite soil treatment (during backfill) and the in-situ soil treatment (oxidant injection).

3.5 Soil Excavation and Stockpiling

The selected contractor will design and implement a safe excavation of the approximate 1.1-acre area to 15-feet bgs (Figure 4), including removal of the entire sewer as shown. The contractor's Competent Person, as defined by OSHA, will indicate an appropriate slope for the excavation and trench sidewalls based on soil competency (i.e., 1:1 or 1.5:1). The excavation work will be completed with standard excavation equipment (i.e., a track-excavator, haul trucks, wheeled loader, water truck). The existing slope facing La Loma Avenue will be taken down as part of the excavation. The existing top of slope facing the existing apartment complex on the north side of the excavation will be left in place, leaving an approximate 4-foot-wide undisturbed area along the site boundary.

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The City or their representative will provide daily oversight and direct the excavation work. The sewer line will be trench-excavated approximately 4-feet wide to approximately 2-feet below the base of the sewer in the areas that fall outside the 15-ft deep excavation area. Based on the varied sewer depth, this will be between 6-ft and 10-ft bgs. The entire length of the sewer line is approximately 650 linear feet.

The excavated soil will be stockpiled just east and south of the excavation limits on an asphalt-paved area. The soil excavated from along the sewer line will be segregated to allow for separate soil profiling, based on the dimensions above. The excavated soils will be staged on top of plastic sheeting and covered with plastic sheeting at the end of each day. The plastic sheeting will be secured over the stockpile(s) with sandbags and laced down with poly rope, if necessary, to prevent wind from lifting the plastic. The stockpile will be shaped with a loader or small bulldozer to facilitate easier covering and subsequent stockpile sampling. Straw wattles will be placed around the perimeter of the soil stockpile(s) to mitigate potential soil migration.

The total soil excavation volume, including the sewer line, is estimated at 27,000 bank cubic yards. The sewer line portion is estimated at 800 cubic yards. The resultant soil pile, placed across an approximate 1-acre portion of the parking lot, would be approximately 15- to 20-feet tall.

Routine air and dust monitoring will also be performed during soil disturbance work, in accordance with the attached *Perimeter Air and Dust Monitoring Plan* (Appendix B). Any dust will be mitigated with water spray from a water truck.

3.6 Stockpile Profiling

Following completion of the soil excavation, soil samples will be collected from the soil stockpile(s) for profiling purposes to determine VOC concentrations.

Discrete soil samples will be collected in a grid pattern across the soil stockpile from a depth of approximately 5-feet into the stockpile using a hand auger. A sample from 5-feet into the soil pile is expected to be representative as the soil will have been homogenized during excavation, transport and stockpile shaping. Discrete samples will be collected at rate of 12 per the first 5,000 cubic yards plus 1 sample per each additional 1,000 cubic yards from the primary soil stockpile (approximately 34 samples), and at a rate of 1 per 100 cubic yards from the soil removed for along the sewer line; approximately 8 samples, for better resolution in an area known to have low concentrations of PCE in soil. The stockpile sampling frequency is based on the DTSC borrow area stockpile sampling guidance (for import fill), with increased sample frequency along the sewer line.

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The samples (approximately 42) will be placed in laboratory-supplied glass jars and submitted to a California state-certified laboratory for analysis of VOCs by EPA Method 8260B. The samples will be stored in a chilled ice chest under chain of custody protocols prior to delivery to the laboratory.

The stockpile profiling results will be used to determine whether onsite soil treatment is needed during backfill, or if off-site disposal may be warranted for portions of the stockpile.

3.7 Backfill and Compaction

Since the available soil data suggest low residual concentrations of PCE in soil, it is anticipated that no soil will require off-site disposal. If PCE is detected in the stockpiles, onsite soil treatment will be conducted via mixing in dry potassium permanganate to the stockpiled soil before backfill, where the oxidant will be activated during backfill (when water is applied as part of the backfill process). The oxidant will be mixed into the backfill soil using a pug mill or equivalent as it is placed in the excavation. The tentative dosing is 0.3% by weight and will be refined per the results from the SOD bench scale testing. The stockpiled soil material will be returned to the excavation and compacted per geotechnical requirements. Compaction testing will be performed per geotechnical requirements, and water added to the soil as needed to meet moisture specifications.

Routine air and dust monitoring will also be performed during soil disturbance work, in accordance with the attached *Perimeter Air and Dust Monitoring Plan* (Appendix B). Any dust will be mitigated with water spray from a water truck.

3.8 In-Situ Soil Treatment

Former Dry Cleaner and Sewer Line Area

The purpose of the contingency in-situ soil treatment through oxidant injections is to treat any residual PCE that may exist in the vadose zone at a depth deeper than 15 feet in this area. The tentative injection plan is detailed as follows. This plan will be refined after the PDI.

The vadose zone permanganate injections are planned to be as follows:

- Injections will be at 20-feet centers (assuming a ROI of 10 feet), with a total of 153 locations in this area.
- Injections will be conducted at 15-, 20-, and 25-feet bgs.
- 3% by weight permanganate solution with a volume equaling 25% of the pore volume of the treatment zone will be injected. The injection concentration may be refined after the SOD bench scale testing.

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The areal and vertical extent of the injections may be refined after the PDI. Currently, it is conservatively assumed the entire 1.1 acre of the former dry cleaner and sewer line area will be injected. The maximum injection depth is planned to be 25 feet bgs. The oxidant is expected to be reacted with the residual PCE and the organics in the soil per the dosing information from the bench scale testing. A 30-feet separation distance to groundwater is planned, so that any potential excess oxidant may react with the 30 feet of soil column below the maximum injection depth and not reach the groundwater.

After injections, each injection boring will be abandoned to 5-feet bgs with neat cement grout, placed downhole via a tremie pipe or through the drill rods. The grout placement will be observed by the Sacramento County Environmental Management Department. No excess soil cuttings are anticipated.

Former Parking Lot Area

If the PDI results suggest there is residual PCE in the vadose zone soil in this area, permanganate injections will be conducted. The injections will be conducted similarly to the plan for the former dry cleaner and sewer line area, except that the injections will be conducted for the top 25 feet of the vadose zone. The tentatively planned injection locations are next to the PDI sampling locations (Figure 4), for a total of 14 locations. The locations may be refined after the PDI.

If the PDI results suggest that there is no residual PCE in the vadose zone soil, and depending on the levels of PCE detections in the groundwater, if any, the in-situ soil treatment in this area will include SVE and/or SVE with air sparging (for groundwater treatment). For this scenario, 10-15 SVE wells will be installed in this area. The wells will be operated as extraction and/or venting wells to improve air flow in the subsurface and accelerate the remediation progress. A trailered SVE system will be rented for operating the SVE wells. An air permit will be obtained prior to the SVE operation. If PCE is detected in the groundwater at a concentration greater than 20 µg/L, air sparging may be conducted in conjunction with the SVE. It is expected 3-6 months are needed to complete this treatment.

4.0 POST-EXCAVATION EFFECTIVENESS SAMPLING

To assess the effectiveness of the soil cleanup, follow-up soil vapor sampling will be completed across the approximate 3-acre area, collecting soil vapor samples from approximately the same 30 pre-excavation profile sample locations. The soil vapor sampling will be initiated approximately 1-month following completion of the remediation work.

The soil vapor samples will be collected using the Waterloo Membrane Sampler (WMS) system, consistent with the RWQCB-approved approach for recent soil gas sampling at the site.

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WMS devices will be installed at 5 and 15 feet bgs for soil vapor sampling at each location, installed in co-located separate soil borings. The WMS devices will be installed using a direct push technology (DPT) rig operated by TEG northern California, a California C-57 licensed driller who has installed WMS devices at the site for previous soil gas sampling events. Since the samplers will be installed for temporary use and removed after sampling collection, a boring permit is not required per confirmation received from the Sacramento County Environmental Management Department.

The installed WMS devices will be left in place for approximately 48 hours to ensure a reporting limit lower than the residential ESL for PCE, similar as previous sampling events. The soil gas samples will be analyzed by Eurofins Air Toxics using a modified United States Environmental Protection Agency (EPA) Method TO-17. A total of 40 soil gas samples will be analyzed from the 20 sampling locations. Trip blanks will also be collected and analyzed, per laboratory recommendation for WMS devices. After sampling is completed, the samplers will be pulled out of ground with the boreholes grouted with neat cement to 5-feet bgs. The top 5-feet of borehole will be backfilled with native on-site soil.

5.0 REPORTING

A summary report will be prepared at the conclusion of the project work. The report will document the field activities including all field records and summarize sampling results. Laboratory analytical data sheets and chain of custody forms will be included for all samples collected (soil, groundwater, soil vapor). Although not expected, if any soil is disposed off-site as a regulated waste (non-hazardous Class II waste or hazardous Class I waste) then copies of disposal manifests and/or landfill weight tags will be included to document proper disposal and the weight of soil disposed.

6.0 SCHEDULE

The project schedule depends on the status of the ECRG application. Currently DTSC expects to award the grants in June 2022.

The field work described is expected to take approximately 6 months to complete. Prior to the field work, permitting and contracting related work is expected to take 2-3 months. The summary report is expected to be completed 2-3 months after completion of all field work and laboratory testing.

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FIGURES

Figure 1 Site Location Map

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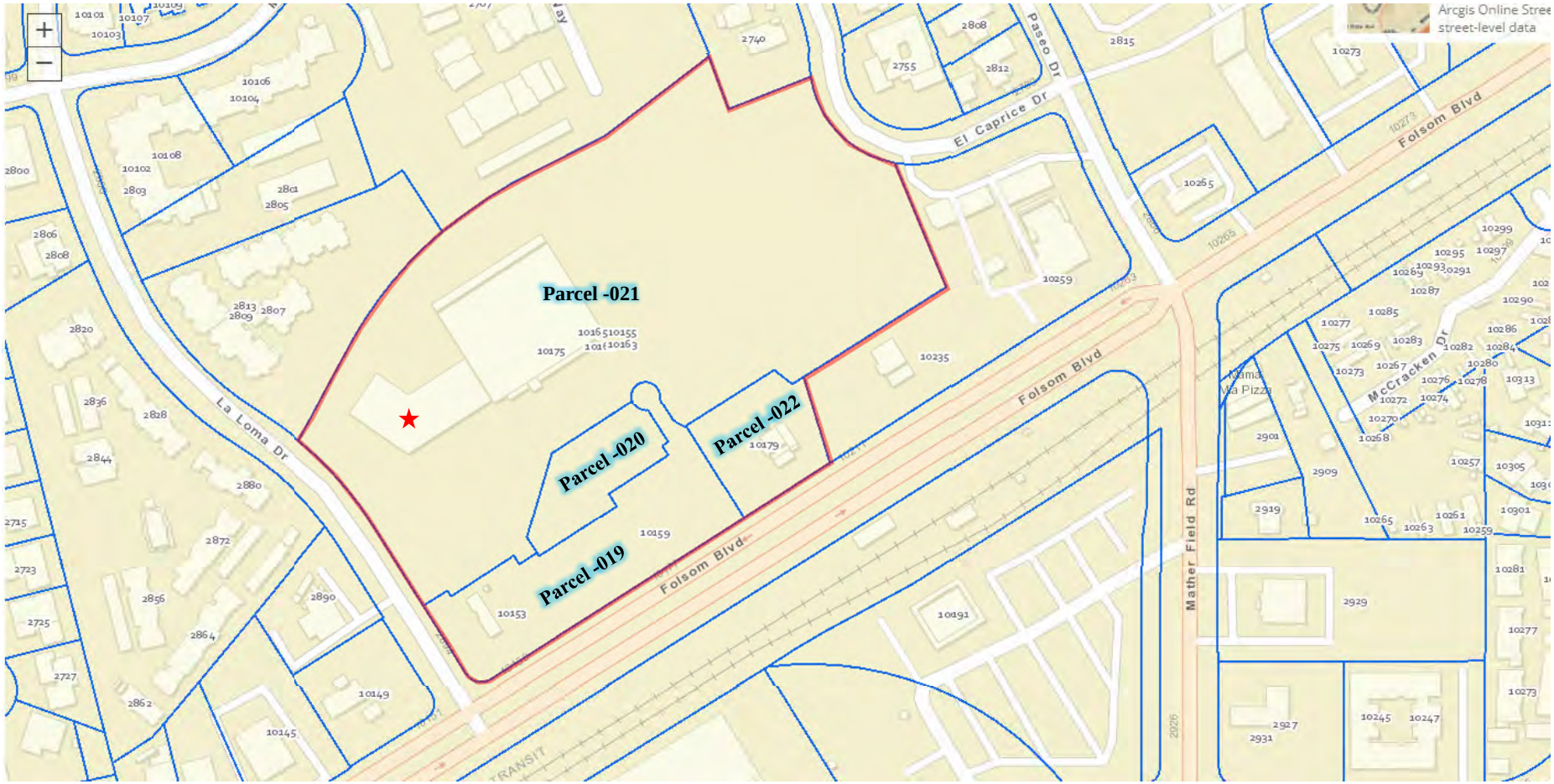

N

0 feet 150

Property Boundary

Parcel Boundary

★ Former Veterans Cleaners tenant space (10161 Folsom Boulevard)

TITLE:	**Site Location Map**
LOCATION:	**10153 Through 10179 Folsom Blvd, Rancho Cordova, California**

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CHECKED:	BL	FIGURE: 1
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DATE:	01-03-22	

Figure 2 PCE In Soil and Soil Gas

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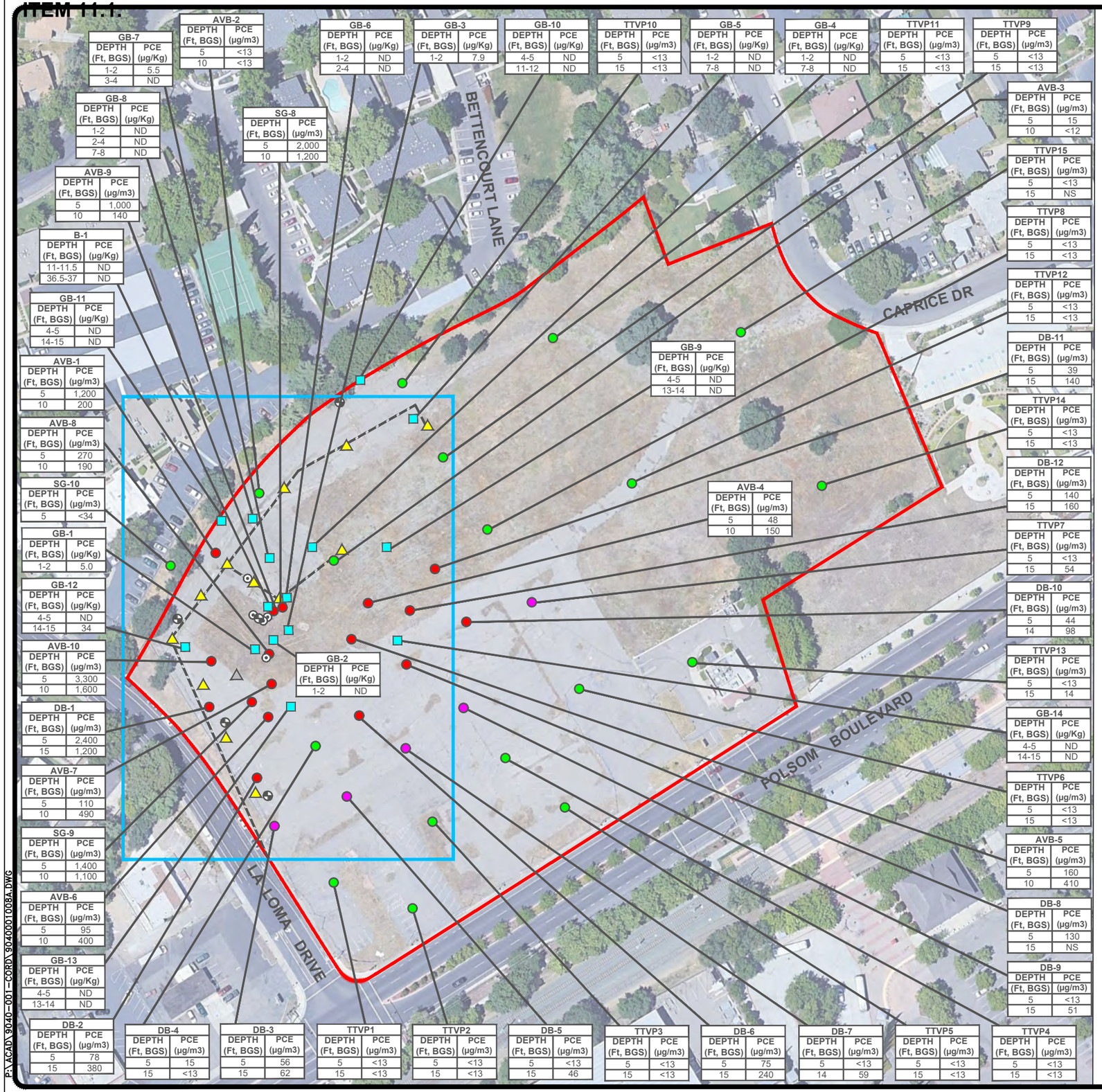


GB-7	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	5.5
3-4	ND

AVB-2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
10	<13

GB-6	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	ND
2-4	ND

GB-3	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	7.9

GB-10	
DEPTH (Ft, BGS)	PCE (µg/Kg)
4-5	ND
11-12	ND

TTVP10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

GB-5	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	ND
7-8	ND

GB-4	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	ND
7-8	ND

TTVP11	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

GB-8	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	ND
2-4	ND
7-8	ND

SG-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	2,000
10	1,200

AVB-3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	15
10	<12

AVB-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,000
10	140

TTVP15	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	NS

B-1	
DEPTH (Ft, BGS)	PCE (µg/Kg)
11-11.5	ND
36.5-37	ND

TTVP8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

GB-11	
DEPTH (Ft, BGS)	PCE (µg/Kg)
4-5	ND
14-15	ND

TTVP12	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

GB-9	
DEPTH (Ft, BGS)	PCE (µg/Kg)
4-5	ND
13-14	ND

DB-11	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	39
15	140

AVB-1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,200
10	200

TTVP14	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

AVB-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	270
10	190

DB-12	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	140
15	160

AVB-4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	48
10	150

SG-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<34

TTVP7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	54

GB-1	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	5.0

DB-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	44
14	98

GB-12	
DEPTH (Ft, BGS)	PCE (µg/Kg)
4-5	ND
14-15	34

GB-2	
DEPTH (Ft, BGS)	PCE (µg/Kg)
1-2	ND

TTVP13	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	14

AVB-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	3,300
10	1,600

GB-14	
DEPTH (Ft, BGS)	PCE (µg/Kg)
4-5	ND
14-15	ND

DB-1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	2,400
15	1,200

TTVP6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

AVB-7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	110
10	490

AVB-5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	160
10	410

SG-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,400
10	1,100

DB-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	130
15	NS

AVB-6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	95
10	400

DB-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	51

GB-13	
DEPTH (Ft, BGS)	PCE (µg/Kg)
4-5	ND
13-14	ND

DB-2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	78
15	380

DB-4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	15
15	<13

DB-3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	56
15	62

TTVP1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

DB-5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	46

TTVP3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

DB-6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	75
15	240

DB-7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
14	59

TTVP5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTSB3	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.70
10	<1.2

TTSB2	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.72
10	<1.1

TTSB1	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.82
10	<1.2

TTSB5	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	7.8
10	28

TTSB4	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	4.7 J
10	<0.97

TTSB7	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.84
10	<0.97

TTSB8	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.79
10	<0.97

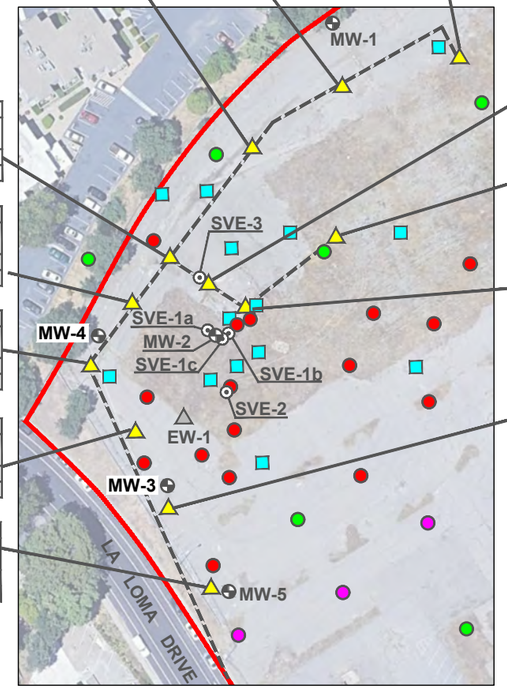
TTSB6	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	1.4 J
10	<1.2

TTSB9	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	1.3 J
10	<0.97

TTSB11	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.97
10	<0.97

TTSB10	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	32
10	54

TTSB12	
DEPTH (Ft, BGS)	PCE (µg/Kg)
5	<0.97
10	<0.97



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- PCE SOIL GAS CONCENTRATIONS GREATER THAN RESIDENTIAL ESL AND LOWER THAN COMMERCIAL ESL (2019-2021 DATA)
- PCE SOIL GAS CONCENTRATIONS LOWER THAN RESIDENTIAL ESL (2019-2021 DATA)
- PCE SOIL GAS CONCENTRATIONS GREATER THAN COMMERCIAL ESL (2019-2021 DATA)
- SANITARY SEWER LINE SOIL SAMPLING LOCATION, 5-FT AND 10-FT (DECEMBER 2021 DATA)
- GROUNDWATER EXTRACTION WELL
- HISTORICAL SOIL BORING (APPROXIMATE LOCATION, 2008 DATA)
- GROUNDWATER MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- SANITARY SEWER LINE LOCATION (APPROXIMATE)

N

0 120 240

SCALE IN FEET

TITLE: PCE IN SOIL AND SOIL GAS

LOCATION: 10153 Through 10179 Folsom Boulevard
Rancho Cordova, California

TETRA TECH

APPROVED	BL
DRAFTED	CP
PROJECT#	117-9040001
DATE	03-14-22

FIGURE 2

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Figure 3 PCE In Groundwater and Soil Gas

TETRA TECH, INC.
3101 Zinfandel Drive, Suite 200, Rancho Cordova, CA 95670
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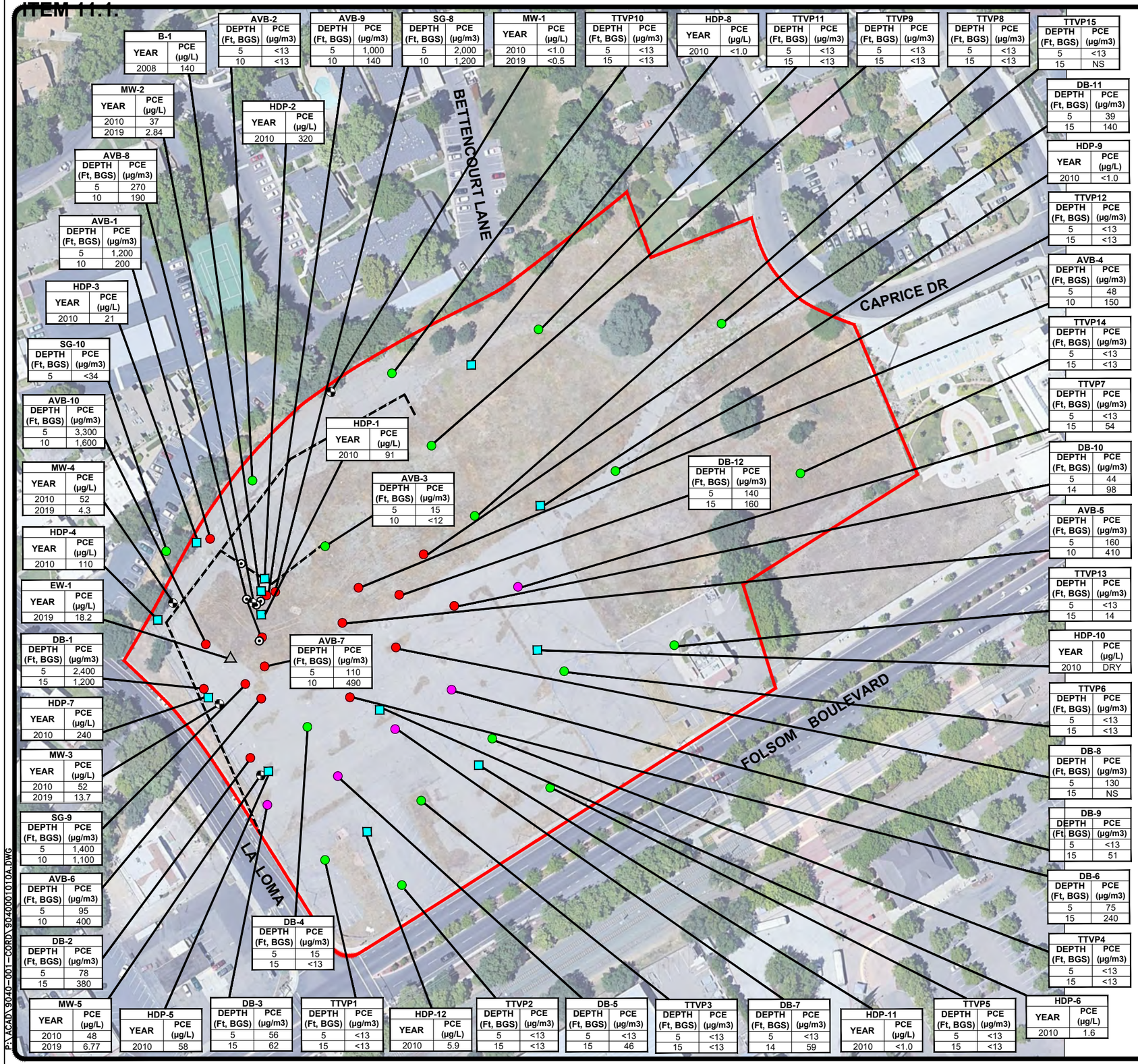

B-1	
YEAR	PCE (µg/L)
2008	140

MW-2	
YEAR	PCE (µg/L)
2010	37
2019	2.84

AVB-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	270
10	190

AVB-1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,200
10	200

HDP-3	
YEAR	PCE (µg/L)
2010	21

SG-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<34

AVB-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	3,300
10	1,600

MW-4	
YEAR	PCE (µg/L)
2010	52
2019	4.3

HDP-4	
YEAR	PCE (µg/L)
2010	110

EW-1	
YEAR	PCE (µg/L)
2019	18.2

DB-1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	2,400
15	1,200

HDP-7	
YEAR	PCE (µg/L)
2010	240

MW-3	
YEAR	PCE (µg/L)
2010	52
2019	13.7

SG-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,400
10	1,100

AVB-6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	95
10	400

DB-2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	78
15	380

MW-5	
YEAR	PCE (µg/L)
2010	48
2019	6.77

HDP-5	
YEAR	PCE (µg/L)
2010	58

DB-3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	56
15	62

TTVP1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

HDP-12	
YEAR	PCE (µg/L)
2010	5.9

TTVP2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

DB-5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	46

TTVP3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

DB-7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
14	59

HDP-11	
YEAR	PCE (µg/L)
2010	<1.0

TTVP5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

HDP-6	
YEAR	PCE (µg/L)
2010	1.6

DB-4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	15
15	<13

AVB-7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	110
10	490

HDP-1	
YEAR	PCE (µg/L)
2010	91

AVB-3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	15
10	<12

DB-12	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	140
15	160

AVB-2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
10	<13

HDP-2	
YEAR	PCE (µg/L)
2010	320

AVB-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,000
10	140

SG-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	2,000
10	1,200

MW-1	
YEAR	PCE (µg/L)
2010	<1.0
2019	<0.5

TTVP10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

HDP-8	
YEAR	PCE (µg/L)
2010	<1.0

TTVP11	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP15	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	NS

DB-11	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	39
15	140

HDP-9	
YEAR	PCE (µg/L)
2010	<1.0

TTVP12	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

AVB-4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	48
10	150

TTVP14	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	54

DB-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	44
14	98

AVB-5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	160
10	410

TTVP13	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	14

HDP-10	
YEAR	PCE (µg/L)
2010	DRY

TTVP6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

DB-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	130
15	NS

DB-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	51

DB-6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	75
15	240

TTVP4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

N

LEGEND

- PCE SOIL GAS CONCENTRATIONS GREATER THAN RESIDENTIAL ESL AND LOWER THAN COMMERCIAL ESL (2019-2021 DATA)
- PCE SOIL GAS CONCENTRATIONS LOWER THAN RESIDENTIAL ESL (2019-2021 DATA)
- PCE SOIL GAS CONCENTRATIONS GREATER THAN COMMERCIAL ESL (2019-2021 DATA)
- GROUNDWATER EXTRACTION WELL
- HISTORICAL GRAB GROUNDWATER SAMPLING LOCATION (APPROXIMATE LOCATION, 2008 AND 2010 DATA)
- GROUNDWATER MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- SANITARY SEWER LINE LOCATION (APPROXIMATE)

NOTES:

1. SOIL GAS DATA ARE FROM MULTIPLE SAMPLING EVENTS FROM 2019 TO 2021.
2. GROUNDWATER DATA ARE FROM SAMPLING EVENTS IN 2008, 2010, AND 2019 AS NOTED.

0 120 240

SCALE IN FEET

TITLE: PCE IN GROUNDWATER AND SOIL GAS

LOCATION: 10153 Through 10179 Folsom Boulevard Rancho Cordova, California

TETRA TECH

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PROJECT#	117-9040001
DATE	03-15-22

FIGURE 3

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Figure 4 Additional Site Remediation Locations

TETRA TECH, INC.
3101 Zinfandel Drive, Suite 200, Rancho Cordova, CA 95670
Tel 916.853.1800 Fax 916.853.1860 www.tetratech.com



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TITLE: ADDITIONAL SITE REMEDIATION LOCATIONS

LOCATION: 10153 Through 10179 Folsom Boulevard
Rancho Cordova, California

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PROJECT#	117-9040001
DATE	03-14-22

FIGURE 4

APPENDIX A
Health and Safety Plan

TETRA TECH, INC.
3101 Zinfandel Drive, Suite 200, Rancho Cordova, CA 95670
Tel 916.853.1800 Fax 916.853.1860 www.tetratech.com

TETRA TECH

HEALTH AND SAFETY PLAN

FOR

SOIL CLEANUP PLAN
FUTURE RANCHO CORDOVA CIVIC CENTER
10153 FOLSOM BOULEVARD
RANCHO CORDOVA, CALIFORNIA

Prepared for:
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

Submitted by:
Tetra Tech, Inc.
3101 Zinfandel Drive
Suite 200
Rancho Cordova, California 95670

March 2022

117-9040001.05

REVIEWS AND APPROVALS
CLIENT NAME: City of Rancho Cordova
PROJECT NO.: 117-9040001
Soil Cleanup Plan – Future Civic Center
10153 Folsom Boulevard
Rancho Cordova, California

We the undersigned have read and approve of the health and safety requirements presented in this health and safety plan for onsite work activities at the Vacant Site – Future Civic Center

Name	Signature	Date
Keith Hoofard Tetra Tech Inc. Office Health & Safety Representative	DRAFT	
Keith Hoofard Tetra Tech Project Manager	DRAFT	
Betty Li Tetra Tech Program Manager	DRAFT	

This certifies that Tetra Tech has inspected the subject site and has assessed the type, risk level, and severity of hazards for the project and has selected appropriate personal protective equipment for site personnel in accordance with Occupational Safety and Health Administration Title 29 of the *Code of Federal Regulations*, Part 1910.132.

Certified by

Roberto Rolon CIH, REM Tetra Tech Health and Safety Director	DRAFT	

HASP-AT-A-GLANCE

This summary sheet is provided as a quick reference only. The full site-specific Health and Safety Plan is integral to the safe performance of project operations and must be applied in its entirety.

EMERGENCY INFORMATION

Site:	Vacant site, 10153 Folsom Boulevard, Rancho Cordova, California
Project Location	10153 Folsom Boulevard
Proposed Start Dates of Activities:	TBD 2022
Scope of Activities:	Perform excavation oversight, conduct perimeter air monitoring, and sample soil stockpiles.
Type/Status of Site:	Currently vacant with remnant paved areas and vegetation consisting of grasses and trees
Chemicals of Potential Concerns (COPC):	Tetrachloroethene (PCE), with lesser concentrations of trichloroethene (TCE) and cis-1,2-Dichloroethene (cis-1,2-DCE)
Route of Exposure:	Inhalation, ingestion, and skin absorption through direct contact.
Physical Hazards:	Slip, trip, and fall hazards; excavation to 15 feet across 1.1-acrea area; lifting; biological hazards; heat stress; noise; and working near excavation equipment.
Levels of Protection:	The standard level of protection for this project is considered Level D and/or Modified Level D. Safety glasses, steel-toe boots, reflective safety vest, nitrile gloves, hearing protection, and leather work gloves.
Engineering and Administrative Controls:	Excavation will not be entered by a Tetra Tech employee except when the excavation is shored or sloped 1:1 and authorized by the General Contractor's on-site OSHA excavation competent person. Heat stress prevention: Canopy for shade, liquids for rehydration, work-rest schedule, buddy system.
Air Monitoring Equipment:	Air monitoring and soil screening will be conducted using PID (ppbRAE), Thermo Scientific pDR dust monitors, and periodic collection of air samples for laboratory analysis of chemicals of concern.
Factors Prompting Monitoring:	Monitoring will be conducted pursuant to the Cleanup Plan and associated Air Monitoring Plan.
PID Action Levels for Worker Breathing Zone:	At or below 5 ppm, stay upwind, let area ventilate and reassess. Above 5 ppm sustained in BZ for 10 minutes: Stop work, move out of source area, let area ventilate, contact corporate H&S Manager for guidance.
Hazard Communication:	Chemical products brought onsite: decon solutions
Nearest Hospital Emergency Room:	*Mather VA Hospital* 10593 Peter A McCuen Blvd Mather, CA 95655 916-843-7000
Nearest Urgent Care:	*Concentra Urgent Care* 10670 White Rock Rd, Suite 100, Rancho Cordova, CA 95670 916-364-1733
Tetra Tech Contacts:	
Project Manager	Keith Hoofard: 916-853-1800 (direct), 916-709-4732 (mobile)
Corporate Health & Safety	Roberto Rolon: 407-448-9553
CORE Incident Intervention:	for non-life-threatening incidents, available 24/7: 1-855-683-9006
Client Contact	Stefan Heisler: City of Rancho Cordova, CA 916-851-8757

Site:	Vacant site, 10153 Folsom Boulevard, Rancho Cordova, California
Subcontractor Contacts:	See Section 2.0
See Section 13.10 for route and map to hospital and Section 13.11 for route and map to clinic.	

TETRA TECH

ACRONYMS AND ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
BZ	Breathing Zone
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
COC	Contaminants of Concern
CPEA	Certified Professional Environmental Auditor
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
CSE	Confined Space Entry
dBA	Decibel (on A-weighted network)
DCE	Dichloroethene
DOT	Department of Transportation
DPT	Direct-Push Technology
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
eV	Electron Volts
EZ	Exclusion Zone
FRA	Federal Railroad Administration
FS	Field Supervisor
GFCI	Ground Fault Circuit Interrupter
GHS	Globally Harmonized System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSR	Health and Safety Representative
IDLH	Immediately Dangerous to Life and Health
IDW	Investigation Derived Waste
I.P.	Ionization Potential
IR	Incident Report
LEL	Lower Explosive Limit
MDS	Medical Data Sheet
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NPDES	National Pollution Discharge Elimination System
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl

PG	Professional Geologist
PCE	Tetrachloroethylene
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PM	Project Manager
POL	Petroleum/Oil/Lubricants
PPE	Personal Protective Equipment
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
SDS	Safety Data Sheet (formerly MSDS)
SOP	Standard Operating Procedure
SOW	Scope of Work
SSC	Site Safety Coordinator
STEL	Short Term Exposure Limit
SWP	Safe Work Practice
SZ	Support Zone
TCE	Trichloroethylene
Tetra Tech	Tetra Tech, Inc.
TLV	Threshold Limit Value
TWA	Time-Weighted Average
UEL	Upper Explosive Limit
UL	Underwriters Laboratories
UN	United Nations
VC	Vinyl Chloride
VOC	Volatile Organic Compound

HASP-AT-A-GLANCE ..... **iii**

ACRONYMS AND ABBREVIATIONS ..... **i**

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Form SSC-1 Daily Site Log
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Appendix D Heat Illness Prevention

1.0 INTRODUCTION

Tetra Tech Inc. (Tetra Tech) received a work authorization from the City of Rancho Cordova (City) to perform a soil cleanup at 10153 Folsom Boulevard in Rancho Cordova, California (the Site). The Site previously supported a multi-tenant shopping center, including a dry cleaner. The dry cleaner experienced of release of cleaning solvent (PCE) to the subsurface, impacting the northwest quadrant of the Site. The Site has been the focus of multiple rounds of subsurface investigation (soil, groundwater, soil vapor) as well as remediation efforts (groundwater and soil vapor extraction/treatment) by Others. The Regional Water Quality Control Board (RWQCB) has been the lead regulatory agency. Remediation efforts have been discontinued and the Site was razed several years back, remaining vacant. Residual soil vapor concentrations remain above residential and commercial screening criteria, and residual soil impacts exist along the sanitary sewer that once served the dry cleaner. The purpose of the soil cleanup is to mitigate residual PCE concentrations in subsurface soils to reduce soil vapor concentrations below residential screening criteria.

The cleanup efforts are anticipated to include a combination of pre-excavation soil and groundwater profile sampling (sonic drill rig) followed by soil excavation in the northwest corner of the site to a depth of 15 feet below grade. The entire length of the on-site sanitary sewer line will be over-excavated (6- to 10-feet deep), which extends outside the excavation limits. The excavation will be designed by the selected contractors Competent Person, as defined by OSHA. Excavated soils will be temporarily stockpiled a short distance away and covered with visqueen while awaiting backfill of the soils to the excavation. The excavation limit encompasses an approximate 1.1-acrea area. Some or all existing groundwater and extraction wells (vapor extraction and groundwater) will require abandonment as some are in the proposed excavation area. It is anticipated that each well will be over-drilled and removed using a hollow stem auger drill rig.

Based on the results of the pre-excavation soil and groundwater profile sampling, and the soil stockpile profile sampling, chemical oxidant (potassium permanganate – KMnO4) soil treatment may be conducted. This may include directly mixing crystalline KMno4 into the excavated soil as it is backfilled and/or oxidant injections at select profile boring locations. The oxidant application rate will be based on a bench scale treatability study of the excavated soil and detected PCE concentrations in soil and groundwater. A temporary soil vapor extraction (SVE) system may also be installed and operated for an approximate 2-month duration, based on the results of the pre-excavation soil and groundwater profile sampling. Up to 20 soil vapor extraction wells will be installed and manifolded to an SVE system equipped with granular active carbon (GAC) emissions controls. The SVE system will be permitted by the local air district. An electrical power drop (by the local utility) will be necessary to operate the SVE system.

The site-specific health and safety provisions in this document have been developed for use during drilling and sampling activities, soil excavation, stockpiling, and backfill, and potential oxidant treatments and/or short-term soil vapor extraction. This document addresses items specified under Occupational Safety and Health Administration (OSHA) Title 29 of the *Code of Federal Regulations* (CFR),

Part 1910.120(b), Hazardous Waste Operations (HAZWOPER) 120 and applicable California Occupational Safety and Health requirements.

This health and safety plan (HASP) must be present at the site during the performance of all Site activities and will be available to all onsite personnel who may be exposed to hazardous onsite conditions, including Tetra Tech and subcontractor personnel participating in site operations, and all authorized site visitors, including regulatory agency representatives. All onsite personnel, including Tetra Tech and subcontractor employees and site visitors, must be informed of site emergency response procedures and any potential health and safety hazards associated with onsite activities. Protocols established in this HASP are based on site conditions and health and safety hazards known or anticipated to be present and on available site data. The Tetra Tech Compliance Agreement form in **Appendix A** must be signed by all personnel before they enter the site.

This HASP is supported by the Tetra Tech Health and Safety Manual and safe work practices (SWPs) (**Appendix B**), which were developed to comply with the OSHA Hazardous Waste Operations standard and applicable sections of 29 CFR Part 1910 (General Industry Standards) and Part 1926 (Construction Standards).

This plan must be reviewed and approved by the Tetra Tech health and safety representative (HSR) and the Tetra Tech program and project managers (see the Reviews and Approvals Form after the Contents in this document). Specifications herein are subject to review and revision based on actual conditions encountered in the field during site activities. The HASP will be modified if the scope of work changes or if new information regarding site conditions, hazards, or contaminants of concern becomes available. If deviations are encountered from the field work plan, Tetra Tech and subcontractor personnel will notify the Project Lead and suspend work to assess changes to the work plan and the HASP. Significant revisions to this plan must be approved by the Tetra Tech program and project managers and the Tetra Tech HSR. Authorized modifications to the HASP will be tracked in the Record of Review/Revision [to be inserted into the HASP] and will be communicated to all project personnel.

2.0 PROJECT PERSONNEL AND RESPONSIBILITIES

This section describes responsibilities of project personnel, summarizes requirements for subcontractors and visitors who wish to enter the Site, and discusses HASP enforcement. Personnel assigned to these positions will exercise the primary responsibility of performing all of their work tasks in a manner that is consistent with the Tetra Tech Health and Safety Policy, the health and safety training they have received, this HASP, and in an overall manner that protects their personal safety and health and that of their coworkers. The Field Supervisor will be the primary point of contact for any questions regarding the health and safety procedures and the selected control measures that are to be implemented for activities at the Site.

The following personnel and organizations are associated with planned activities at the site. The organizational structure will be reviewed and updated as necessary during the course of the project.

Name/Title	Responsibility	Telephone No.
Client Representative:		
Stefan Heisler	City of Rancho Cordova Project Lead	(916) 851-8757
Tetra Tech Personnel:		
Betty Li	Program Manager	(916) 853-1800 (office) (617) 820-3613 (cell)
Keith Hoofard	Project Manager	(916) 853-4523 (office) (916) 709-4732 (cell)
Zack Laforet	Field Supervisor	(916) 853-1800 (office) (603) 801-1624 (cell)
Roberto Rolon	Corporate Health& Safety	(407) 448-9553
Keith Hoofard	Site Safety Coordinator (SSC)	(916) 853-4523 (office) (916) 709-4732 (cell)

Subcontractors:

Company Name	Contact	Telephone Number
GPRS (utility clearance)	Kelly Poitevint	800-231-3347
Cascade Drilling (well abandonment)	Rick Alcartado	916-638-1169
Cascade Drilling (soil & groundwater profile borings)	Rick Alcartado	916-638-1169
Calvada Surveying (locate 30 profile borings; relocate for post-remediation sampling)	Saul Melgarejo Jr., LSIT	951-280-9960 (office) 562-673-5123 (cell)
TBD (Excavation, Stockpile, Backfill)	TBD	TBD
Cascade Drilling (SVE well drilling)	Rick Alcartado	916-638-1169
EnviroSupply & Service (temp SVE system)	Joe Hunter	949-732-3318
TEG NorCal (post-remediation vapor sampling)	Mark Jerpbak	916-853-8010

2.1 PROJECT PERSONNEL

The Tetra Tech project manager, field supervisor, and site safety coordinator (SSC) will be responsible for implementation and enforcement of the provisions of this HASP. Their duties and the expectations for Tetra Tech employees are described in the following sections.

2.1.1 Project Manager

The Tetra Tech project manager (PM) has ultimate responsibility for ensuring implementation of the requirements set forth in this HASP. Some of this responsibility may be achieved through delegation to site-dedicated personnel that report directly to the project manager. The project manager shall regularly confer with site personnel regarding safety and health performance.

2.1.2 Field Supervisor

The Tetra Tech field supervisor (FS) will oversee and direct field activities and has day-to-day responsibility for ensuring HASP implementation. Subcontractor compliance with the HASP shall be monitored by the field supervisor. The field supervisor will report directly to the project manager any health and safety-related issues.

2.1.3 Site Safety Coordinator

A Site Safety Coordinator (SSC) is assigned by the project manager (PM) to provide health and safety oversight for this project. The SSC is responsible for the following:

- Being on site during all work activities to oversee health and safety issues for Tetra Tech employees, subcontractors, and visitors at the site.

- Conducting site-specific training which includes review of the HASP at the project initiation and conducting daily tailgate meetings to discuss planned tasks, identified hazards, and required hazard controls.
- Implementing the site-specific HASP including hazard communication, respiratory protection, personal protective equipment, and other associated safety and health programs.
- Verify that the HASP accurately reflects ALL site hazards and is revised or amended as new tasks are assigned or new hazards are recognized.
- Verifying onsite personnel have all necessary training, medical and respirator clearance, and respirator fit-tests as specified by the HASP.
- Advising the PM and/or client of any field practices or conditions that may endanger the health and safety of field personnel, subcontractors, or visitors.
- Recommending corrective actions for any conditions that may endanger the health and safety of field personnel, subcontractors, or visitors.
- Selecting, inspecting, maintaining, and enforcing proper use, cleaning, and maintenance of protective clothing and equipment.
- Monitoring onsite hazards and conditions (frequent site inspections).
- Maintaining visual or verbal communication with all site workers.
- Stopping work if any worksite condition, practice, or operation causes or presents a hazard that can reasonably be expected to result in immediate death, serious physical harm, or severe damage to the environment.
- Working closely with the PM and HSR to determine appropriate corrective action and/or prompt resolution to all hazards.
- Establishing and maintaining work zones and control points by overseeing control of entry and exit at site access points and recording the names and job assignments of all personnel who enter and exit the site.
- Arranging for required work area, personal or ambient hazard monitoring.
- Ensuring that all monitoring equipment used on site has been properly calibrated and is operated in accordance with manufacturer's recommendations and approved sampling methodologies.
- Creating and maintaining records of employee exposure and monitoring results for all onsite personnel.
- Monitoring workers for signs and symptoms of work-related exposures, such as chemical exposure, heat stress and fatigue.
- Conducting daily field inspections for early recognition of potential site and task hazards.
- Coordinating and supervising emergency response and providing emergency first aid and cardiopulmonary resuscitation (CPR) to team members, if required.
- Reporting all occupational illness, injuries, incidents and near-misses to the HSR and PM immediately after stabilization of the incident and notification of emergency medical providers.

- Assisting in conducting incident investigations and preparing reports of serious near-misses, illnesses, injuries, motor vehicle accidents, or property damage.

2.1.4 Health and Safety Representative

The Tetra Tech health and safety representative (HSR) is responsible for review of the project HASP. The HSR will also act in an advisory capacity to the project manager and site personnel for project-specific health and safety issues. The Tetra Tech project manager will establish a liaison between the City of Rancho Cordova representative and the HSR on matters relating to health and safety. The HSR responsibilities include the following:

- Provide information regarding site contaminants and physical and biological hazards.
- Establish air monitoring and decontamination procedures.
- Assign personal protective equipment based on task and potential hazards.
- Determine emergency action procedures.
- Stipulate training and medical surveillance requirements.
- Provide standard work practices to minimize potential injuries and exposures associated with hazardous waste site work.
- Modify this HASP, where and when necessary.

2.1.5 Tetra Tech Employees

Tetra Tech employees are expected to fully participate in implementing the site HASP by having the necessary training, attending site safety meetings, always wearing designated personal protective equipment (PPE), complying with site safety and health rules, and advising the Tetra Tech SSC of health and safety concerns at the site. Additionally, all Tetra Tech employees have the following rights and responsibilities:

- Tetra Tech employees are expected to and responsible for reporting health and safety hazards they face while performing their work. As such, employee reports of health and safety hazards are viewed as positive interactions and no employee of Tetra Tech will retaliate against any other employee who reports a health and safety hazard.
- Tetra Tech employees have the right to refuse to perform work involving significant safety hazards they feel have not been adequately addressed.
- Every Tetra Tech employee has the right to stop work if he/she feels any worksite condition, practice, or operation causes or presents a hazard that can reasonably be expected to result in immediate death, serious physical harm, or severe damage to the environment. Through observations and communication, all parties involved will then develop, communicate, and implement corrective actions necessary and appropriate to modify the task and to resume work. The stop work event will be reported as a near miss incident.

Note: In some cases, one person may be designated responsibilities for more than one position. For example, the Field Supervisor may also be responsible for the SSC duties. This action will be performed only as credentials, experience, and availability permit.

2.2 SUBCONTRACTORS

Subcontractor personnel participating in project operations will be required to read and comply with all sections of this plan. All subcontractor personnel entering the site must sign the Compliance Agreement form (**Appendix A**). Subcontractor personnel must comply with all applicable 29 CFR 1910.120 training, respirator fit testing, and medical surveillance requirements and other applicable OSHA General Industry and Construction Standards (Part 1926). Subcontractors are responsible for providing PPE required by this plan for their personnel (see Section 7.1, Protective Equipment and Clothing) and are directly responsible for the health and safety of their employees. Subcontractors will prepare a safety plan and/or Job Hazard Analysis for their work assignments which will be submitted to Tetra Tech for review.

2.3 SITE VISITORS

All authorized site visitors will be required to read the HASP and sign the Compliance Agreement form (**Appendix A**). Visitors will be expected to comply with relevant OSHA requirements. Visitors will also be expected to provide their own PPE required by the HASP. Visitors who have not met OSHA training, medical surveillance, and PPE requirements are not permitted to enter work areas where exposure to health and safety hazards is possible.

3.0 SITE BACKGROUND

The Site is a multi-parcel commercial property, totaling 9.23-acres (Figure 1). All former buildings have been razed and the Site sits vacant with the former asphalt paved parking areas intact. A former on-Site dry cleaner (Veterans Cleaners) tenant space was located at 10161 Folsom Boulevard (Parcel -021) and operated from approximately 1970 to 2003. The dry cleaner reportedly utilized a 45 gallon above ground tank to store tetrachloroethane (PCE). Figures showing the footprint boundary of the former dry cleaner, and dry-cleaning equipment layout, were not found.

A release of PCE to the subsurface was first discovered at the Site in 2008 after samples of soil, groundwater and soil vapor were collected from multiple soil borings in the vicinity of the dry cleaner. PCE was detected at concentrations up to:

34 micrograms per kilogram (µg/kg) in soil;

70,000 micrograms per cubic meter (µg/m3) in soil gas; and

140 micrograms per liter (µg/L) in groundwater.

Total petroleum hydrocarbons as gasoline (TPH-gas) was also detected in groundwater at a concentration of 100,000 µg/L in 2008. Subsequent TPH-gas and TPH-diesel concentrations were low to non-detect in groundwater monitoring wells through 2014. Benzene, toluene, ethyl benzene and xylenes (BTEX) compounds also appear to have been non-detect in groundwater through 2019.

Elevated concentrations of lead were also detected in soil above environmental screening levels, along with one soil sample containing TPH-motor oil above the environmental screening level. These detections were not confirmed during later sampling.

Trichloroethene (TCE) and cis-1,2-dichlorethene (cis-1,2-DCE) were originally detected at concentrations above California maximum contaminant levels (MCLs) prior to groundwater remediation, but concentrations decreased to non-detect after remediation (discussed below).

Depth to groundwater at the site ranges from approximately 50 to 55 feet below ground surface (bgs), with a groundwater flow direction ranging from north to northeast.

Since 2008, multiple Site characterization sampling events have been conducted in support of delineating the extent of impacts to soil, soil vapor and groundwater, along with on-site remediation consisting of soil vapor extraction (SVE) and groundwater extraction. The CV-RWQCB has been the lead agency providing oversight of site characterization and remediation.

- An SVE system operated at the site from approximately April 2011 through August 2016, removing approximately 7.8 pounds of PCE. PCE was detected in soil gas up to 70,000 µg/m3 prior to operation of the SVE system, and up to 280 µg/m3 following remediation. The RWQCB concurred that soil vapor had been adequately remediated and the SVE system was

subsequently dismantled. The SVE system was subsequently dismantled with concurrence from the RWQCB.

- A groundwater extraction system also operated at the site from April 2014 through August 2017 (shutdown due to vandalism). Approximately 11 million gallons of groundwater were extracted at approximately 10 gallons per minute and discharged (untreated) to the sanitary sewer from a single extraction well (EW-1). Well EW-1 is a 6-inch diameter extraction well screened from 45 to 75 feet bgs, with a reported radius of influence over 150-feet. PCE was detected in EW-1 at concentration of 150 µg/L prior to startup, decreasing to 11.5 µg/L during second quarter 2017. An estimated 2.7 pounds of PCE was removed by groundwater extraction.

Soil gas and groundwater confirmation samples were most recently collected in the vicinity of the former dry cleaner during three sampling events in 2019 (March, April, and October) and one in July 2020 as part of additional site characterization activities. PCE was detected as follows:

- Up to 3,300 µg/m3 (5-feet bgs) and 1,600 µg/m3 (10 feet bgs) at sample location AVB-10, located along the sanitary sewer line, distant from the rear of the former dry cleaner; and

Up to 18 µg/L in groundwater (EW-1). Upgradient well MW-5 contained PCE at a concentration of 6.77 µg/L. Downgradient well MW-1 was non-detect for PCE. Well MW-5 is located near the sanitary sewer line on La Loma (or the Site sewer lateral, depending on which figures are correct), presumed "downstream" from the former dry cleaner.

Tetra Tech conducted additional on-site soil and soil vapor sampling in December 2021 to evaluate current soil conditions along the sewer line, and to further evaluate soil vapor conditions south and east of the dry cleaner in areas not previously investigated. Low concentrations of PCE were detected in soil at two locations along the sewer line (TTSB5 and TTSB10) in both the 5- and 10-ft soil samples at concentrations ranging from 7.8 to 54 micrograms per kilogram (µg/Kg). Estimated low concentrations of PCE were detected in the 5-ft soil samples at three sewer line locations (TTSB4, TTSB6 and TTSB9) ranging from 1.3 to 4.7 µg/Kg. TCE was also detected at an estimated low concentration of 2.8 µg/Kg in the 5-ft soil sample from TTSB5. Low to estimated low concentrations of petroleum-related compounds (TPH-gas, naphthalene, toluene, trimethylbenzenes, and xylenes) were detected at locations TTSB6 through TTSB9. All soil detections were well below respective Environmental Screening Levels (ESLs) for human health (direct exposure) under both Residential and Commercial land use scenarios.

TPH, VOCs, and PCBs were not detected in the 5-ft or 10-ft composite soil samples from along the sewer line (TTCOMP-5 and TTCOMP-10). Low to estimated low concentrations of the organochlorine pesticides 4,4-DDE and dieldrin were detected in both the 5-ft and 10-ft composites soil samples. Estimated low concentrations of the SVOCs pyrene and fluoranthene were detected in the 5-ft composite soil sample. Low to estimated concentrations of 11 metals (arsenic, barium, beryllium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, and zinc) were detected in both the 5-ft and 10-ft composite soil samples along the sewer line. The various detections of metals appear to represent naturally occurring background concentrations; no anomalous metals concentrations were detected. None of the chemicals detected in the two composite soil samples exceed their respective Title 22 Total

Threshold Limit Concentration (TTLC) values for classification as a hazardous waste (should the soil be excavated and transported off-site for disposal).

PCE was not detected above the laboratory reporting limit of 13 µg/m3 in the 30 soil vapor samples collected at 5-feet in depth. PCE was only detected in soil vapor at 15-feet in depth from two locations at concentrations of 54 µg/m3 (TTVMP7-15) and 14 µg/m3 (TTVMP13-15). Both detections are below the commercial PCE soil vapor ESL value of 67 µg/m3. Only location TTVMP7-15 exceeds the residential PCE soil vapor ESL value of 15 µg/m3 (at 54 µg/m3). PCE degradation compounds were not detected in any of the soil vapor samples. Low concentrations of petroleum-related compounds (xylenes and toluene) were detected in soil vapor at various depths at TTVP1, TTVP4, TTVP6, TTVP7 and TTVP10. The concentrations were well below their ESLs for commercial or residential uses.

4.0 SCOPE OF WORK

This section discusses the activities that are to be performed at the Site. Table 5-1 of this HASP provides information related to each of the tasks associated with the scope of work. The planned activities involved in this effort are presented in detail in the Tetra Tech **Soil Cleanup Plan, 10153 – 10175 Folsom Boulevard, Rancho Cordova, California, dated March 15, 2022.** If tasks other than those described below are to be performed, Table 5-1 and this section will be modified accordingly.

Field operations to be performed by Tetra Tech and subcontractor personnel include:

- Mark Site for USA/Utility Clearance
  - Tetra Tech will mark all proposed drilling locations and soil excavation area and subcontract an on-site utility locator to scan the subsurface for utility conflicts.
- Well Abandonment
  - Eleven existing site wells will be abandoned before beginning soil excavation activities. Tetra Tech will subcontract well abandonment through a CA- licensed well driller, and obtain drilling permits from Sacramento County. Tetra Tech will provide field oversight.
- Pre-excavation Profile Drilling
  - Tetra Tech will subcontract with a CA-licensed well driller to collect soil and groundwater samples from approximately 30 locations in a grid pattern. Soil samples will be collected at 5-foot intervals down to groundwater (approx. 55-feet), where a grab groundwater sample will also be collected. Tetra Tech will place samples in containers appropriate for selected analyses. County drilling permits are required for borings completed withing 20-feet of groundwater.
- Soil excavation, stockpiling, backfill and compaction
  - Tetra Tech or the Client will subcontract with a licensed excavation company to design the soil excavation in the northwest corner of the site, including removal of the section of sanitary sewer that extends outside the excavation limits to the east. The contractor will also coordinate with utility companies to abandon any utilities that enter the excavation arear. The excavation will be designed by an OSHA-competent person. The soil will be stockpiled and covered for subsequent profile sampling. Tetra Tech will provide field oversight.
- Stockpile profile sampling
  - Tetra Tech will collect samples of the stockpiled soil for laboratory analysis.
- Addition of Dry Oxidants to Soil During Backfill
  - Based on the results of the profile sampling, a dry chemical oxidant (KMnO4) may be mixed into the soil during backfill and compaction. The excavation contractor or their subcontractor will perform this work utilizing personal protective equipment (PPE) recommended by the oxidant manufacturer. Tetra Tech will not be directly involved in this task.

- Air and Dust Monitoring
    - During active soil excavation, stockpiling and backfill, Tetra Tech will perform perimeter air and dust monitoring. Monitoring instruments will include a photoionizing detector (PID), real-time dust monitors, and the periodic collection of air samples for laboratory analysis. A portable weather station will be set up to collect regular meteorological data. The details of the air monitoring are presented in the Air Monitoring Plan.
- Post-Backfill Oxidant Injections (optional)
    - Following backfill and compaction to original grade and based on the results of the pre-excavation profile drilling, liquid oxidants (KMnO4) may be injected into select soil borings. Tetra Tech will contract with a licensed CA-well driller to perform this task. Tetra Tech will provide field oversight. Appropriate PPE will be donned for handling the KMnO4, per manufacturer guidance and SDS information.
- Short-Term Soil Vapor Extraction (optional)
    - Following backfill and compaction, and based on pre-excavation profile sampling, short term soil vapor extraction may be completed. Tetra Tech will contract with a licensed CA-well driller to install 15 to 20 soil vapor extraction wells to approximately 35 feet below grade. A subcontractor will supply and setup a temporary SVE system with granular activated carbon emissions control. As there is no power at the site, Tetra Tech will hire a subcontractor to install a power drop and wire the SVE trailer to the power supply. Tetra Tech will operate the SVE system for approximately 2-months, performing routine operations, maintenance, and system monitoring, including collection of compliance air samples. The SVE vendor will recycle or dispose of the spent carbon after system shutdown.
- Post-Cleanup Soil Vapor Sampling
    - To assess the effectiveness of the soil cleanup activities, soil vapor samples will be collected from 30 locations, corresponding to the pre-excavation profile soil borings. The soil vapor sampling will be similar to recent soil vapor sampling events. Waterloo Membrane Samplers (WMS) will be installed at depths of 5-feet and 15-feet below grade. The WMS samplers will be retrieved 48-hours following installation for laboratory analysis. Grout borings with neat cement. Tetra Tech will contract with a CA-licensed well driller to perform this work.

5.0 HAZARD ASSESSMENT AND CONTROL

Field activities and physical features of the site may expose field personnel to a variety of health and safety hazards. This section provides information on potential hazards related to site activities and the nature of hazardous material impacts. Potential chemical, physical, and biological hazards related to site activities and conditions are discussed below.

5.1 CHEMICAL HAZARDS

The chemical contaminants of concern on this site are:

Media	VOCs
Soil	Cis-1,2-DCE PCE TCE
Soil Gas	Cis-1,2-DCE PCE TCE
Groundwater	Cis-1,2-DCE PCE TCE

Specific information on potential chemical hazards at the site is provided in **Table 5-1**, including exposure limits, anticipated exposure routes, and toxic effects. Potential routes of exposure include dermal (skin and eye) contact and absorption, inhalation, and ingestion. Dermal contact and accidental ingestion can occur because of improper decontamination or PPE usage. Inhalation can occur because of airborne contaminants (either vapors or dusts) generated or released during site activities. The chemicals may also contaminate equipment, vehicles, instruments, and personnel.

The Safety Data Sheets (SDS) included in **Appendix C** to this HASP summarize health and safety information for hazardous materials that will be brought to the site, such as treatment chemicals, laboratory reagents, decontamination solutions, and sample preservatives.

TABLE 5-1 CHEMICAL HAZARDS (*list major and toxic COCs*)			
Chemical	Exposure Limits	Routes of Entry	Toxic Effects
Tetrachloroethene (PCE)	PEL = 100 ppm TLV = 25 ppm IDLH = 150 ppm	Inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin erythema (skin redness); liver damage; [potential occupational carcinogen]
Trichloroethene (TCE)	PEL = 25 ppm TLV = 10 ppm IDLH = 1,000 ppm	Inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]
Cis-1,2-DCE	PEL = 200 ppm TLV = 200 ppm IDLH = 1,000 ppm	inhalation, ingestion, skin and/or eye contact	irritation eyes, respiratory system; central nervous system depression

Notes:
ACGIH American Conference of Governmental Industrial Hygienists
Ca Carcinogen
IDLH Immediately dangerous to life or health (NIOSH)
NL Not listed
OSHA Occupational Safety and Health Administration
PEL Permissible exposure limit (OSHA legal limit)
ppm Part per million
STEL Short Term Exposure Limit
TLV Threshold Limit Value (ACGIH recommended value)

Exposure to the Contaminants of Concern (COC) will be prevented through the implementation of applicable Tetra Tech safe work practices (**Appendix B**) including avoiding contact with media (soils, groundwater, etc.), working from an upwind location, screening with real-time direct-reading instruments, use of PPE, minimizing the generation of dust, proper decontamination, and hand washing prior to conducting hand to mouth activities.

A minimum of two project personnel (the “buddy” system) is required when Level C PPE or higher is required to protect against chemical exposures via inhalation or dermal contact/absorption.

5.2 PHYSICAL HAZARDS

Physical hazards associated with site activities present a potential threat to onsite personnel. The following physical hazards may be present during the performance of site activities:

- Excessive noise (> 85 dBA)
- Slips, trips, and falls
- Traffic and heavy equipment hazards
- Manual lifting/material handling
- Pinch/compression points
- Heat stress
- Underground utilities
- Overhead power lines and structures
- Power and hand tools
- Suspended loads

Site-specific physical hazards include the following:

- Drilling/excavation/trenching activities.
- Installation of a soil vapor extraction system with power drop.
- On-site traffic associated with haul trucks.

Tetra Tech SWPs for protection against these physical hazards are provided in **Appendix B**.

A minimum of two project personnel (the "buddy" system) is required for the following hazardous operations or site conditions:

- Electrical work
- Working over or near water
- Heavy lifting (pumps and hoses)
- Excavation work
- Instances of extreme heat illness risk
- Instances of extreme hypothermia risk
- Confined space entry
- Working at heights/fall hazard

5.3 BIOLOGICAL HAZARDS

The Site is located within the City of Rancho Cordova and has been razed. Native vegetation (weeds) has grown across the former building footprints on the west half of the Site, and through cracks in the asphalt paved areas that remain, with the east half remaining vegetated. Therefore, biological hazards will be limited to urban animals such as rats, raccoons, possums, and feral cats and dogs that may be encountered during field operations. Personnel should look for signs of animal activities (i.e., tracks, foraging areas, etc.) and avoid those areas, where possible. Biting or stinging insects and spiders (e.g., fleas, mosquitos, etc.) may also be a potential concern.

Homeless persons have also been seen on-Site and residing in vehicles parked along La Loma Avenue.

For purposes of this HASP, site personnel are categorized as Class B in the Bloodborne Pathogens Program, which pertain to jobs where required tasks do not, but could involve exposure to blood, bodily fluids, or tissues – for example, in the event first aid or CPR is administered. The implementation of Universal Precautions will minimize the chance of contracting blood borne disease.

The Tetra Tech Safe Work Practice for Biohazards is provided in **Appendix B**.

5.4 TASK HAZARD ANALYSIS SUMMARY

Table 5-2 provides a task hazard analysis matrix of the planned field activities listed in Section 4.0 for quick identification of chemical, physical, and biological hazards that may be encountered as part of site conditions and that are inherent to one or more tasks. **Table 5-3** provides a detailed list of required control measures for each site and task hazard listed in Table 5-2. The table also refers to Tetra Tech Safe Work Practices (SWP) which have been developed to address many common health and safety hazards. The SWPs must be reviewed prior to mobilization for understanding and hazard control planning purposes. The applicable SWPs should also be reviewed as part of the daily tailgate safety meeting to focus on that day's planned work and associated hazards.

TABLE 5-2
TASK HAZARD ANALYSIS MATRIX

	TASKS				
HAZARDS	**USA/Utility Clearance**	**Any Drilling Activities (pre- and post-excavation)**	**Excavation Related Activities (excavation, stockpiling, stockpile sampling, backfilling)**	**Chemical Oxidant Applications (soil mixing or injections)**	**Temporary Soil Vapor Extraction System Installation and Operation**
Exposure to COCs/ airborne dust		X	X	X (oxidant dust)	
Heavy Equipment		X	X	X	X
Vehicle Traffic		X	X	X	X
Excessive Noise		X	X	X	X
Pinch/compression points		X	X	X	
Power/hand tools		X	X	X	
Sun (UV) exposure	X	X	X	X	X
Heat Stress (depending on season)		X	X	X	X
Slips, trips, falls	X	X	X	X	X
Underground utilities		X	X		X
Manual lifting/ material handling		X	X	X	X

TABLE 5-3 HAZARD CONTROL SUMMARY	
Potential Hazard	Controls
Exposure to COCs	1. Stand upwind of chemical products (i.e oxidant dust)/COC sources whenever possible. 2. Minimize direct contact and contact time with contaminated media. 3. Do not consume food/drink, apply cosmetics or smoke in work areas. 4. Wear assigned PPE (minimum modified Level D). 5. Use direct-reading monitor (PID) to assess total VOCs at worker breathing zone and at source. Adhere to prescribed action levels. 6. Review chemical hazard information on chemical and physical properties, toxic effects, and exposure limits. 7. Promptly report any encounter of unknown materials, strong odors, free product, and any possible signs or symptoms of chemical exposure.
Heavy Equipment	1. Review SWP 5-7 in Appendix B. 2. Wear ANSI Class 2 or higher reflective safety vest. 3. Maintain line of vision with operator. Use established hand signals. 4. Keep a safe distance (swing radius + boom).
Vehicle Traffic	1. Review TT program DCN 4-4. 2. Wear ANSI Class 2 or higher reflective safety vest. 3. Use cones, flags, barricades, caution tape and signage to define work area and warn oncoming traffic (per Work Zone Plan). 4. Use vehicle with flashers/arrowboard/strobe to warn/direct traffic (not applicable). 5. Engage police escort for high-traffic locations (not applicable).
Excessive Noise (> 85 dBA)	1. Obey posted signage for areas requiring hearing protection. 2. Wear required hearing protection when noisy equipment such as drill rig, jackhammer, cut saw, air compressor, blower, generator, etc. is operating onsite. 3. Use rule of thumb to know when to use hearing protection (if you must raise your voice to be heard at arm's length.
Heat Stress	**1.** Follow SWP 5-15 for heat stress. Follow TT Procedures for Heat Illness Prevention.**!** 2. Pre-hydrate and stay hydrated. Fill out and comply with TT heat Illness Prevention Checklist. Avoid alcohol, salt, and caffeine. Eat more fruit and vegetables. 3. Provide and use shade pursuant to Procedures for Heat Illness Prevention 4. Acclimate slowly. Take rest breaks as needed in shade or air-conditioned space. 5. Wear cotton, light-colored clothing, and cooling garments (dew rags). 6. Schedule work for cooler parts of the day (early AM/late PM).

TABLE 5-3 HAZARD CONTROL SUMMARY	
Potential Hazard	Controls
	7. Check oral temperature and pulse if early signs and symptoms appear (flushed skin, fatigue, dizziness, nausea, headache). 8. Get IMMEDIATE medical attention if heat stroke is suspected.
Slips, trips, falls (STF)	1. Preview work area to identify site hazards and correct promptly. If not possible, place barricades/caution tape and communicate locations to all onsite workers. 2. Wear sturdy safety boots with non-skid sole and good tread for traction. 3. Avoid wet, slick, and icy surfaces. Dry, cover or provide friction surface for safe passage OR use alternate route.
Underground utilities	1. Refer to SWP 5-35. 2. Conduct utility clearance with One Call System (811) for public areas and third-party contractor for private property. 3. Railroads: Before any DIGGING near Client signals, obtain proper clearance and instructions from the Local Signals and Communications Supervisor (not applicable).
Material handling/ manual lifting	1. Review SWP 5-19. 2. Use mechanical lifting device or a lifting aid where needed. 3. Plan the lift. Check route for clearance. 4. Bend at the knees and use leg muscles when lifting. 5. Use the buddy system when lifting heavy (> 35 lbs.) or awkward objects. 6. Do not bend or twist the body while lifting.

6.0 SITE CONTROL

To control the impact and spread of contamination and prevent employee exposures to chemical and physical hazards during site operations, onsite work areas may be divided into an exclusion zone, a decontamination zone, and a support zone. Work and support areas will be established based on necessary security measures, ambient air data, and site-specific conditions.

Access to the exclusion and decontamination zones will be restricted to authorized personnel. Any visitors to these areas must present proper identification and be authorized to be on site. The Tetra Tech SSC will identify work areas that visitors or personnel are authorized to enter and will enforce site control measures.

The following sections describe the exclusion zone, the decontamination zone, and the support zone as well as procedures to be followed in each.

The entire Site is secured by a gated chain link fence; thus no other vehicle or pedestrian traffic will be on-Site.

6.1 WORK ZONES

6.1.1 Exclusion Zone

An Exclusion Zone will be established at each intrusive operation (e.g., drilling, well abandonment, excavation) and waste staging area (soil stockpile). Exclusion zone size and dimensions will vary based on activities. The perimeter of the exclusion zone and an appropriate radius around work task areas will be demarcated by a physical barrier, such as barricade tape or traffic cones, to restrict access. Signs will be posted to inform and direct site personnel and site visitors.

A daily roster with the date of each person's entrance into the exclusion zone; the person's name, signature, and organization; and the time of entry and exit will be kept for all personnel working in the zone. Visitors will not be permitted to enter the exclusion zone without proper qualifications, equipment, and Tetra Tech SSC authorization and escort.

Exclusion zones will remain marked until the SSC has evaluated the restoration effort and has authorized changing the zone status.

6.1.2 Decontamination Zone

This zone will occur at the interface of the Exclusion Zone and the Support Zone and will provide for the transfer of construction materials and equipment, the decontamination of transport vehicles handling contaminated soils prior to entering the Support Zone, and the decontamination of personnel, PPE, and equipment prior to entering the Support Zone. Access to this Zone will be restricted to personnel who meet all HAZWOPER training and medical surveillance requirements and have the required PPE. No food or drink consumption or smoking is permitted in this Zone.

6.1.3 Support Zone

The support zone will consist of any uncontaminated and nonhazardous part of the site and should be situated in an area generally upwind of any exclusion zone whenever possible. The Support Zone for this project will include a staging area where site vehicles can be parked, equipment will be unloaded, and where food and drink containers will be maintained. The support zones will be established in clean areas of the site. Site visitors not meeting training, medical surveillance, and PPE requirements must stay in the support zone.

For this Site, the entire Site is fenced and thus serves as the Exclusion Zone.

6.2 SITE SECURITY AND SITE VISITORS

Tetra Tech will retain control over the active operational areas. The SSC will serve as a focal point for site personnel and will serve as the final line of security for the work areas. All work will cease in the event of unauthorized personnel entering the exclusion zone. Work will remain suspended until the unauthorized visitor can be removed. Local police may be contacted to remove unauthorized persons who refuse to leave the Site. The SSC or designee will serve as the primary enforcement contact for removing unauthorized visitors.

All authorized visitors will generally gain initial access to the site by coordinating with the Tetra Tech project manager. Once onsite, all visitors entering the Site will be required to receive the site-specific training, complete the sign-in form, and will be escorted at all times. All visitors are required to observe the personal protective equipment and site restrictions in effect at the time of their visit.

Authorized site visitors may include:

- Personnel invited to observe or participate in operations by Tetra Tech
- Federal, state and local regulatory personnel (i.e. Environmental Protection Agency [EPA], OSHA, RWQCB)
- Property Owners
- Client representatives
- Other authorized visitors

6.3 COMMUNICATIONS

Successful communication between field teams and personnel in the support zone is essential. The following communication systems will be available during site activities:

- Cellular telephones

The hand signals listed below can be used by site personnel in emergency situations or when verbal communication is difficult.

Signal	Definition
Hands clutching throat	Out of air or cannot breathe
Hands on top of head	Need assistance
Thumbs up	Okay, I am all right, or I understand
Thumbs down	No or negative
Arms waving upright	Send backup support
Gripping partner's wrist	Exit area immediately

7.0 PERSONAL PROTECTIVE EQUIPMENT

The level of personal protection to be used for work tasks at the Site have been selected based on known or anticipated physical hazards; types and concentrations of contaminants that may be encountered on site; and contaminant properties, toxicity, exposure routes, and matrixes.

Modified Level D PPE is the minimum acceptable level required for routine work at the Site, which includes the following items:

- Standard work clothes – long sleeves, long pants, or coveralls
- Chemical-resistant clothing (such as Tyvek® or Saranex® coveralls) (optional)
- Leather work gloves (physical hazards)
- Chemical-resistant gloves: nitrile
- Safety boots with steel toe protection
- Disposable boot covers or chemical-resistant outer boots (optional)
- Safety glasses with side shields or goggles
- Hard hat
- ANSI Class 2 or better high-visibility safety vest
- Hearing protection (ear plugs or muffs with minimum 25 dB noise reduction rating)
- Any addition PPE recommended by the chemical oxidant (KMnO4) manufacturer (i.e. respiratory protection).

Personnel must maintain proficiency in the use and care of PPE that is to be worn. Only PPE that meets the following ANSI standards are to be worn:

- Eye protection – ANSI Z87.1-1989
- Head protection – ANSI Z89.1-1986
- Foot protection – ANSI Z41-1991

8.0 DECONTAMINATION PROCEDURES

Decontamination is the process of removing or neutralizing contaminants on personnel or equipment. When properly conducted, decontamination procedures protect workers from contaminants that may have accumulated on PPE, tools, and other equipment. Proper decontamination also prevents transport of potentially harmful materials to uncontaminated areas. Personnel and equipment decontamination procedures are described in the following sections.

8.1 PERSONNEL DECONTAMINATION

Personnel decontamination at the site will be limited by using disposable PPE whenever possible. Personnel and PPE will be decontaminated with potable water or a mixture of detergent and water. Liquid and solid wastes generated during decontamination will be collected and drummed.

For routine activities, the following decontamination procedures will be followed:

- ***Disposable PPE***: nitrile gloves will be placed in a plastic disposal bag.
- ***Non-Disposable PPE***: leather or other work gloves and boots are to be decontaminated as necessary by washing with a Liquinox® or Alconox® solution and rinsing them with hot water. Remove and retain neoprene boots for reuse, if possible.
- Thoroughly wash the hands and face with water and soap.

Used, disposable PPE will be collected in sealable containers and will be disposed of in accordance with procedures described in the Work Plan (pending characterization, if necessary). Personnel decontamination procedures may be modified as necessary while on site.

8.2 EQUIPMENT DECONTAMINATION

Decontamination of all sampling and field monitoring equipment used during site activities will be required. Equipment decontamination procedures are based on guidelines appropriate for low-level contamination. Additional procedures may be found in EPA SOP No. 2006, titled “Sampling Equipment Decontamination” dated August 11, 1994.

Sampling and field equipment will be decontaminated before and after each use as described below.

- Scrub the equipment with a brush in a bucket containing Liquinox® or Alconox® solution and distilled water.
- Triple-rinse the equipment with distilled water and allow it to air-dry.
- Reassemble the equipment and place it on plastic or aluminum foil in a clean area. If aluminum foil is used, wrap the equipment with the dull side of the aluminum foil toward the equipment.

Other field equipment can be decontaminated with hot water and/or protected from exposure by covering with disposable covers such as plastic to minimize required decontamination activities. Wastewater from equipment decontamination activities will be transferred to the onsite treatment plant for treatment and disposal.

9.0 AIR MONITORING

Real-time direct-reading monitoring instruments will be used to evaluate source areas (i.e., sample locations, wells, excavation areas, etc.), worker breathing zones, and the Site perimeter. A Photoionization Detector (PID) with a 10.6 eV lamp will be used at each source location to detect the presence of any VOCs, as well as real-time perimeter dust monitors. Background levels will be determined and noted prior to recording the level at the monitored points. The background readings will be taken away from any areas of potential contamination. These readings, any influencing conditions (i.e., weather, temperature, humidity) and site location must be documented in the field operations logbook or other site documentation (e.g., sample log sheet).

The instruments will be maintained, and field calibrated by qualified field personnel (SSC). Operational checks and field calibration will be performed on all instruments each day prior to their use according to manufacturer's recommendations (for example, the PID must be field calibrated daily, and an additional field calibration must be performed at the end of each day to determine any significant instrument drift). Periodic operational checks or re-calibration using calibration gas should be performed if elevated readings are noted during the day to ensure there is limited instrument drift. These operational checks and calibration efforts will be performed in a manner that complies with the employee's health and safety training, the manufacturer's recommendations, and with the applicable manufacturer standard operating procedure. All calibration efforts must be documented.

Figure 9-1 is provided for documenting these calibration efforts. This information may instead be recorded in a field operations logbook, provided that the information specified in Figure 9-1 is recorded. This required information includes the following:

- Date calibration was performed
- Individual calibrating the instrument
- Instrument name, model, and serial number
- Any relevant instrument settings and resultant readings (before and after) calibration
- Identification of the calibration standard (lot no., source concentration, supplier)
- Any relevant comments or remarks

Real-time air monitoring frequency will be every 60 minutes after the background level is established and prior to a change in operations that might increase the risk of exposure.

An Air and Dust Monitoring Plan has been prepared for this Site, detailing additional monitoring tasks.

FIGURE 9-1

DOCUMENTATION OF FIELD CALIBRATION

SITE NAME: Vacant Site – Rancho Cordova Civic Center site PROJECT NO.: 117-9040

Date of Calibration	Instrument Name and Model	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot # _____)	Remarks/ Comments
				Pre-Calibration	Post-Calibration	Pre-Calibration	Post-Calibration	PID: 10 ppm Isobutylene in air	

10.0 CONFINED SPACE ENTRY

It is not anticipated, under the proposed scope of work, that confined space and permit-required confined space activities will be conducted. **Therefore, personnel under the provisions of this HASP are not allowed, under any circumstances, to enter confined spaces**. Entry is defined as breaking the plane of the opening to the confined space with any body part.

Activities will include oversight of excavation and trenching for utilities; resulting trenches may represent confined spaces. Tetra Tech employees will not be entering the trenches or other potential confined spaces. Any sampling of soil from excavations or trenches will performed by sampling soil from backhoe/excavation bucket. The resulting soil excavation sidewalls will be sloped 1:1, resulting in a safe excavation.

However, should future work require confined space entry, Tetra Tech and subcontractor personnel conducting the entry will first receive confined space entry training for the category of confined space(s) to be entered (permit-required or non-permit-required) and for the designated role each employee will play in the entry operation (i.e., attendant, entrant, supervisor, or rescue). Training will be in accordance with the revised OSHA permit-required confined space entry (CSE) standard (29 CFR 1910.146). The purpose of the CSE procedure is to protect employees from potentially hazardous environments and to facilitate immediate rescue in an emergency.

A confined space is defined as an area which has the following characteristics:

- Is large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit (for example, tanks, manholes, sewers, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
- Is not designed for continuous employee occupancy.

Additionally, a Permit-Required Confined Space must also have one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly caving walls or by a floor that slopes downward and tapers to a smaller cross-section.
- Contains any other recognized, serious, safety or health hazard.

11.0 TRAINING AND MEDICAL SURVEILLANCE REQUIREMENTS

11.1 INTRODUCTORY/REFRESHER/SUPERVISORY HAZWOPER AND OSHA TRAINING

All onsite personnel who may be exposed to hazardous conditions, including Tetra Tech and subcontractor personnel and site visitors who will participate in onsite activities, will be required to meet training requirements outlined in 29 CFR 1910.120, "Hazardous Waste Operations and Emergency Response." All general site workers must have completed the 40-hour initial HAZWOPER training Project managers and field supervisors will have received 8-hour HAZWOPER Supervisor training and all site personnel must have current 8-hour HAZWOPER annual refresher training. At least one site person must be current in basic first aid, CPR and bloodborne pathogens (1910.1200). All Tetra Tech site personnel have received the updated hazard communication/GHS training as of the December 1, 2013 OSHA due date.

Additional required client-required training for onsite personnel includes: **None**

Documentation of 40-hour initial HAZWOPER, 8-hour HAZWOPER supervisor, and annual 8-hour HAZWOPER refresher training, as well as site-specific training are maintained by the PM and by the SSC, either on-Site or at the Tetra Tech office. Copies of certificates or other official documentation will be used to fulfill this requirement.

Depending on the work to be performed by a subcontractor, additional OSHA-required health and safety training may include confined space entry operations, excavation safety, and Construction Competent Person (by specialty). The selected excavation contractor will have a Competent Person to design the soil excavation work and perform routine inspections of progress. Tetra Tech subcontractors must provide copies of training certificates for all subcontractor personnel participating in site activities, as requested.

11.2 SITE-SPECIFIC TRAINING

11.2.1 HASP Review

Tetra Tech will provide site-specific training to all Tetra Tech and subcontractor personnel who will perform work at the Site. Site-specific training will also be provided to all authorized site visitors who wish to enter the exclusion zones to perform functions that may or may not be directly related to Site or Tetra Tech operations. All personnel and visitors entering the site will be required to review this HASP and sign the Compliance Agreement Form (HSP-4).

Site-specific training will include:

- Contents of this HASP
- Emergency response procedures (evacuation and assembly points)
- Names of designated personnel responsible for site health and safety
- Site and operation hazards and required controls
- PPE requirements
- Spill response procedures
- Review of the contents of relevant SDSs

11.2.2 Daily Safety Tailgate Meetings

The Tetra Tech SSC will conduct a brief meeting daily to discuss operations planned for that day, which must be attended by all onsite Tetra Tech and subcontractor personnel. The daily safety meeting will address:

- Expected conditions at the site;
- Daily activities;
- Job hazard analysis review;
- Stop-work authority;
- Safety deficiencies previously observed and status of corrective action;
- Any changes in the emergency procedures; and,
- Personnel bee allergies or medical conditions which are important for coworkers to be aware.

The meeting discussions will be documented on the Daily Tailgate Safety Meeting (Form HST-2) (**Appendix A**), which will be signed daily by all Site workers. All safety-critical questions and the SSC responses/directions will be documented on this Form.

11.3 MEDICAL SURVEILLANCE

All Tetra Tech and subcontractor personnel involved in on-Site activities must participate in a medical surveillance program as required by 29 CFR 1910.120(f). Tetra Tech has established an employee medical surveillance program with CORE Occupational Health. Employee HAZWOPER medical clearance and respirator clearance reports are maintained at the Corporate Health and Safety office and by the Tetra Tech Rancho Cordova, California office health & safety coordinator. Subcontractors must provide evidence of current medical clearance for HAZWOPER sites. No additional site-specific medical monitoring is required for activities at this site.

11.4 SITE VISITORS

Site visitors wishing to enter the exclusion zone will be required to produce the necessary information supporting clearance to the site, including information attesting to training and medical surveillance.

12.0 SPILL PREVENTION AND CONTAINMENT PROGRAM

12.1 SCOPE AND APPLICATION

This program applies to the single or aggregate accumulation of bulk storage materials (over 55-gallons). As the classification of certain materials such as Investigation Derived Waste (IDW) is unknown, these materials will be treated as hazardous, pending laboratory certification to the contrary. The types of materials for which this program will apply are as follows:

- IDW such as decontamination fluids, soil cuttings, and purge and well development waters, concrete coring water, etc.
- Resource Storage – Limited fuel and lubricant storage (in equipment and trucks). No bulk storage of fuels will be conducted on-site. Equipment will be serviced and fueled by an off-site vendor as needed.

The spill containment and control will be engaged any time there is a release of the above-identified materials from a containment system or vessel to minimize associated hazards.

12.2 POTENTIAL SPILL AREAS

Potential spill areas will be periodically monitored in an ongoing attempt to prevent and control further potential contamination of the environment. Currently, limited areas are vulnerable to this hazard including:

- Bare soil areas adjacent to the asphalt paved parking areas (i.e. diesel fuel release from heavy equipment)

The primary substances stored or handled onsite with the potential to be released are soil treatment chemicals (oxidants). The potential for these substances to be released is minimal as they will be intentionally mixed into backfill soil or injected into the subsurface as an approved form of soil treatment. A ruptured fuel tank or fuel line on a drill rig or piece excavation equipment is possible, but not expected.

Safety Data Sheets[1] (SDS) for all hazardous substances/materials brought onsite are included in the HASP (**Appendix C**) and should be consulted in case of a spill or release. The two main goals will be to contain and clean up any spills.

It is anticipated that the IDW (pre-excavation soil borings) generated by this scope of work will be placed in the resulting soil stockpile area and profiled. The results of sample analyses will determine disposal and/or oxidant treatment methods when the soil is returned to the excavation.

[1] Formerly Material Safety Data Sheets (MSDSs)

12.3 CONTAINMENT AREAS

To facilitate leak and spill inspection and response, and to minimize potential hazards which may impact the integrity of the storage containers, the staging area for these substances will be structured as follows:

12.3.1 IDW

Currently, all soil generated during the scope of the work will be profiled, treated with oxidant if needed, and returned to the excavation. Any construction related debris (asphalt, concrete, discovered piping) and well abonnement casing/vault boxes will be transported off-site for recycling or disposal.

12.4 MATERIALS HANDLING

To minimize the hazards associated with moving drums and containers (i.e., lifting, pinch and compression points), material handling will be supported in the following manner:

- A drum cart with pneumatic tires will be required if drums are to be moved at the IDW storage area. This cart will be used to relocate drums within the staging and satellite storage location.

Other means of material handling will be evaluated by the SSC based on their ability to minimize or eliminate material handling hazards.

12.5 LEAK AND SPILL DETECTION

To establish an early detection of potential spills or leaks, a periodic walk-around by the personnel staging materials in the work area will be conducted during working hours to visually determine that storage vessels or excavation equipment is not leaking, and that soil piles are appropriated covered and secured. If a leak is detected, or a soil pile is uncovered, the Field Supervisor will be notified, and the Spill Containment/Control Response Plan as specified in **Section 12.8** will be engaged. Inspections will be documented in the project logbook.

12.6 PERSONNEL TRAINING

Personnel will be instructed in the procedures for incipient spill prevention, containment, and collection of hazardous materials in the site-specific training. The Field Supervisor and/or the SSC will serve as the Spill Response Coordinators for this operation, should the need arise. Should an incidental spill occur, these individuals will engage incident response measures. It will be the responsibility of these individuals to insure they have the supplies and equipment specified in Section 12.7 to support this function. Insufficient supplies or resources should be reported to the Field Supervisor.

12.7 SPILL PREVENTION AND CONTAINMENT EQUIPMENT

The following represents the minimum equipment that will always be maintained at the staging areas for the purpose of supporting this Spill Containment/Control Plan.

- Sand, clean fill, vermiculite, or other non-combustible absorbent (Oil-dry)
- Extra drums should the need to transfer material from leaking containers arise.
- Pumps (Gas or Electric as necessary for transferring liquids from leaking containers)/tubing

- Shovels, rakes, and brooms
- Container labels
- Personal Protective Equipment (nitrile outer gloves, splash face shield, impermeable over-boots, rain suit)
- General spill prevention equipment such as a shovel, broom, 55-gallon Department of Transportation (DOT) drum UN 1A2, and absorbent material will be maintained onsite to respond to any spill based on the nature of the task to be performed.

12.8 SPILL CONTAINMENT/CONTROL RESPONSE PLAN

This section describes the procedures the Tetra Tech field personnel will employ upon the detection of a spill or leak.

- Notify the SSO or FOL immediately upon detection of a leak or spill, or uncovered soil stockpile.
- Employ the PPE stored at the staging area. Initiate incidental spill response measures. Take immediate actions to stop the leak or spill by plugging or patching the container or raising the leak to the highest point in the vessel. Spread the absorbent material in the area of the spill, covering it completely.
- Transfer the material to a new vessel; collect and containerize the absorbent material. Label the new container appropriately. Await analyses for treatment and disposal options.
- Re-containerize spills, including 2-inch of top cover (if over soils) impacted by the spill. Await test results for treatment or disposal options.
- If the spill cannot be controlled or contained, initiate emergency alerting procedures for that area to remove non-essential personnel.
- Recover the soil stockpiles as needed during windy conditions.

It is not anticipated that a spill will occur that the field crew cannot handle. Should this occur, notification of the appropriate emergency response agencies will be carried out by the Field Supervisor or SSC in accordance with the procedures specified in Section 13.0.

13.0 EMERGENCY ACTION PLAN

13.1 INTRODUCTION

This section describes emergency response planning procedures to be implemented for the site. This Emergency Action Plan conforms to the requirements of 29 CFR 1910.38(a), as allowed in 29 CFR 1910.120(I)(1)(ii). The following sections discuss pre-emergency planning, personnel roles and lines of authority, emergency recognition and prevention, evacuation routes and procedures, emergency contacts and notifications, hospital route directions, emergency medical treatment procedures, fire or explosion, spills or leaks, emergency equipment and facilities, and reporting.

13.2 PRE-EMERGENCY PLANNING

Initial hazard/risk assessment efforts have identified exposure to physical, chemical, and biological hazards and fire as the most probable emergencies that could be encountered during activities at the Site. To minimize or eliminate the potential for these emergency situations and to reduce the severity of any potential incident, pre-emergency planning activities associated with this project include the following:

- Coordinate with the Site project manager and/or local emergency response personnel to ensure that Tetra Tech emergency actions are compatible with existing emergency response procedures
- Establish and maintain information at the project staging area (e.g., support zone) for easy access in the event of an emergency:
    - Tetra Tech HASP
    - Logbook identifying personnel onsite each day
    - Emergency Contacts List (multiple copies; and posted)
    - Maps to Hospital and Clinic Physician (copies should be placed in each vehicle)
    - Chemical Inventory (used onsite), with Safety Data Sheets (SDSs) (**Appendix C**)

During the project kickoff meeting and daily tailgate safety meetings, all onsite employees will be trained in and reminded of the provisions of this Section, site communication systems, and site evacuation routes. The emergency response provisions will be reviewed on a regular basis by the Tetra Tech SSC and will be revised, if necessary, to ensure that they are adequate and consistent with prevailing site conditions.

13.3 PERSONNEL ROLES AND LINES OF AUTHORITY

The Tetra Tech SSC has primary responsibility for responding to and correcting emergency situations and for taking the appropriate measures to ensure the safety of site personnel and the public. The SSC will coordinate responding to emergencies. Possible actions may include evacuation of personnel from the site area. The SSC is also responsible for ensuring that corrective measures have been implemented, appropriate authorities have been notified, and follow-up reports have been completed.

The SSC will also be responsible for the following:

- Identifying a chain of command for emergency action
- Educating site workers to the hazards and control measures associated with planned activities at the Site, and providing early recognition and prevention where possible
- Periodically perform practice drills as appropriate to ensure site workers are familiar with incidental response measures.
- Provide the necessary equipment to safely accomplish identified tasks.
- Provide first aid kit, emergency eye wash, fire extinguishers and spill kits and place them in strategic locations for quick access.

Individual subcontractors are required to cooperate with the SSC, within the parameters of their scopes of work.

Project personnel are required to report all serious near misses, injuries, illnesses, spills, releases, fires, explosions, equipment or property damage, and motor vehicle accidents to the SSC. The SSC must be notified of any onsite emergencies and is responsible for ensuring that the appropriate emergency procedures described in this section are followed.

13.4 EMERGENCY RECOGNITION AND PREVENTION

Table 5-1 lists potential site chemical hazards, and Table 5-2 provides information on the health and safety hazards associated with the different tasks planned for the site. Onsite personnel will be made familiar with this information and with techniques of hazard recognition through prior health and safety training and site-specific briefings.

13.4.1 Recognition

Many chemical, physical and biological hazards that could lead to emergency scenarios are generally recognizable by visual observation. Thus, hazard identification should include pre-work and periodic 360° walk-around surveys, equipment and tool inspections, and background surveys with direct-reading air monitoring instrumentation.

The field supervisor, SSC, and subcontractor supervisor will be responsible for performing surveys of work areas prior to initiating site operations and periodically while operations are being conducted. Site surveys will be conducted at all work locations prior to the commitment of resources and personnel. This will be done for the purpose of removing or barricading identified physical hazards. Additionally, site surveys will be conducted at least once a week at all resource/staging areas. All site surveys conducted during this effort will be documented in the Project or Field Operations Logbook and survey findings will be discussed with field personnel as part of the tailgate safety meetings. In addition, site personnel will be responsible for reporting hazardous situations. Where potential hazards exist, Tetra Tech will initiate control measures to prevent adverse effects to human health and the environment.

13.4.2 Prevention

Tetra Tech and subcontractor personnel will minimize the potential for emergencies by following the direction and guidance provided within this HASP as well as the SWPs and applicable OSHA regulations as they apply to the tasks to be conducted. Additionally, prevention will be facilitated through employment of offensive and defensive measures in removing or denying access to hazards identified through the site survey activities. Preparation through acquiring and placing emergency equipment in the work areas will also aid in controlling incidents from escalating into an emergency.

The above actions will provide early recognition for potential emergency situations. Should an incident occur, Tetra Tech will take measures in the beginning stages to control these situations. However, if the field supervisor and the SSC determine that an incident has progressed to a serious emergency, Tetra Tech will withdraw and notify the appropriate response agencies listed in **Table 13-1.**

13.5 EVACUATION PROCEDURES AND PLACES OF REFUGE

An evacuation will be initiated whenever specified hazard controls are insufficient to protect the health, safety or welfare of site workers. Specific examples of conditions that may initiate an evacuation include, but are not limited to the following:

- Severe weather conditions
- Fire or explosion
- Monitoring instrumentation readings which indicate levels of contamination that are greater than instituted action levels
- Personnel showing signs or symptoms of potential exposure to site contaminants or natural stresses (e.g., heat stress, hypothermia, or snake bite)
- Injury or illness requiring medical transport and care
- Major spill or release

Field activities at the Site will involve Tetra Tech personnel working within proximity to each other; therefore, hand signals and voice commands will be sufficient to alert site personnel of an emergency. In the event of an emergency, the following procedures will be followed:

- Initiate an evacuation by hand signals or voice commands, immediately stop all activities, and report to designated refuge point. **The Site safe place of refuge will be** identified prior to the commencement of site activities within an identified area as determined by the SSC.
- Describe to the SSC (who will serve as the Incident Coordinator) what has occurred and as many details as possible
- Once all personnel have been evacuated, begin appropriate response procedures to control the situation (incipient response measures for fire, spill, and injury (first aid) and site control and security measures, as necessary.

Evacuation procedures will be discussed prior to the initiation of any site work. Evacuation routes from the site and safe places of refuge are dependent upon the location at which work is being performed and the circumstances under which an evacuation is required. Additionally, site location and meteorological conditions (i.e., wind speed and direction) may dictate evacuation routes. As a result, refuge points will be selected and communicated daily to the workers relative to the site location where work is being performed. Evacuation should always take place in an upwind direction from the site.

Whenever possible, the safe place of refuge will also serve as the telephone communications point for that area. During an evacuation, personnel will remain at the refuge location until directed otherwise by the SSC or the onsite Incident Commander of the Emergency Response Team. The SSC will take a head count at this location to account for and to confirm the location of all site personnel. Emergency response personnel will be immediately notified of any unaccounted personnel.

13.6 DECONTAMINATION PROCEDURES

During an evacuation, decontamination procedures will be performed only if doing so does not further jeopardize the welfare of site workers. However, it is unlikely that an evacuation would occur which would require workers to evacuate the site without first performing decontamination procedures. A supply of clean decon water is available at a metered fire hydrant on Site.

13.7 INITIAL RESPONSE AND EMERGENCY NOTIFICATIONS

The Tetra Tech SSC must survey the situation and avoid taking any action or delay that could endanger anyone's life. Tetra Tech personnel may perform rescue operations from emergency situations and may provide initial medical support for injury/illness requiring only "basic first-aid" level support, and only within the limits of training obtained by site personnel. Basic first-aid is considered treatment that can be rendered by a trained first-aid provider at the injury location and not requiring follow-up treatment or examination by a physician (for example: minor cuts, bruises, stings, scrapes, and burns). Personnel providing medical assistance are also required to be trained in the requirements of OSHA's Bloodborne Pathogen Standard (29 CFR 1910.1030). Medical attention above first-aid level support will require assistance from the designated emergency response agencies.

Basic first aid measures for chemical exposures and non-medical initial responses are summarized below:

Chemical Exposure	***Skin Contact:*** ▪ Remove contaminated clothing. ▪ Wash immediately with water. ▪ Use soap if available. ▪ If irritation persists, seek medical attention. ***Eye Contact:*** ▪ ***Flush eyes with water for 15 minutes.*** ▪ ***If symptoms persist, seek medical attention.*** ***Inhalation:*** ▪ ***Remove person from contaminated atmosphere.*** ▪ ***If necessary, provide CPR. Seek medical attention.*** ▪ ***DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY TRAINED/EQUIPPED AND ALL CSE PROTOCOLS ARE FOLLOWED WITH QUALIFIED ATTENDANT ONSITE.*** ***Ingestion:*** ▪ ***NEVER induce vomiting on an unconscious person.*** ▪ ***NEVER induce vomiting when ingestion of acids, alkalis, or petroleum products is suspected.*** ▪ ***Contact the poison control center (see Table 13-1 for telephone number).*** ▪ ***Administer CPR, if necessary. Seek medical attention.*** ***Possible Exposure Symptoms:*** • ***Headache, dizziness, nausea, drowsiness, respiratory tract, skin or eye irritation***
Snake Bite	• Follow the standard notification procedures (call 911). Notify emergency response personnel of the nature of the snake bite. • If possible, take photo of snake. • Have victim remain calm until ambulance team arrives. • Keep the bite location below the heart at all times. • Apply a pressure wrap (for extremities) just above and over the bite area. With a couple wraps of the pressure wrap in place over the bite area, apply a splint, and continue the application of the pressure wrap. The purpose for the splint is to restrict the movement of the extremity. This, along with the pressure wrap, will aid in restricting the toxins from leaving the site of the bite.
Incipient Stage Fire	• A fire that cannot be readily extinguished with one 10-pound fire extinguisher will be considered major and may require evacuation of project and/or site personnel to safe areas. • Only attempt to put out fire if you are trained in the use of the fire extinguisher, have confidence that you can put the fire out, and you have a route of escape from the fire.
Minor Spill or Leak	• Use onsite spill kit to contain/absorb and remove spilled materials. • See details on spill prevention and containment in SWP 5-47.
Major Spill or Leak	• Evacuate the affected area and relocate personnel to an upwind location. • Inform the Tetra Tech SSC, a Tetra Tech office, and a site representative immediately. • Locate the source of the spill or leak, and stop the flow if it is safe to do so. • Begin containment and recovery of spilled or leaked materials. • Notify the client and appropriate local, state, and federal agencies.

Workers who are ill or who have suffered a non-serious injury may be transported by site personnel to nearby medical facilities, provided that such transport does not aggravate or further endanger the welfare of the injured/ill person.

Personnel requiring treatment greater than first aid will constitute an emergency for which the appropriate agency must be notified. If an exposure to hazardous materials has occurred, provide information on the chemical, physical, and toxicological properties of the subject chemical(s) to medical services personnel.

If an emergency cannot be handled using onsite resources, personnel will evacuate to a safe place of refuge and the appropriate emergency response agencies will be notified. It has been determined that most potential emergency situations would be better supported by outside emergency responders. These agencies are located within a reasonable distance from the area of site operations, which ensures adequate emergency response time.

If site personnel cannot control the incident through offensive and defensive measures, the field supervisor (or SSC, if designated) will enact the following emergency notification procedures to secure additional assistance:

- Call 911 or other emergency contacts (Table 13-1) to report the emergency and provide the following information:
    - Location of emergency
    - Type of emergency
    - Number of injured personnel
    - Brief description of what occurred.

Stay on the phone and follow the instructions given by the operator. The operator will then notify and dispatch the proper emergency response agencies.

The Emergency contacts list will also be posted [*insert emergency contact list location*] and be placed in all project vehicles. In case of any emergency (e.g., injury, illness, spill/release, and fire), verbal notification to the Tetra Tech project manager must be provided as soon as possible. If project personnel determine that the situation could either directly or indirectly threaten human health or the environment, the Tetra Tech Project Manager will contact the appropriate emergency response agencies.

The nearest medical facility to the site is the Mather VA Hospital. Maps and directions to these facilities are provided in **Section 13.10** and **Section 13.11**, respectively.

For non-life-threatening incidents (e.g., muscle strains and sprains, and minor lacerations), personnel are encouraged to contact CORE **(888-449-7787**) for guidance on first aid and medical treatment. CORE may direct the affected employee to the Chartis/AIG-authorized medical clinic/physician for further evaluation of a work-related injury or illness. **The authorized doctor offices or clinics have agreed to accept workers compensation patients without an appointment.** Information for the clinic nearest to the Site is provided below:

Concentra Urgent Care
10670 White Rock Rd, Suite 100, Rancho Cordova, CA 95670
916-364-1733

Table 13-1 EMERGENCY CONTACTS	
LOCAL EMERGENCY SERVICES	
Emergency	911
City/State Police	Police: (916) 362-5115
City/State Fire Department	Fire: (916) 859-4300 (Metro Fire Sacramento
EMS/Ambulance	911
One Call or state program name	811
Utility - Pacific Gas & Electric Company	(800) 743-5000
CLIENT CONTACTS	
Stefan Heisler City of Rancho Cordova Project Lead	(916) 851-8757
MEDICAL SERVICES	
Nearest Hospital Address:	Mather VA Hospital 10593 Peter A McCuen Blvd Mather, CA 95655 916-843-7000
Nearest Urgent Care Address:	Concentra Medical Centers: (916) 364-1733 10670 White Rock Rd Ste 100 Rancho Cordova, CA 95670
CORE Occupational Health (24/7)	1-855-683-9006 (for non-life-threatening incidents)
National Poison Control Center (ingestion, snake bites etc.)	1-800-222-1222

Table 13-1 EMERGENCY CONTACTS	
NATIONAL CHEMICAL EMERGENCY	
Chemtrec National Response Center	800-424-9300/800-424-8802
TETRA TECH CONTACTS	
Project Manager: Keith Hoofard	(916) 853-1800 (office) (916) 709-4732 (cell)
Health and Safety, Tetra Tech Corporate Roberto Rolon	(407) 448-9553
SUBCONTRACTOR	
GPRS (utility clearance)	800-231-3347
Cascade Drilling (well abandonment)	916-638-1169
Cascade Drilling (soil & groundwater profile borings)	916-638-1169
Calvada Surveying (locate 30 profile borings; relocate for post-remediation sampling)	951-280-9960 (office); 562-673-5123 (cell)
TBD (Excavation, Stockpile, Backfill)	TBD
Cascade Drilling (SVE well drilling)	916-638-1169
EnviroSupply & Service (temp SVE system)	949-732-3318
TEG NorCal (post-remediation vapor sampling)	916-853-8010

13.8 EMERGENCY AND PERSONAL PROTECTIVE EQUIPMENT

A first aid kit, a wall-mounted eyewash station or sufficient quantity of eye wash bottles, a spill kit containing absorbent materials and polyethylene sheeting along with an empty drum and shovel to respond to small spills, and a 10-pound ABC-rated fire extinguisher will be maintained onsite at all active work locations and shall be immediately available for use in the event of an emergency. PPE used in daily activities will serve as the primary defense for all chemical and physical/biological hazards encountered. Emergency situations surpassing the level of protection offered by the prescribed PPE will constitute an emergency and require evacuation and notification of the appropriate response agency.

13.9 INCIDENT REPORTING

All emergency situations require follow-up and reporting. After the initial response (e.g., first aid, etc.) to an injury or illness has taken place or emergency responders have been notified, the incidence and details of the incident must be properly reported and documented. Within one (1) hour of occurrence, any occupational injury or illness must be reported to the HSR/Corporate Health & Safety Director at (610) 348-7197. **Appendix A** includes the Tetra Tech Incident Report (Form IR) and the Supplemental Forms A (employee injury or illness), B (property and equipment damage, spills and releases) and C (motor vehicle accidents). All applicable reports must be completed and submitted to the Tetra Tech project manager within 24 hours of an emergency. The project manager will review the report and then forward it to the Tetra Tech HSR for review. The report must include proposed actions to prevent similar incidents from occurring. The HSR must be fully informed of the corrective action process to ensure appropriate and sufficient response measures have been implemented.

TOTAL is Tetra Tech's online incident reporting system which is the preferred means of reporting incidents. Tetra Tech will use TOTAL to directly report health and safety incidents, notify key personnel, and initiate the process for properly investigating and addressing the causes of incidents, including near-miss events. An incident is considered any unplanned event that includes several types of near misses, events where no loss was incurred, or incidents that resulted in injuries or illness, property or equipment damage, chemical spills, fires, or damage to motor vehicles. Incidents must be entered into TOTAL within 24 hours of its occurrence by the PM, field supervisor, or SSC.

TOTAL is accessed from the Tetra Tech Intranet site at https://my.tetratech.com/ or from the following web address: http://totalhs.tetratech.com/.

It should be noted that "near misses" as well as actual injuries and illnesses should be reported. By identifying near miss situations, possible recommendations for preventing a recurrence can be made. Near misses should be reviewed with field personnel during the daily pre-work site briefing.

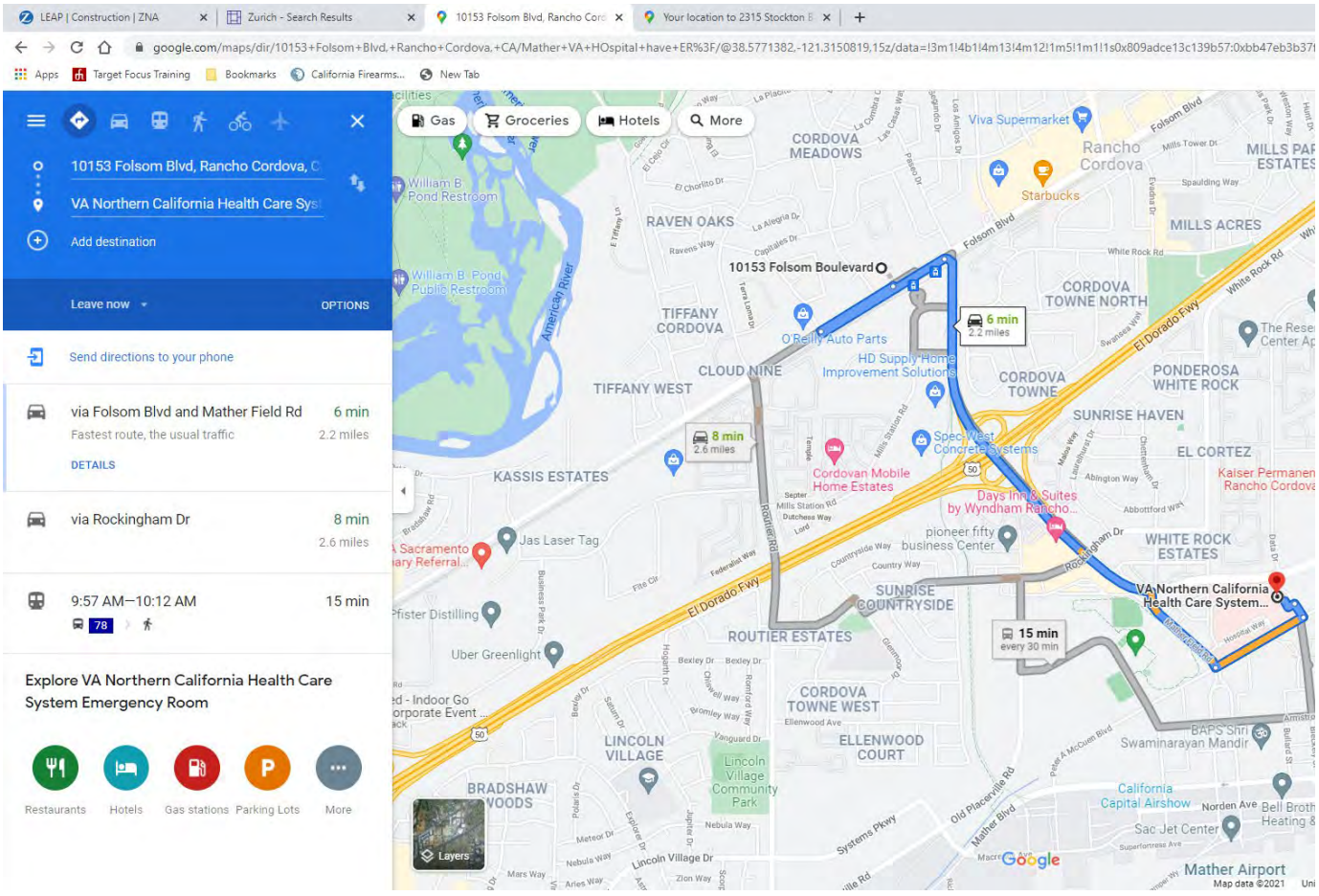
13.10 EMERGENCY ROUTE TO HOSPITAL

Before performing any site activities, Tetra Tech personnel will conduct a pre-emergency hospital run to familiarize themselves with the route to the local hospital.

Mather VA Hospital: (916) 843-7000

10535 Hospital Way, Mather, CA 95655

2.2 miles/6 minutes

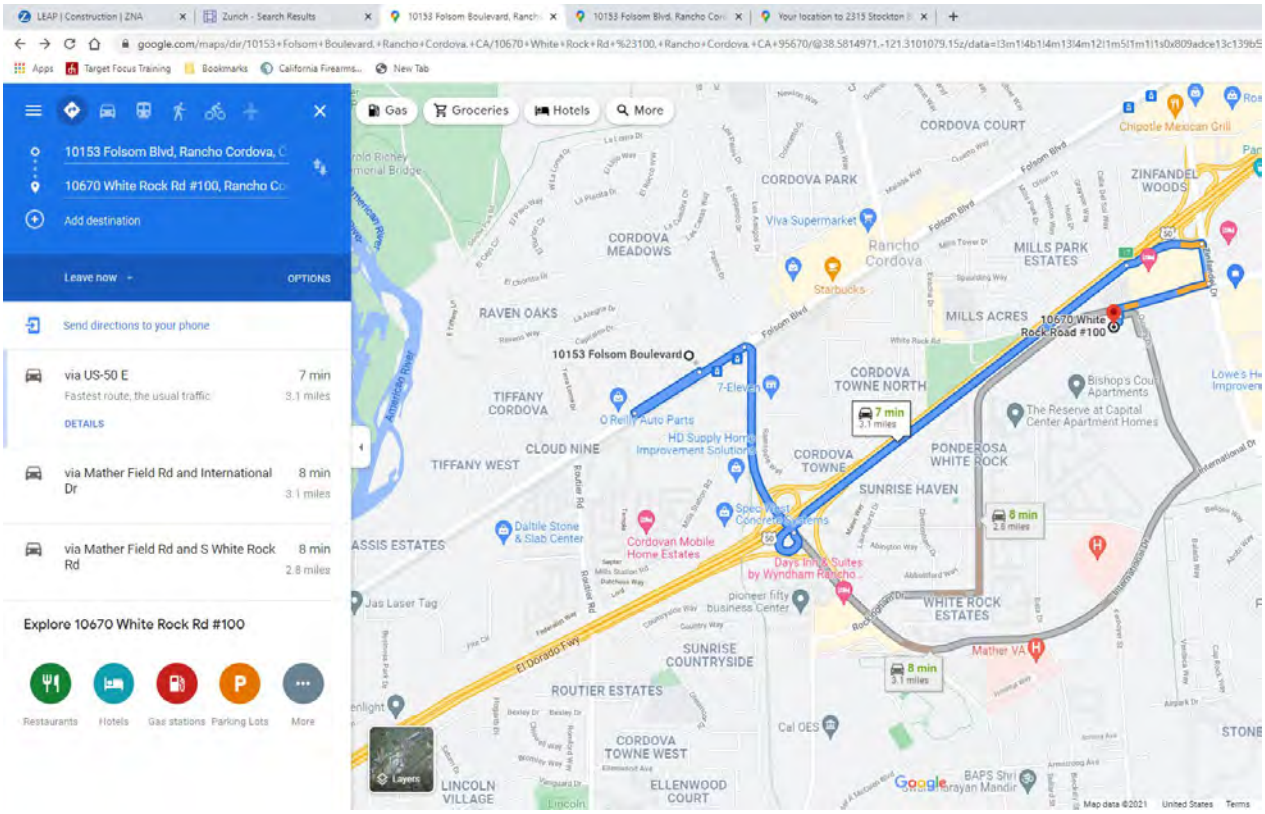


13.11 ROUTE TO WORKERS COMPENSATION CLINIC

Concentra Medical Centers: (916) 364-1733

10670 White Rock Rd, Ste 100
Rancho Cordova, CA 95670

3.1 miles/7 minutes



14.0 RECORDKEEPING AND POSTINGS

The Tetra Tech SSC shall ensure the following materials/documents are maintained at the Site and used as required:

- A complete copy of this HASP with all attachments
- Incident Report forms (IR and supplemental forms A, B and C) (Appendix A)
- SDSs for all chemicals brought on site, including decon solutions, fuels, sample preservatives, calibration gases, etc. (Appendix D)
- Follow-up reports
- A full-size OSHA Job Safety and Health Poster (posted onsite for long-term projects > 1 year)
- Emergency Contacts (Table 13-1,) extra copy for posting)

14.1 MATERIALS TO BE POSTED OR ACCESSIBLE ONSITE

The following documentation is to be posted at the site for quick reference purposes:

Chemical Inventory Listing - This list represents all chemicals brought on site, including treatment chemicals, decontamination solutions, sample preservatives, fuels, calibration gases, etc. This list should be posted in a central area. **Will be in Appendix of Health & Safety Plan.**

SDSs - The SDSs should also be in a central area accessible to all site personnel. These documents should match all the listings on the chemical inventory list for all substances employed on site. It is acceptable to have these documents within a central folder and the chemical inventory as the table of contents.

The OSHA Job Safety & Health Protection Poster - This poster, as directed by 29 CFR 1903.2 (a)(1), should be conspicuously posted in places where notices to employees are normally posted. Each SSC shall ensure that this poster is not defaced, altered, or covered by other material.

Emergency Phone Numbers and Directions to the Hospital(s) - This list of numbers and the directions will be maintained at all phone communications points and in each site vehicle.

Hearing Conservation Standard (29 CFR 1910.95) - This standard will be posted anytime hearing protection or other noise abatement procedures are employed.

Placards and Labels - Where chemical inventories have been separated, because of quantities and incompatibilities, these areas will be conspicuously marked using Department of Transportation placards and 2012-updated Hazard Communication/GHS (29 CFR 1910.1200 [f]) labels.

APPENDIX A
TETRA TECH FORMS

Form HSP-4 HASP Compliance Agreement
Form HST-2 Daily Tailgate Safety Meeting
Form SSC-1 Daily Site Log
Form AF-1 Field Audit Checklist
Form JSA-1 Job Safety Analysis
Incident Report Forms IR, IR-A, IR-B, IR-C

	TETRA TECH, INC. HEALTH AND SAFETY PLAN COMPLIANCE AGREEMENT	Revision Date: 10/1/2008 Document Control Number: FORM HSP-4 Page 1 of 1

Project Name: _____

Project Number: _____

I have read and understand the health and safety plan indicated above and agree to comply with all of its provisions. I understand that I could be prohibited from working on the project for violating any of the safety requirements specified in the plan.

Name	Signature	Employer	Date

DAILY TAILGATE SAFETY MEETING FORM

This form describes the requirements and responsibilities for implementing an incident and injury-free workplace by providing guidance on the daily tailgate safety meeting discussion.

Daily tailgate safety meetings shall be held in a safe location at the start of each work day, shift or task change. The daily tailgate safety meetings shall review the planned work activities for the day, discuss and resolve the risks and mitigations, discuss any health, safety, security and environment (HSSE) concerns and raise the HSSE consciousness of each worker before they start work.

The Field Team Leader (FTL) or Site Safety Officer (SSO) will decide on the location of the daily tailgate safety meetings based on the overall safety of the individuals attending the meeting. Maintaining minimal background noise and establishing more comfortable areas for the meeting location is also preferred. Ultimately, the weather and surrounding environment could be the most limiting factor on the location of the meeting.

For this project, the Project Manager (PM) will:

- Verify that all work activities for this project are consistent with Document Control Number (DCN) 01-05, Health and Safety Management System, as well as any associated practices and permit requirements.
- Carry out all duties specified in the Health and Safety Management System.
- Ensure that all site personnel involved in a work activity are competent and correctly prepared for the work they will perform.
- Verify or delegate the responsibility to verify that the daily toolbox meeting is carried out.

For this project, the FTL will:

- Carry out all duties specified by the PM, as consistent with DCN 01-05.
- Conduct or supervise all work identified and agreed upon in the scope of work.
- Participate in the daily tailgate safety meeting whenever the scope of work requires a permit to work.
- Verify in the daily tailgate safety meeting, the specific roles and responsibilities of the FTL and SSO are clearly understood by all members of the workforce.

For this project, the SSO will:

- Carry out all duties specified by the PM, as consistent with DCN 01-05.
- Be accountable for the safe, responsible and reliable delivery of all work activities.
- Lead or designate an alternative conductor to lead the daily tailgate safety meeting.
- Verify in the daily tailgate safety meeting that workers have a clear understanding of the scope of work, hazards, controls and mitigations of the project.
- Verify in the daily tailgate safety meeting, the specific procedures and policies relevant to the project and are clearly understood by all members of the workforce.

Either the SSO or FTL will facilitate the daily tailgate safety meeting each day. At least one, if not both individuals shall have a thorough understanding of the following:

- Tetra Tech's hazard/risk assessment process
- The site-specific HASP.

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DAILY TAILGATE SAFETY MEETING FORM (Continued)

- The contract scope of work.
- The subcontractors on site and their health and safety officer.
- Site requirements of the client.

These meetings prior to starting work shall include, but are not limited to:

- The completion of the daily tailgate safety meeting form.
- A review of relevant Health and Safety Plan (HASP) elements.
    - Reviews of the HASP shall be performed when updated, modified or when deemed necessary by the SSO or FTL.
- A review of all applicable permits.
- Any applicable Hazard Communication (HAZCOM) information review, including MSDSs, and labels.
- A review of 'Stop Work' procedures and responsibilities.
- Address any risks arising from the site walk, including but not limited to, equipment and materials use and location.
- Complete and review a Job Safety Analysis (JSA), appropriate Safe Work Practices (SWP) and applicable Activity Hazard Analysis (AHA) for the tasks to be completed.
- Implement the controls set forth in the JSA, SWP and AHA. Verify that all parties on site have a complete understanding of the work plan and controls that are in place.
- In addition, allocate resources and complete permits.

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DAILY TAILGATE SAFETY MEETING FORM (Continued)

Date: _____ Time: _____ Project No.: _____

Client: _____ Site Location: _____

Site activities planned for today: _____

Does each job and task have a valid SWP, AHA, or JSA associated with it? Yes ☐ No ☐

Has everyone signed off on the HASP? Yes ☐ No ☐

Have newly identified risks been controlled and documented? Yes ☐ No ☐

Do not proceed unless the answer to all the above questions is Yes.

Current weather conditions: _____

Safety Topics Discussed
Review of Stop Work Authority
Are there multiple operations on site? Yes ☐ No ☐ If yes, describe.
Does the work activity require a MoC? Yes ☐ No ☐ If yes, has the MoC been authorized by the PM? Yes ☐ No ☐
Permits required? Yes ☐ No ☐ If yes, list permits covered in safety meeting.
Protective clothing and equipment for activities planned for today:
Chemical, physical, and biological hazards identified for activities planned for today:
Equipment hazards identified for activities planned for today:
Review of emergency procedures from HASP (including muster point locations):

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DAILY TAILGATE SAFETY MEETING FORM (Continued)

Site-safety discussion topics:
Review anticipated temperature for the day: _____ Could expected temperatures trigger High Heat Procedures: Yes ☐ No ☐ If yes, review High heat procedures.
Discuss the following: • Encouragement to drink plenty of water; • Reminder of the employees right to take a cool down rest period,
Drinking water replentishment schedule.
Identify exact location of work site and identify location of where hospital route map is posted..
Best practices observed: Lessons learned, near misses, other observations: Post-job review: Any "stop work" interventions:

Attendees

By signing in below, I certify that I understand the hazards and risk controls associated with each task I am to perform. I understand the permit requirements applicable to the work being performed and am aware that all tasks must be assessed. I am also aware of my obligation to "stop work." Furthermore, I am physically and mentally fit for duty and am not under the influence of any type of medication, drugs or alcohol that could affect my ability to work safety. I am aware of my responsibility to bring any injury, illness, or other safety issue to the attention of the SSO.

By signing out below, I certify that I am uninjured unless I have already informed the FTL, PM, or SSO.

Sign In Signature and Time	Sign Out Signature and Time

TETRA TECH, INC.

DAILY TAILGATE SAFETY MEETING FORM (Continued)

At the conclusion of this day, I certify that the job site is being left in a safe condition and there were no unissued reports of property damage, spill, fire, explosion, injury, illness, or first aid.

In Meeting Conducted by:

_____ _____

Name Title

_____

Signature

Out Meeting Conducted by:

_____ _____

Name Title

_____

Signature

	TETRA TECH, INC. DAILY SITE LOG	Revision Date: 10/1/2008 Document Control Number: FORM SSC-1 Page 1 of 1

Site Name: _____ Date: _____
Site Safety Coordinator:_____ Project Number:_____

Name (print)	Company	I have received site-specific training	Time	
			In	Out

Comments:

_____

_____

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	TETRA TECH, INC. FIELD AUDIT CHECKLIST	Revision Date: 5/28/09 Document Control Number: AF-1 Page 1 of 3

Project Name: _____ Project No.: _____

Field Location: _____ Completed by: _____

Project Manager: _____ Site Safety Coordinator: _____

General Items		In Compliance?		
Health and Safety Plan Requirements		Yes	No	NA
1	Approved health and safety plan (HASP) on site or available			
2	Names of on-site personnel recorded in field logbook or daily log			
3	HASP compliance agreement form signed by all on-site personnel			
4	Material Safety Data Sheets on site or available			
5	Designated site safety coordinator present			
6	Daily tailgate safety meetings conducted and documented			
7	On-site personnel meet HASP requirements for medical examinations, fit testing, and training (including subcontractors)			
8	Compliance with specified safe work practices			
9	Documentation of training, medical examinations, and fit tests available from employer			
10	Exclusion, decontamination, and support zones delineated and enforced			
11	Windsock or ribbons in place to indicate wind direction			
12	Illness and injury prevention program reports completed (California only)			
Emergency Planning				
13	Emergency telephone numbers posted			
14	Emergency route to hospital posted			
15	Local emergency providers notified of site activities			

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	TETRA TECH, INC. FIELD AUDIT CHECKLIST	Revision Date: 5/28/09 Document Control Number: AF-1 Page 2 of 3

16	Adequate safety equipment inventory available			
17	First aid provider and supplies available			
18	Eyewash stations in place			
Air Monitoring				
19	Monitoring equipment specified in HASP available and in working order			
20	Monitoring equipment calibrated and calibration records available			
21	Personnel know how to operate monitoring equipment and equipment manuals available on site			
23	Environmental and personnel monitoring performed as specified in HASP			

Safety Items		In Compliance?		
Personal Protection		Yes	No	NA
1	Splash suit			
2	Chemical protective clothing			
3	Safety glasses or goggles			
4	Gloves			
5	Overboots			
6	Hard hat			
7	Dust mask			
8	Hearing protection			
9	Respirator			
Instrumentation				
10	Combustible gas meter			
11	Oxygen meter			

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	TETRA TECH, INC. FIELD AUDIT CHECKLIST	Revision Date: 5/28/09 Document Control Number: AF-1 Page 3 of 3

12	Organic vapor analyzer			
Supplies				
13	Decontamination equipment and supplies			
14	Fire extinguishers			
15	Spill cleanup supplies			
Corrective Action Taken During Audit:				
Corrective Action Still Needed:				

Note: NA = Not applicable

_____ _____

Auditor's Signature Site Safety Coordinator's Signature

_____

Date

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APPENDIX B
SAFE WORK PRACTICES

SWP 5-1 General Safe Work Practices for Field Work
SWP 5-2 HAZWOPER Field Work
SWP 5-4 Safe Drilling Practices
SWP 5-7 Use of Heavy Equipment
DCN 4-5 Excavation and Trenching
SWP 5-14 Spill and Discharge Control Practices
SWP 5-15 Heat Illness Prevention and Monitoring
SWP 5-17 Biohazard Safety
SWP 5-19 Safe Lifting and Carrying Procedures
SWP 5-26 Prevention of Sun Exposure
SWP 5-35 Underground Utilities
SWP 5-47 Spill Prevention and Clean-up
SWP 5-51 Hand Tools

	TETRA TECH, INC. GENERAL SAFE WORK PRACTICES FOR FIELD WORK	Revision Date: 10/1/2008 Document Control Number: SWP 5-1 Page 1 of 3

To prevent injuries and adverse health effects, the following general safe work practices (SWP) are to be followed when conducting work involving known and unknown site hazards. These SWPs establish a pattern of general precautions and measures for reducing risks associated with field operations not conducted on hazardous waste sites. This list is not inclusive and may be amended as necessary.

- Be familiar with and knowledgeable of and adhere to all instructions in the construction health and safety plan (C-HASP), job safety analysis, job hazard analysis, work permit or other health and safety documentation.
- At a minimum, a safety meeting will be held at the start of each project to discuss the hazards of the site and site work. Additional meetings will be held, as necessary, to address new or continuing safety and health concerns.
- Be aware of the location of the nearest telephone and all emergency telephone numbers.
- Attend a briefing on the anticipated hazards, equipment requirements, SWPs, emergency procedures, and communication methods before going on site.
- Plan and delineate entrance, exit, and emergency escape routes.
- Rehearse unfamiliar operations prior to implementation.
- Use the “buddy system” whenever respiratory protection, fall protection, or other protective equipment is in use. Buddies should establish hand signals or other means of emergency communication in case radios break down or are unavailable.
- In order to assist each other in the event of an emergency, buddies should maintain visual contact with each other and with other on-site team members by remaining in close proximity.
- Do not bring nonessential vehicles and equipment onto the site.
- Immediately report all injuries, illnesses, and unsafe conditions, practices, and equipment to the site safety coordinator (SSC).
- Maintain a portion of the site field logbook as a project safety log. The project safety log will be used to record the names, entry and exit dates, and times on site of all Tetra Tech personnel, subcontractor personnel, and project site visitors; and other information related to safety matters.

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- A portable eyewash station should be located in the support zone if corrosive materials are used or stored on the site.
- Smoking is not allowed on Tetra Tech projects sites, except in designated smoking areas.
- Do not bring matches and lighters in the exclusion zone or contamination reduction zone.
- Observe coworkers for signs of toxic exposure and heat or cold stress.
- Inform coworkers of nonvisual effects of illness if you experience them, such as headaches, dizziness, nausea, or blurred vision.
- Anyone known to be under the influence of drugs or intoxicating substances that impair the employee's ability to safely perform assigned duties shall not be allowed on the job while in that condition.
- Horseplay, scuffling, and other acts that tend to have an adverse influence on the safety or well-being of the employees is prohibited.
- Work shall be well planned to prevent injuries in the handling of materials and when working with equipment.
- No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that might unnecessarily expose the employee or others to injury.
- Use proper lifting techniques. Heavy objects will be lifted using the large muscles of the leg instead of the smaller muscles of the back.
- Wear appropriate footwear and all other protective equipment required for work.
- Cleanse thoroughly after handling hazardous substances.
- Maintain all tools and equipment in good condition.
- First aid kits shall be located in a prominent location and stocked with basic first aid supplies.

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	TETRA TECH, INC. GENERAL SAFE WORK PRACTICES FOR FIELD WORK	Revision Date: 10/1/2008 Document Control Number: SWP 5-1 Page 3 of 3

Disclaimer: This safe work practice (SWP) is the property of Tetra Tech, Inc. (Tetra Tech). Any reuse of the SWP without Tetra Tech's permission is at the sole risk of the user. The user will hold harmless Tetra Tech for any damages that result from unauthorized reuse of this SWP. Authorized users are responsible for obtaining proper training and qualification from their employer before performing operations described in this SWP.

Revision Date	Document Authorizer	Revision Details
10/1/2008	Chris McClain	NEW

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	TETRA TECH, INC. GENERAL SAFE WORK PRACTICES for HAZARDOUS WASTE SITE ACTIVITIES	Revision Date: 10/1/2008 Document Control Number: SWP 5-2 Page 1 of 3

To prevent injuries and adverse health effects, the following general safe work practices (SWP) are to be followed when conducting work involving known and unknown site hazards on hazardous waste sites. These SWPs establish a pattern of general precautions and measures for reducing risks associated with hazardous site operations. This list is not inclusive and may be amended as necessary.

- Do not eat, drink, chew gum or tobacco, take medication, or smoke in contaminated or potentially contaminated areas or where the possibility for contact with site contamination exists.
- Wash hands and face thoroughly upon leaving a contaminated or suspected contaminated area. If a source of potable water is not available at the work site that can be used for hands-washing, the use of waterless hand cleaning products will be used, followed by actual hand-washing as soon as practicable upon exiting the site. A thorough shower and wash must be conducted as soon as possible if excessive skin contamination occurs.
- Avoid contact with potentially contaminated substances. Do not walk through puddles, pools, mud, or other such areas. Avoid, whenever possible, kneeling on the ground or leaning or sitting on drums, equipment, or the ground. Do not place monitoring equipment on potentially contaminated surfaces.
- Remove beards or facial hair that interferes with a satisfactory qualitative respirator fit test or routine pre-entry positive and negative pressure checks.
- Be familiar with and knowledgeable of and adhere to all instructions in the site-specific health and safety plan (HASP). At a minimum, a safety meeting will be held at the start of each project to discuss the HASP. Additional meetings will be held, as necessary, to address new or continuing safety and health concerns.
- Be aware of the location of the nearest telephone and all emergency telephone numbers.
- Attend a briefing on the anticipated hazards, equipment requirements, SWPs, emergency procedures, and communication methods before going on site.
- Plan and delineate entrance, exit, and emergency escape routes.
- Rehearse unfamiliar operations prior to implementation.

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- Use the "buddy system" whenever respiratory protection equipment is in use. Buddies should establish hand signals or other means of emergency communication in case radios break down or are unavailable.
- Buddies should maintain visual contact with each other and with other on-site team members by remaining in close proximity in order to assist each other in case of emergency.
- Minimize the number of personnel and equipment in contaminated areas (such as the exclusion zone). Nonessential vehicles and equipment should remain within the support zone.
- Establish appropriate support, contamination reduction, and exclusion zones.
- Establish appropriate decontamination procedures for leaving the site.
- Immediately report all injuries, illnesses, and unsafe conditions, practices, and equipment to the site safety coordinator (SSC).
- Maintain a portion of the site field logbook as a project safety log. The project safety log will be used to record the names, entry and exit dates, and times on site of all Tetra Tech personnel, subcontractor personnel, and project site visitors; air quality and personal exposure monitoring data; and other information related to safety matters. Form SSC-1, Daily Site Log, may be used to record names of on-site personnel.
- A portable eyewash station should be located in the support zone if chemical splashes to eyes are possible.
- Do not bring matches and lighters in the exclusion zone or contamination reduction zone. Flames and open fires are not permitted on site.
- Observe coworkers for signs of toxic exposure and heat or cold stress.
- Inform coworkers of nonvisual effects of illness if you experience them, such as headaches, dizziness, nausea, or blurred vision.

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	TETRA TECH, INC. SAFE DRILLING PRACTICES	Revision Date: 10/1/2008 Document Control Number: SWP 5-4 Page 1 of 3

This document establishes safe work practices (SWP) to follow during drilling operations. These SWPs are based on suggested safety procedures provided in the National Drilling Association's "Drilling Safety Guide." Procedures to follow before, during, and after drilling are listed below.

Before beginning any drill operation, each employee must conform to the following requirements:

- Wear a hard hat, safety glasses or goggles, steel-toed work boots, a shirt and full-length pants when working with or near the drill rig. Shirts must be tucked in at the belt.
- Do not wear loose or frayed clothing, loose long hair, or loose jewelry while working with rotating equipment.
- Do not eat, drink, or smoke near the drill rig.
- Identify all underground utility and buried structure locations before drilling.
- Ensure that drill masts or other projecting devices will be farther than 25 feet in any direction from overhead power lines.
- Ensure that the drill rig and any other machinery used is inspected daily by competent, qualified individuals. The site safety coordinator (SSC) will ensure compliance with this precaution.
- Drill rig operators will be instructed to report any abnormalities, such as equipment failure, oozing liquids, and unusual odors, to their supervisors or the SSC.
- Establish hand-signal communications for use when verbal communication is difficult. One person per work team will be designated to give hand signals to equipment operators.

While the drill rig is operating, employees must:

- Wear appropriate respiratory and personal protective equipment (PPE) when conditions warrant their use.
- Avoid direct contact with known or suspected contaminated surfaces.
- Move tools, materials, cords, hoses, and debris to prevent tripping hazards and contact with moving drill rig parts.

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- Adequately secure tools, materials, and equipment subject to displacement or falling.
- Store flammable materials away from ignition sources and in approved containers.
- Maintain adequate clearance of the drill rig and mast from overhead transmission lines. The minimum clearance is 25 feet unless special permission is granted by the utility company. Call the local utility company for proper clearance.
- Only qualified and licensed personnel should operate drill rigs.
- Workers should not assume that the drill rig operator is keeping track of the rig's exact location. Workers should never walk directly behind or beside heavy equipment without the operator's knowledge.
- Workers should maintain visual contact with drill rig operators at all times.
- When an operator must maneuver equipment in tight quarters, the presence of a second person is required to ensure adequate clearance. If much backing is required, two ground guides will be used: one in the direction the equipment is moving, and the other in the operator's normal field of vision to relay signals.
- Auger sections and other equipment are extremely heavy. All lifting precautions should be taken before moving heavy equipment. Appropriate equipment, such as chains, hoists, straps, and other equipment, should be used to safely transport heavy equipment too heavy to safely lift.
- Proper personal lifting techniques will be used. Workers should lift using their legs, not their backs.
- Workers will not use equipment they are not familiar with. This precaution applies to heavy as well as light equipment.
- All personnel not essential to work activities will be kept out of the work area.
- Workers will be aware of their footing at all times.
- Workers will remain alert at all times.

After drilling operations are completed, employees should do the following:

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- Shut down machinery before repairing or lubricating parts (except parts that must be in motion for lubrication).
- Shut down mechanical equipment prior to and during fueling operations. When refueling or transferring fuel, containers and equipment must be bonded to prevent the buildup of static electricity.
- Keep drill rigs in the exclusion zone until work has been completed. Such equipment should then be decontaminated within the designated decontamination area.
- Engage parking brakes when equipment is not in use.
- Implement an ongoing maintenance program for all tools and equipment. All tools and moving equipment should be inspected regularly to ensure that parts are secured, are intact, and have no cracks or areas of weakness. The equipment must turn smoothly without wobbling and must operate in accordance with manufacturer specifications. Defective items should be promptly repaired or replaced. Maintenance and repair logs will be kept.
- Store tools in clean, secure areas to prevent damage, loss, or theft.

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	TETRA TECH, INC. HEAVY EQUIPMENT	Revision Date: 02/16/2012
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1.0 PURPOSE

The purpose of this procedure is to identify minimum requirements, and to provide guidance to Tetra Tech Inc. (Tetra Tech) project personnel concerning the management of construction tools and equipment on construction projects.

2.0 SCOPE

This procedure applies to all Tetra Tech projects that include a construction, O&M, and/or UXO component, including remediation construction.

3.0 MINIMUM REQUIREMENTS

3.1 Definitions

3.1.1 Construction Equipment

For the purposes of this procedure, construction equipment shall mean heavy equipment, such as excavators, scrapers, off-road trucks, dozers, road graders, compactors, dredges, and cranes; light equipment, such as skid-steers, forklifts, generators, and light plants; and operating systems such as screens, crushers, conveyors, pugmills, mobile treatment plants, and pumps. Any discussion of construction equipment shall be understood not to include cars, pickup trucks, flatbed trucks, etc. registered for use on public roadways, which shall be called vehicles hereinafter. Also for the purposes of this procedure, construction equipment shall be synonymous with Contractor's Equipment, a term also commonly used in the construction industry to designate the types of equipment described above.

3.1.2 Terms

The terms "should, may, and might" as used in statements in this procedure are intended to denote a discretionary consideration; the terms "shall & must" are intended to impose a mandatory requirement. The terms "is, are, & will" as used in statements in this procedure are intended to denote discretionary or mandatory requirements that are addressed in other department/disciplines' procedures. However, nothing contained herein should be interpreted as to prohibit development and approval of project-specific procedures or plans that take exception to mandatory direction presented in this procedure provided that the appropriate level of approval, (Executive Vice President of Construction, Business Line Executive Vice President, or the Vice President ESQ Services as appropriate) is obtained for deviations from such requirements.

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3.1.3 Tools of the Trade

Specific hand tools and or equipment (e.g., manlifts, trucks, trenchers, and pumps) normally provided by or to workers for the performance of their particular work activity.

3.2 Roles & Responsibilities

3.2.1 Equipment Supervisor

Depending on the project's equipment needs, an individual may be designated as the Equipment Supervisor. Responsibilities of the Equipment Supervisor include:

- Determination of the equipment needs for the project;
- Providing input to the Work Plan concerning equipment;
- Identification of Contract and legal/regulatory requirements for mobilization of equipment on client facilities;
- Submit required certifications, inspection reports, and test reports for equipment;
- Arranging for the mobilization/demobilization of equipment in support of the project's schedule, providing required notices, such as mobilization details and dates, and obtaining Contractual or legally required approvals for mobilization;
- Receipt inspection of equipment arriving at the site, including coordination of any client or third party inspection;
- Coordination with equipment yard personnel or vendors regarding equipment maintenance;
- Ensuring implementation of safe work practices for equipment utilization; and
- Assuring that the return of demobilized equipment is performed in accordance with the terms of the rental/lease/PO agreement and documented correctly, or, for Tetra Tech owned equipment, that the equipment transfer form is completed and coordinated with the Equipment Manager; and
- All other responsibilities as assigned by the Project Manager or Site Supervisor

3.3 Safe Operation Requirements for Tools

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3.3.1 Manual T-Post Drivers

There shall be no use of manual fence post drivers, such as those typically used to drive T-posts, without prior approval from the Site Safety Coordinator or the Vice President of Construction. Any approval of the use of such a tool shall require the implementation of an Activity Hazard Analysis (AHA) to identify and control the hazards presented by the tool. The AHA shall address appropriate PPE and position for the task in order to avoid injury to the worker.

3.3.2 Tools

The Site Supervisor shall determine the nature and quantity of tools required for the construction effort and shall ensure that adequate tools are provided in support of the schedule.

Tools may be assigned to workers or crews for the duration of their activities and shall be stored in gang boxes or other secured storage areas when not in use.

The Site Supervisor may designate certain tools to be issued from a tool control area on a daily basis. These tools should be signed out at the beginning of the work, returned to the tool control area at the end of the work, and signed back in.

3.3.3 Worker Provided Personal Tools

Workers may be required to provide personal tools of the trade for their particular work. Master mechanics, for example, may be required to provide tools required for repairs and maintenance of construction equipment and vehicles. Requirements for workers to provide their own tools shall be established based on the project requirements and shall be discussed at the Pre-Job Conference to be held in accordance with the requirements of the Labor Relations Guidelines LR-8, Pre-Job Conferences.

Any worker required or offering to provide personal tools shall be required to present a list of personal tools being provided upon reporting to the project site. The Site Supervisor shall inventory the tools against this list for verification that all listed tools have been provided. The list shall then be maintained for use in performing an inventory of the tools when the worker is to leave the site at the end of the worker's assignment and shall be the basis for any claims for loss or damage.

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The Site Supervisor shall ensure that any personal tools brought onto the project site receive a safety inspection. The safety inspection shall include as a minimum, the items addressed in Section 3.3.4 of this procedure.

The Site Supervisor should ensure that secure, lockable facilities are provided for the storage of worker provided personal tools.

The worker shall be responsible for notification of lost or damaged tools immediately on discovery of the loss. The limits of the project's liability (if any) for loss or damage to personal tools provided by the workers should be established at the Pre-Job Conference.

Use of personal tools, other than addressed above, either by manual or by Tetra Tech nonmanual personnel, should not be allowed except as specifically authorized by the Project Manager or Site Supervisor. Project personnel should be notified that Tetra Tech will not be liable for any theft, loss, or damage of unauthorized personal tools on the project site.

3.3.4 Tool Safety Inspection

OSHA 29 CFR Part 1926 Subpart I Tools – Hand and Power provides guidance for tool safety. All tools shall be inspected for the following minimum features by the person using the tool prior to starting the work:

- Proper general condition of tools, electrical cords, and air hoses;
- Presence and serviceability of guards and safety devices;
- Proper electrical grounding or double insulation protection;
- Power tools properly equipped with constant pressure switches;
- Tool retainers installed on pneumatic tools;
- Proper adjustment of the tool; and
- Confirming that the load rating of the tool is sufficient for the work to be performed.

Unsafe tools shall be removed from service and the Site Supervisor advised of the condition for corrective action. An Out of Service tag should be placed on all unsafe or defective tools to prevent their inadvertent use by others. These tools should be physically segregated from the acceptable tools.

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3.3.5 Environmental Safety and Quality Policy Implementation

Proper selection of construction equipment can impact employee health, consideration should be given to ergonomic design when selecting construction equipment.

Selection of construction equipment and vehicles may have significant impacts on the environment, either adverse or beneficial. Proper selection of the size and type of equipment and vehicles can reduce the adverse impacts from their operation.

Project procurement practices for construction equipment, parts, supplies, lubricants, and fuel shall be consistent with the principles of pollution prevention. For example, consideration should be given to such factors as rent versus buy options, disposable versus reusable filters, recycled versus virgin oils/fluids, recycling versus disposal of spent fluids and used parts, and fuel efficiency and economy of operation.

Spent fluids, filters, and used parts shall be recycled to the extent practical, or otherwise disposed of in accordance with the environmental compliance elements of the Work Plan or EHS plan.

Proper utilization of construction equipment and vehicles can also reduce adverse impacts on the environment. (For example, it is Tetra Tech's policy to not allow unattended equipment and vehicles to be left with motors running. This is not only a safety consideration; it reduces adverse environmental impacts and is generally cost effective due to reduced fuel consumption.)

3.3.6 Insurance

The Project Manager shall ensure that all construction equipment, including Tetra Tech-owned or rental/lease equipment, is covered by appropriate insurance policies for the intended use of the equipment. Property insurance on construction equipment is normally arranged by Tetra Tech if Tetra Tech bears the risk of loss or if Tetra Tech is required to arrange such insurance. However, all rented/leased construction equipment valued in excess of $100,000, and all cranes regardless of their value shall be reported to the Administration and Compliance Department via the 'Insurance Request for Leased Equipment' (Attachement 5, and available in Tetra Links and from procurement) for specific inclusion under the Tetra Tech property insurance policy. The procurement representative should be contacted to ensure that this

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occurs in each case. Notification is not required for equipment valued under $100,000 except when the construction equipment provider requests a certificate of insurance be provided, or the equipment is a crane.

The Project Manager, usually through the designated procurement representative, should ensure that duplicate insurance coverage is not provided through the equipment provider since this will increase the rental rates. In those cases where the provider requires insurance certificates to verify coverage by Tetra Tech, the procurement representative should be contacted to obtain the appropriate documentation.

A Vehicle Insurance Form (available from the Vehicle Insurance Coordinator, Tetra Links or procurement) shall be processed and sent to the Vehicle Insurance Coordinator for all vehicles (leased, rented, or owned) which are registered and operated off jobsites on public highways.

3.3.7 Receipt and Inspection

All construction equipment shall be subject to a receipt inspection by a competent person and any Contract or otherwise required additional person(s) prior to acceptance at the project site. The inspections and tests shall be in accordance with the manufacturer's recommendations. Most vendors provide a form for notation of any existing damage to the equipment to be filled out on receipt. The equipment should be inspected carefully to determine its condition, including any damage, missing or non-functional equipment. The agreement should be used as a basis to determine that everything required (e.g., the equipment, its condition, manuals, spares, documentation of inspections, and certifications) has been provided. All discrepancies should be noted on the form. A pre-inspection of the equipment prior to transport to the Project site should be considered. Particular attention shall be given to the following items:

- All safety equipment and its condition;
- Operator (when provided) certification for the equipment;
- Posted operating and safety instructions;
- All pollution control devices and their condition;
- Safe entry and egress, with steps, ladders, handholds, and platforms provided as required, including safe access to perform routine checks, maintenance, and refueling operations;
- Leaking fluids, such as hydraulic oil, engine oil, transmission fluid, and coolant;

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- Deteriorated or cracked hydraulic and coolant hoses which could result in leaks or spills;
- Guard belts, gears, shafts, pulleys, fly wheels and other reciprocating, rotating or moving parts shall be guarded to protect workers from becoming caught on, in or between machinery; and
- Presence of the manufacturer operation and maintenance manual.

Equipment or vehicles with deficient conditions relating to safety or protection of the environment shall not be placed into service until the deficiencies have been corrected and documented.

All construction equipment shall be subject to an operational check prior to acceptance at the project site. The operational check should verify that the equipment has the capability to function as intended or as required through the full range of its intended use.

Receipt of construction equipment shall be documented; with a copy of the receipt inspection report provided to the Equipment Supervisor and to the equipment purchase order file. Documentation should include entries for date and time of receipt, condition of equipment, mileage or engine hours at time of receipt, information on next scheduled maintenance, and a record of operating and maintenance manuals received with the equipment. Photographs or a video record of the equipment on receipt should be taken if conditions are noted that would warrant further documentation.

Construction equipment providers will often include terms and conditions on receipt documentation to be signed when construction equipment is delivered to the project site. **Project personnel requested to sign this receipt documentation shall not sign any delivery forms unless authorized to do so by Legal of the Project Manager. Further, if they are required to sign delivery forms, they shall be instructed to cross out all terms and conditions, on both the front and back of the forms, before signing.** Alternately, the person receiving the construction equipment should enter the following statement in the immediate vicinity of their signature: “In lieu of the terms and conditions set forth on this document, the Original Purchase Order (or appropriate form of agreement) terms and conditions apply to the receipt of this item(s).” These actions are necessary to avoid acceptance of additional or different terms and conditions.

Construction equipment delivered to the project site should be accompanied with operating and maintenance manuals. Cranes and lifting equipment shall include certification of satisfactory completion of annual inspection and have load charts posted in the cab. Additionally, some

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construction equipment may be supplied with common replacement parts, such as filters and belts, and any specialized tools required for routine operation or maintenance. (i.e. forks, buckets, lift arms, and tool carries) These items should be carefully inventoried upon receipt, and documented on the receipt inspection report. Responsibility for protection and maintenance of the construction equipment shall be verified, and all measures necessary to protect the construction equipment from damage or loss will be instituted in accordance with the agreement, operating, and maintenance manuals or other instructions as appropriate.

Disposition requirements for construction equipment found to not be in accordance with the rental/lease/sale agreement when received shall be confirmed with the vendor immediately.

A sample Equipment/Vehicle Inspection Report is included as Attachment 1 to this procedure.

3.3.8 Protection from Environmental Extremes

Consideration shall be given to the environmental conditions to which the construction equipment will be exposed to during its time at the project site or during transportation. The manufacturer's instructions shall be reviewed and followed to ensure adequate protection from damage due to environmental conditions.

Adequate protection to the construction equipment's cooling system shall be verified by ensuring that the appropriate coolant/antifreeze mixture, as recommended by the manufacturer, has been used.

Appropriate procedures for operating or storing construction equipment, such as water treatment systems, shall be developed in accordance with the manufacturer's instructions. Measures such as draining and venting the system, providing auxiliary heat sources (e.g., heat tape), dry storage, shaft rotation, fluid levels, shall be taken to protect construction equipment subject to damage from environmental conditions.

Manufacturer's instructions concerning periodic operation of construction equipment shall be followed.

A means of ensuring that appropriate protective measures are instituted and performed as required should be implemented through the establishment of site procedures, logs, and/or checklists.

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3.3.9 Equipment Inspections

All construction equipment shall be inspected daily (when in use) for safety and operability, including manufacturer's recommended daily inspections. The inspection form/checklist should note any deficiencies for correction and serve as documentation of the inspection performance. The Equipment Supervisor shall be notified of any deficiency immediately. A Daily Equipment Inspection form, a sample of which is included as Attachment 2 to this procedure, should be filled out at the start of the shift and provided to the Equipment Supervisor. Other supplemental forms which may be used in conjunction with Attachment 2 are the equipment specific "Pre-operation Inspection" and/or "Function Tests" forms, which are normally supplied by the equipment manufacturer. This information is usually found in the equipment's Operation Manual.

Government property control procedures usually require the implementation of a vehicle utilization log for vehicles when used on government projects; other projects should also implement a similar system for logging use of these vehicles. The log should be kept in the vehicle and an entry made for each use, including name of the driver, purpose of the trip, starting mileage, ending mileage, fuel purchased, maintenance performed, and any damage incurred. The log sheets should be transmiTetra Teched as required in the contract documents and the project's documentation plan. Copies of the log sheets will be maintained and filed as discussed in Section 3.3.12 of this procedure.

A separate Daily Equipment Inspection Report should be filled out for each shift if construction equipment is utilized on multiple shifts.

The Equipment Supervisor should use the information on Daily Equipment Inspection forms to schedule any repairs or preventive maintenance required for the equipment. Equipment with missing or defective safety features should not be put in service until repairs have been performed to bring the equipment into compliance with any applicable Tetra Tech H&S Program and/or regulatory requirements.

Implementation of the daily equipment inspections should be the subject of periodic verification inspections performed by the Project Manager, Site Supervisor, and/or the Site Safety Coordinator (SSC). These periodic inspections should include verification that the required maintenance is being performed in a timely manner to ensure that unsafe conditions or impacts to the environment (e.g., spills, releases, and discharges) are not created by delays in correcting deficiencies noted on the Daily Equipment Inspection Forms.

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Rigging equipment, wire rope, nylon or KEVLAR slings and chokers shall be inspected by a competent person prior to use each shift; particular attention shall be paid to the rigging condition and presence of load/certification tags.

Cranes (weight handling equipment) shall be subjected to annual and certification inspections per OSHA guidelines. Mobile and crawler cranes shall be inspected on a monthly basis; a sample checklist form is included as Attachment 3 to this procedure.

Construction equipment to be demobilized shall be given a final inspection, similar to the receipt inspection, to identify and document, by means of written description and pictures, the condition of the equipment as it leaves the project site. Where possible, a concurrent inspection by the vendor is preferred. Additionally, some projects, particularly USACE projects, require a certificate of decontamination prior to the equipment leaving the site.

3.3.10 Operator Qualifications

Tetra Tech employees operating vehicles or construction equipment on public rights of way shall be required to have in their possession a valid driver's license appropriate to the location where the item is being operated and containing the appropriate endorsement for the type of vehicle or construction equipment being operated. A Commercial Driver's License (CDL) may be required for operation of some construction equipment on public rights of way, or as a specific requirement of a client's safety program. In addition, individual states may require specific licenses or certifications for operators of certain equipment, such as forklifts, and hoisting equipment. Additionally, the client's safety program may include license or certification requirements for personnel operating equipment on their property. The contract documents should be reviewed carefully to ensure that any such requirements are incorporated into the project's Work Plan or HASP. The Site Supervisor shall verify that the operator possesses the required license(s). Copies of licenses should be maintained in the on-site project employee file.

Any agreements for the rental or lease of vehicles or equipment should be reviewed for any provider's requirements for licensing or certification of operators to ensure that any such requirements are incorporated into the project's Work Plan or HASP.

Operators shall be required to demonstrate their proficiency in operating the construction equipment to be assigned to them prior to being allowed to work. Crane operators shall have qualifications for the type of crane to be operated.

Operator proficiency may be demonstrated through a performance test such as those

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developed by the International Union of Operating Engineers, or by equipment manufacturers such as Caterpillar. These performance tests include exercises developed to demonstrate operator proficiency in various aspects of equipment operation, including daily operator inspections, ability to follow directions, ability to understand equipment limitations and operating guidelines, safety, and productivity. Also included are checklists that assist an observer in evaluating all of the various aspects of equipment operation. Attachment 4 is an example of Operator/Driver Observation Checklist.

Where it is not possible or practical to demonstrate operator proficiency through a performance test as described above, there should be a period of observation of the operator during the initial period of performance, whether the operator is a new employee or a current employee who is being assigned to a different type of equipment than previously operated on the project site. This observation may be performed by a knowledgeable member of the management team or a designated craft employee such as a foreman or steward. The above referenced checklists could be used for this observation in lieu of the performance test.

Operators shall be physically fit to perform their duties and may be required to participate in the Tetra Tech Medical Surveillance program.

3.3.11 Refresher Training and Evaluation

Refresher training in relevant topics shall be provided to Crane (as defined by OSHA 1910.180(a) operators, and Powered Industrial Truck (PIT) as defined by OSHA 1910.178(a)(1) operators prior to be allowed to continue operating when:

- The operator has been observed to operate the PIT/Crane in an unsafe manner.
- The operator has been involved in an accident or near-miss incident.
- The operator has received an evaluation that reveals that the operator is not operating the PIT/Crane safely.
- The operator is assigned to operate a different type of PIT/Crane; or
- A condition in the workplace changes in a manner that could affect safe operation of the PIT/Crane.

An evaluation of each PIT/Crane operator's performance shall be conducted at least once every three years.

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Refresher training in relevant topics shall be provided to all other construction equipment operators when:

- The operator has been observed to operate the equipment in an unsafe manner.
- The operator has been involved in an accident or near-miss incident.
- The operator has received an evaluation that reveals that the operator is not operating the equipment safely.
- The operator is assigned to drive a different type of equipment; or
- A condition in the workplace changes in a manner that could affect safe operation of the equipment.

The employer shall certify that each operator has been trained and evaluated. The certification shall include the name of the operator, the type of equipment, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

3.3.12 Repairs

All construction equipment shall be repaired as necessary and maintained in good working order. Repairs to rented/leased construction equipment shall be in accordance with the terms of the rental/lease agreement. Repairs to rented/leased and Tetra Tech's construction equipment shall be documented and a record of the repairs maintained in the project files. Copies of the repair records are to be forwarded to the equipment yard for Tetra Tech-owned equipment.

Construction equipment with deficiencies noted on the Daily Inspection Report should be repaired promptly. The Equipment Supervisor, with input from the Environmental and Safety Supervisor as appropriate, should evaluate if a piece of equipment or a vehicle should be removed from service until the deficiency is corrected.

Construction equipment that develops a fluid leak such as engine oil, hydraulic oil, transmission fluid, or coolant shall be removed from service until the deficient condition has been corrected.

Construction equipment with missing or inoperable exhaust systems, including spark or flame arrestors, mufflers, and catalytic converters, shall be removed from service until the deficient

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condition has been corrected.

Tampering with, removal, modification, or otherwise rendering inoperable any pollution control device on construction equipment shall not be allowed except as specifically authorized by the equipment manufacturer or appropriate authority and the Project Manager or Supervisor's concurrence

Only trained, qualified personnel shall be allowed to repair equipment. The project's Work Plan should address repairs to equipment by designating required actions in the event of an equipment failure.

An Authorization for Capital Expenditure or Lease (AFCEL) is to be completed for all major repair work (i.e., $1500.00 and over) performed on Tetra Tech-owned construction equipment in accordance with Accounting/Finance Procedure AF-8, Fixed Assets. (Note that on some construction equipment, the cost of a specific item, a replacement tire for example, may require the processing of an AFCEL due to the item cost.)

Costs for major repairs, as well as repairs for deficiencies, to Tetra Tech-owned construction equipment shall be charged back to the project releasing the equipment if the need for repairs is identified within 30 days of the equipment's release and removal from a project and there are indications that the repairs are needed as the result of lack of maintenance or failure of the releasing project to otherwise keep the equipment in good working order.

No repair shall be undertaken for damage covered by an insurance claim until the damage is reported to the Administration and Compliance Department and the insurer approves the repairs.

3.3.13 Documentation and Record Keeping

A file shall be established and maintained for each operator which contains documentation that the operator has the proper qualifications, licenses/certificates, and training to perform his/her job function. Records may include training identified in the HASP (e.g., OSHA, DOT, Waste Management training), vehicle operator licenses, results of site-administered proficiency testing, and any other special licenses/certificates required by state/local law or the client.

A file shall be established and maintained for each piece of construction equipment, and all records relating to that equipment shall be placed in the file, including the Receipt Inspection Report, annual inspections (for cranes), record of the date the equipment was first placed in

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service, Daily Equipment Inspection records, maintenance records, repair records, record of the last date that the equipment was in service, demobilization inspection report, and the decontamination certificate, if applicable. For ease of retrieval, all records pertaining to pieces of equipment should be maintained in separate folders for each piece of equipment.

Additional copies of inspection reports and records may be required to be maintained in other project files, such as the procurement files and/or the Environmental Health and Safety files, based on the project's Documentation Plan.

The Equipment Supervisor should ensure that complete and accurate record of equipment utilization, including a list of idle equipment, is provided to the Quality Control Site Manager on a daily basis..

It may be useful to maintain equipment utilization information on a spreadsheet depending on the size of the project. Information such as equipment mobilization date, date of first use, utilization of equipment by rental period (for example, if rental rate is based on hourly usage and is billed on a monthly cycle, there should be an entry for the number of hours the equipment was used in each billing period), scheduled equipment release date, actual release date, and demobilization date. This information may be useful in verification of vendor invoices, in review of production rates, for preparation of requests for change orders or equitable adjustment, or for backup for use in support of (or defense against) claims.

Copies of all maintenance and repair records for Tetra Tech-owned construction equipment shall be forwarded to the Tetra Tech Equipment Manager at the regional equipment yard on a periodic basis. This period should be monthly, and in no circumstances should it exceed quarterly. An Equipment Service Form is available from the Equipment Manager. This form shall be used to report unscheduled and preventative maintenance on Tetra Tech-owned construction equipment.

The Equipment Manager produces a spreadsheet for Tetra Tech-owned construction equipment that is distributed to the projects on a monthly basis. The Equipment Supervisor shall ensure that reports of mileage or meter readings and routine maintenance for all Tetra Tech-owned construction equipment and vehicles assigned to the project are provided to the Equipment Manager for inclusion on the spreadsheet on a monthly basis. A Meter/Mileage Reading Update Form, available from the Equipment Manager, shall be used to report the required information.

The Equipment Supervisor should review the availability date included on the spreadsheet for Tetra Tech-owned equipment and vehicles assigned to the project and inform the Equipment

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Manager of any required revisions to these dates.

The Equipment Supervisor shall complete an Equipment Transfer Report, available from the Equipment Manager, for all Tetra Tech-owned construction equipment and vehicles to be mobilized to, and demobilized from the project. Copies of the Equipment Transfer Reports shall be provided to the Equipment Manager at the regional equipment yard.

There shall be no equipment disposal action (junk or sale) for Tetra Tech-owned construction equipment or vehicles without prior notification and approval from the Tetra Tech President.

4.0 GUIDANCE

4.1 Additional Considerations

4.1.1 Control of Government Property

Activities involving the use of Government property are to be controlled by specific procedures negotiated with the Client in accordance with the contract's terms and conditions; such procedures shall be consulted where appropriate. Such activities may involve the handling or installation of Government property, whether furnished by the Government to Tetra Tech or acquired by Tetra Tech for use in the performance of work and for which the Government has retained title.

Government property may include construction tools and equipment purchased as a project cost, as well as permanent materials or equipment purchased for incorporation into the work. Project-specific procedures for control of Government property are to address issues relevant to the use, storage, inventory control, maintenance, and/or final disposition of the Government property.

4.1.2 Spill Control and Emergency Response Dedicated Tools and Equipment

The project's Emergency Response Plan, or Emergency Action Plan is to identify dedicated personal protective equipment and emergency response tools and equipment to be available for an emergency response to a spill or discharge of hazardous material.

Dedicated emergency response tools and equipment are to be segregated and identified for use in emergency response situations. The use of dedicated emergency response tools or equipment for any other activity is not to be permitted.

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4.1.3 Inventory Control

An individual should be designated as the Material Control Supervisor and should be responsible for inventory control of all tools issued from the tool control area. A log should be maintained for all tools issued and should record, as a minimum, the identification by name and employee number of the individual signing out the tool, the date and time the tool was signed out, the intended use of the tool (by area or system), an indication of when the tool is to be returned, and the time and date when the tool is returned.
Inventory control of tools assigned to individuals or crews should be performed on a daily basis as the tools are returned to the gang box or storage area. The crew foreman should be responsible for inventory control of tools assigned to the foreman's crew.

The Site Supervisor should immediately be made aware of any missing tools and should take the appropriate action to investigate and/or replace the missing tools.

4.1.4 Disposition of Tools at Project Completion

The Project Manager should make a determination of the disposition of tools remaining at the end of the project. The project may not be reimbursed by the client for the purchase of tools on certain cost reimbursable and lump sum projects. On other projects, a dollar value for individual tools may establish whether or not the client provides any reimbursement. The terms and conditions of the contract should provide direction as to the required disposition of the tools. Tools for which the project has been reimbursed by the client are to be dispositioned in accordance with the client's preferences and the contract terms and conditions.

Tools purchased for the project as a project cost, and which are not to be turned over to the client, should be dispositioned by the Project Manager. Means of disposition may include, but not be limited to, declaring the tools surplus, sale of the tools, or providing the tools to another project. The Project Manager should consult with the appropriate Business Line Executive Vice Presidents, concerning disposition of project tools.

Tetra Tech owned tools (i.e., not purchased as a project cost) should be dispositioned by the Project Manager based on consultation with the appropriate Business Line Executive Vice Presidents. Means of disposition of Tetra Tech-owned tools may include, but not be limited to, declaring the tools surplus, sale of the tools, return of the tools to an equipment yard, or providing the tools to another project.

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4.1.5 Company-Owned Equipment

Tetra Tech utilizes regional equipment yard(s) for the temporary storage and maintenance of Tetra Tech-owned construction equipment and vehicles when not currently assigned to a project. Available Tetra Tech-owned equipment should be considered for support of a project's construction effort based on an analysis of the benefits to the project and/or Tetra Tech. When evaluating Tetra Tech owned equipment the requirements discussed in 4.1.6 below should be considered when making the equipment selection.

4.1.6 Rental/Lease Equipment

Agreements for rental/lease of construction equipment should be coordinated through an authorized procurement representative to ensure that appropriate terms and conditions are included in the agreement. The Scope of Work for the agreement should be developed and reviewed carefully, including review by the Site Supervisor or Equipment Supervisor for inclusion of sufficient detail in order to clearly define the scope of work.

The Equipment Supervisor, or requisitioner if there is no designated Equipment Supervisor, should review the terms and conditions of all rental/lease agreements to determine that the following topics are adequately addressed:

- Receipt and return of the rental or leased equipment and any required accessories;
- Inspection and documentation of receipt and release;
- Provision of documentation required to be submitted, such as Occupational Safety and Health Administration (OSHA) accredited inspection reports, NDE reports, test reports (i.e. load test for cranes), typically annual inspections, and wire rope certification.
- Provision of all safety equipment and accessories, as required, such as fire extinguishers, seat belts, Roll Over Protection Structures (ROPS), Falling Object Protection Structures (FOPS), access steps, handholds, platforms, and anti two-block devices and load moment indicator (cranes);
- Provision of documentation demonstrating operator certification;
- Provision of Certificate of Compliance when required, for instance by NAVFAC P-307 Management of Weight Handling Equipment, Appendix P - Contractor Crane Requirements.

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- Provision and requirements of routine and non-routine maintenance and repairs, including payment for labor, parts, filters, lubricants, and fluids;
- Documentation requirements for the above maintenance and repairs;
- Disposal/recycling requirements for used parts, filters, lubricants, and fluids;
- Items such as point of delivery, costs of delivery and return, rental charges during idle time, notification requirements for demobilization, and point of return;
- Appropriate rental rate provisions for straight time and overtime;
- Responsibility for damage to equipment;
- Insurance;
- Indemnification (if included);
- Payment for replacement of parts subject to normal wear and tear, such as tires, tracks, cuTetra Teching edges, and teeth; and
- Documentation requirements required in support of invoices for basic rental rates and overtime rates, as well as labor, parts, filters, lubricants, and fluids.

Rental agreements should be structured to include normal wear and tear on the equipment in the basic rental rate. In all cases, there should be mutual agreement with the equipment vendor as to the condition of the equipment as it is delivered. This should include items such as the life expectancy of the parts subject to wear and tear, their condition on receipt (i.e., percentage of usable life remaining), and the expected condition on return of the equipment. There should be agreement on minor versus major repairs and on what constitutes normal wear and tear. Mutual agreement is essential to mitigate potential claims from vendors for excessive wear and tear.

4.1.7 Mobilization of Equipment

Mobilization of construction equipment may be a long lead time item and may require client or third party involvement or approvals to gain site access, depending on the required equipment. The Site Supervisor or Equipment Supervisor should determine the lead time required, including Contract submitted and advance notice/approval requirements, and plan for the mobilization of equipment to support the project's schedule.

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- Planning for mobilization of equipment should include a thorough review of Contract requirements for utilization of each equipment and site access requirements.
- Documentation of certification, and OSHA compliant annual inspection, load testing, safety devices (e.g., anti two-block) installed, wire rope certification, and operator's certification for cranes (weight handling equipment) should be reviewed prior to initiating mobilization of cranes.

4.1.8 Equipment Maintenance

The Equipment Supervisor should be responsible for administration of a construction equipment maintenance program for the project. A spreadsheet of all Tetra Tech-owned equipment, titled the Status of All Project Equipment, is maintained by the Construction Department providing notification of the scheduled maintenance requirements for each piece of equipment. Either this spreadsheet, or a project specific spreadsheet, should be maintained and statused on a periodic basis. Specific maintenance requirements may also be contained in specific contract negotiated property procedures or in other Tetra Tech corporate procedures.

As construction equipment is received on site, it should be added to the spreadsheet for tracking of the required maintenance.

A review of the scheduled maintenance should be performed for all construction equipment to be used in the Exclusion Zone to determine the desirability of performing any upcoming scheduled maintenance prior to placing the equipment in service. It may be difficult and expensive to perform the maintenance under the conditions required in the Exclusion Zone, or to decontaminate the construction equipment in order to perform the maintenance under clean conditions. When the maintenance of equipment in the Exclusion Zone is anticipated, the Site Supervisor should ensure that qualified personnel are available with the appropriate medical clearances and certifications to work in the Exclusion Zone.

4.1.9 Construction Equipment Safe Operation Requirements

Standards for safe operation of equipment are contained in the documents identified herein, inclusive and in particular of the requirements for safe operation of lifting and rigging equipment and weight handling equipment. The Contract typically will specify certain documents/codes to be followed for the project.

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- The United States Army Corps of Engineers (USACE) Safety and Health Requirements Manual, EM 385-1-1, Chapters 16, 17, and 18, provide guidance concerning the safe operation of construction equipment.
- Safe operation of earth drilling equipment is addressed in SWP 5-36 Drill Rigs.
- Safe operation of hand and power tools is addressed in OSHA standard 29CFR Part 1926 Subpart I.
- Safe operation of cranes, derricks, hoists, elevators and conveyors is addressed in OSHA standard 29CFR Part 1926 Subpart N.
- Safe operation of motor vehicles, mechanized equipment and marine operations is addressed in 29CFR Part 1926 Subpart O.
- Rollover protective structures and overhead protection is addressed in 29CFR Part 1926 Subpart W.
- The American Society of Mechanical Engineers (ASME) provides guidance in the B30 commiTetra Techee volumes – Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings.
- The United States Department of Energy (DOE) provides guidance for safe lifting operations in Technical Standard DOE-STD-1090 – Hoisting and Rigging.
- The United States Navy publication NAVFAC P-307 – Management of Weight Handling Equipment includes requirements for Contractor Cranes (see appendix P). Navy facilities issue Instructions specific to particular facilities such as 'NAVSHIPYDPUGET INSTRUCTION 11262.4A' which provides requirements for weight handling equipment at all Navy facilities within the Puget Sound.

Construction Equipment safety requirements shall be met before any task can be safely and properly performed, including

- Equipment will be used only in the manner in which it was designed.

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- Vehicles and equipment shall be kept in the appropriate gear or drive range when in motion, specifically when ascending or descending a grade. Freewheeling or coasting is prohibited.
- Steps, handrails and grab irons shall be used and equipment shall be faced when mounting or dismounting equipment. When climbing onto or from equipment a 3-point contact shall be maintained. Steps, handrails and grab rails shall be kept maintained, clean and free from slip, trip and fall hazards. Allow extra time in winter or rainy conditions to clean ice, snow and mud from equipment.
- Operators shall wear seat belts before starting and while in operation if the equipment is supplied with seat belts.
- Eye protection is mandatory if the equipment does not have an enclosed cab.
- Passengers shall not ride on equipment unless the equipment is designed to accommodate passengers.
- Before dismounting, the operator shall secure the equipment from movement by lowering all ground-engaging attachments, if so equipped (i.e., setting the parking brake, placing the transmission in park, disabling the hydraulics and activating any other elements of the equipment per the operator's manual).
- Wheeled equipment, without ground-engaging attachments, shall be chocked immediately following dismount with chock blocks that are adequate for the wheel size and equipment weight.
- Blades, buckets and other materials shall be in contact with the ground before the operator dismounts the equipment.
- Equipment should not be left unattended while the engine is running. If conditions exist that make it necessary for equipment to be left running in an unattended state (i.e., cold weather and certain start-ups), do not allow the general public entrance to the area unless the area can be clearly delineated. If the area cannot be clearly delineated to preclude casual entrance by the general public, unattended equipment shall not be left running.

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- The work site around equipment shall be clear prior to moving equipment. The operator shall be attentive to people and any vehicles that may have entered the area during the walk-around inspection.
- All operations shall be in accordance with manufacturers Standard Operating Procedures (SOPs).
- All ground disturbance operations shall comply with the DCN 4-5 Trenching and Excavation Practices.
- Proper working distances shall be maintained when operating equipment that is near electrical lines, as defined in DCN 5-9 Safe Electrical Work Practices.
- Employees shall not get on or off a vehicle or piece of equipment while it is moving.

4.1.10. General Traffic Requirements

The traffic rules in this section shall be followed, at a minimum, when heavy equipment and haul trucks are operated on project sites. The PM or SSC shall implement new traffic rules as conditions or project changes dictate.

- All applicable local governing authority driving rules shall be followed when driving heavy equipment and haul trucks on public or project sites.
- Operators shall understand and adhere to the site traffic right-of-way rules and work zone configurations.
- Speed limits, dependent on the risk associated with the site, shall be posted for the location and shall always be observed. Violation of speed limits shall result in disciplinary actions, which shall be posted and discussed with the workforce. Appropriate signage shall adequately communicate haul roads and traffic hazards.
- Vehicles and equipment shall follow at a safe distance as determined by road conditions, the specific vehicle and loading. The site shall define a minimum following distance.

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- Passing shall be limited to areas of adequate clearance, visibility and where marked accordingly. Passing may be prohibited completely on some sites or areas.

- Lights should be used to direct equipment at night; work zone lighting shall be sufficient for the work being performed.

- Adequate equipment spotters and ground employees should be deployed in conjunction with the job zone and traffic control plan. Spotters shall be not in the path of equipment travel while equipment is backing into a dump or loading area. Spotters shall wear bright, reflective clothing and be competent in directing and signaling equipment. Spotters and operators shall have a clear understanding of signal protocol for the site. When applicable, equipment will be equipped with a working signal alarm while backing up.

- A communications plan shall be developed by the site to allow the workforce to have communications with operators and spotters. A direct communication technique such as radio communication is preferred. If noise may impede operators to hear radios, then visual alerts (e.g., warning lights) inside the cab that are visible to the operator shall be considered.

4.1.11 Road Construction and Maintenance

For the safest and most efficient worksite, these construction and maintenance rules shall be followed when applicable:

- Elevated haul roads and roads, where risk is high from activities such as building dikes, shall have side berms or barriers that are axle height or greater to accommodate for the largest type of equipment that normally occupies the road. Drainage shall be allowed.

- All curves shall have open sight lines and have as large a radius as practical.

- Haul road/traffic changes shall be communicated to all affected personnel.

- Roadways shall be constructed with a slight crown to facilitate drainage.

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- All roadways, including haul roads, shall be routinely maintained in a safe condition, including the elimination or control of dust, ice or similar hazards. Adequate dust control equipment shall be provided on the job site and shall be utilized to control the hazards.

4.1.12 Demobilization of Equipment

Construction equipment should be demobilized when no longer required for the work. The Executive Vice President of Construction should be provided with a status of Tetra Tech-owned construction equipment and scheduled release dates in order to coordinate availability of equipment with other projects.

The Project Manager or designee should request demobilization instructions from the Executive Vice President of Construction or designee to determine the location to receive Tetra Tech-owned equipment.

Construction equipment leaving the Exclusion Zone of a remediation construction project will be decontaminated in accordance with the requirements of DCN 3-9 Decontamination and the site specific HASP.

Individual state regulations may require cleaning of construction equipment leaving a site, not limited to remediation construction, in order to control the spread of microorganisms contained in the soil. Such requirements are to be identified in the project HASP plans.

Revision Date	Document Authorizer	Revision Details
2/16/2012	Chris McClain	Content & Format Revision

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	TETRA TECH INC. EXCAVATION AND TRENCHING	Revision Date: 10/01/2011 Document Control Number: DCN 4-5 Page 1 of 16

1.0 PURPOSE

This program provides the requirements for activities involving excavations in accordance with 29 CFR 1926, Subpart P - Excavations.

2.0 SCOPE

These requirements are applicable to all Tetra Tech operations.

3.0 MAINTENANCE

The VP, Corporate Health and Safety or designee is responsible for updating this procedure. Approval authority rests with Tetra Tech's Senior VP, Corporate Administration. Suggestions for revision shall be submitted to the Corporate Administration department.

4.0 DEFINITIONS

4.1 Benching

A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

4.2 Competent Person

A competent person is one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

4.3 Excavation

Any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

4.4 Hazardous Atmosphere

An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

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4.5 Protective Systems

A method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

4.6 Sloping

A method of protecting employees from cave-ins by forming sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.

4.7 Support System

A structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

4.8 Trench

A narrow excavation made below the surface of the ground. In general the depth is greater than the width, but the width of a trench measured at the bottom is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench.

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5.0 DISCUSSION

5.1 Responsibilities

5.1.1 Competent Person

The competent person(s) shall be responsible for:

- Day-to-day oversight of open excavations and trenches
- Conducting soil classifications
- Selection of protective systems
- Conducting daily inspections of open excavations and trenches; and
- Providing the PM and or Supervisor with all required documentation on a daily basis.

5.1.2 Line Management

The Project Manager (PM) shall be responsible for:

- Ensuring compliance with this procedure
- Providing the necessary resources for compliance with this procedure; and
- Designating competent personnel in consultation with the Site Safety Coordinator (SSC)

5.1.3 Site Safety Coordinator Personnel

The SSC shall be responsible for:

- Providing oversight on the implementation of the requirements contained in this procedure
- Conducting periodic reviews of open trenches and excavations
- Consulting with the project manager and competent person on excavation issues; and

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- Maintaining required records.

5.2 Designation of Competent Personnel

Prior to the start of any excavation work the project manager shall designate a competent person to fulfill the requirements of this procedure.

5.3 General Requirements

The following section provides general requirements governing activities in and around excavation and trenches, as well as the requirements for the selection and use of protective systems.

- Surfaces surrounding open trenches and excavations shall have all surface hazards removed.
- All utilities shall be located and cleared prior to initiating digging. Public or facility utility groups shall be utilized where possible for this purpose. In the absence of either, the SSC shall specify the procedures to be used to clear utilities in consultation with the project manager. When the excavation is open, utilities shall be supported and protected from damage. Clearance and support methods shall be documented on the daily inspection checklist.
- No person may enter a trench or work at the foot of the face of an excavation until a qualified, competent person has inspected the excavation and determined whether sloping or shoring is required to protect against cave-in or subsidence and the appropriate protection has subsequently been installed.
- Trenches and excavations must be assessed by a qualified, competent person, even in the absence of working personnel, whenever heavy equipment will be operating nearby in order to ensure that the trench or excavation will support the weight of the equipment without subsistence or causing the accidental overturning of machinery.
- Access to trenching areas must be controlled and limited to authorized personnel. Prior to entering a trench or excavation, workers must notify the project manager, SSC, and nearby equipment operators whose activities could affect the trench or excavation.
- Trenches and excavations must be inspected regularly (daily at a minimum) to ensure that changes in temperature, precipitation, shallow groundwater, overburden, nearby building

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weight, vibration, or nearby equipment operation have not caused weakening of the sides, faces, and floors and to ensure that personnel protection is being maintained.

- Where structural ramps are used for egress they shall be installed in accordance with 29 CFR 1926.651(c)(1).
- Stairways, ladders, or ramps shall be provided as means of egress in all trenches 4 feet or more in depth. Travel distance shall be no more than 25 feet between means of exit.
- Ladders if used must be secured from shifting, and must extend at least 3 feet above the top of the trench or excavation.
- Where necessary to prevent falls, crosswalks or walkways will be constructed. Structural ramps, walkway, and cross walks must be designed by a qualified competent person.
- Employees exposed to vehicular traffic shall wear traffic vests.
- No employee shall be permitted under loads being lifted or under loads being unloaded from vehicles.
- When vehicles and machinery are operating adjacent to excavations warning systems such as stop logs or shall be utilized to prevent vehicles from entering the excavation or trench.
- Scaling or barricades shall be used to prevent rock and soils from falling on employees.
- Excavated and loose materials should be kept at least 3 feet from the edge of excavations, but at a minimum 2 feet from the edge of the excavation in accordance with OSHA requirements.
- Walkways or bridges with standard railing shall be provided at points employees are to cross over excavations or trenches.
- Barriers shall be provided to prevent personnel from inadvertently falling into an excavation.
- Comply with any regulatory or contract required permitting and notification processes. For example, in California, a Cal-OSHA excavation permit and notification is required. Clients may classify excavations and trenches as permitted confined spaces, in these cases, DCN 2-5 Confines Space Entry shall be followed. These requirements shall be outlined in the site specific Health and Safety Plan

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- When subsidence or tension cracks are apparent anywhere in an excavation, all work should be stopped until the problem is corrected.

- The competent person must inspect trenches or excavations after any precipitation event to ensure integrity has been maintained.

- If trenches or excavations are near walkways or roadways, guards or warning barriers must be placed to alert pedestrians and drivers of the presence of the trench or excavation.

- If possible, trenches or excavations should be covered or filled in when unattended. Otherwise, strong barriers must be placed around the trench or excavation and lighting must be provided at night if the trench or excavation is near a walkway or roadway.

- When a hazardous atmosphere could exist, the excavation must be tested for appropriate hazardous substances and oxygen level before personnel entry. Excavation where hazardous atmospheres exist must be treated as a confined space. Entry must follow procedures outlined in "Confined Spaced Entry Program," Document Control No. 2 5.

- Entry is not allowed into excavations where water has accumulated.

5.4 Hazardous Atmospheres

Where atmospheres containing less than 19.5 percent oxygen or other types of hazardous atmospheres may exist the following requirements shall be implemented.

- Atmospheric testing shall be done prior to employees entering excavations 4 feet or greater in depth.

- Testing methods shall be listed on the daily inspection checklist and results documented daily in field logs.

- Control measures such as ventilation and personal protective equipment (PPE) shall be used to control employee exposure to hazardous atmospheres below published exposure limits.

- Ventilation shall be used to control flammable and combustible vapors to below 10 percent of their lower explosive limit.

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- Testing shall be repeated as often as necessary to ensure safe levels of airborne contaminants.
- Emergency equipment shall be provided and attended when the potential for a hazardous atmosphere exists. This equipment shall include but not be limited to emergency breathing apparatus, harnesses, lifelines, and basket stretchers. Required equipment will be listed on the daily inspection checklist and reviewed daily.

5.5 Protection From Water Hazards

When water has collected or is collected in excavations and trenches the following requirements shall be applied.

- Employees shall not work in excavations in which water has, or is, accumulating without the use of additional protection such as special support systems or water removal.
- Water removal shall be monitored by a competent person.
- Barriers such as ditches and dikes shall be used to divert runoff from excavations and trenches.
- Trenches shall be re-inspected prior to re-entry after water accumulation due to heavy rainfall or seepage.

5.6 Stability of Adjacent Structures

When excavating or trenching near an adjacent structure the following practices shall be implemented.

- Support systems such as shoring, bracing, or underpinning shall be provided where the stability of buildings, walls, or other structures is endangered by excavation.
- Excavation bases or footings of foundations shall be prohibited unless support systems are used, the excavation is in stable rock, a professional engineer has determined the structure is sufficiently removed from the site as to not pose a hazard, or the PE determines that the excavation shall not pose a hazard to employees due to the structure.

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- Support systems shall be used when it is necessary to undermine sidewalks, pavements, and appurtenant structures.
- Surcharge load sources and adjacent encumbrances shall be listed with their evaluation date on the daily inspection checklist.

5.7 Daily Inspections

Inspections shall be performed daily on all excavations, adjacent areas, and protective systems before personnel enter the trench. The checklist provided in Attachment A or equivalent shall be used.

5.8 Soil Classification

To perform soil classification, the competent person shall use a thumb test, pocket penetrometer, or shear vane to determine the unconfined compressive strength of the soils being excavated. In soils with properties that change (i.e., one soil type mixed with another within a given area) several tests may be necessary. When different soil types are present the overall classification shall be that of the type with the lowest unconfined compressive strength. Classifications shall result in a soil rating of Stable Rock, Type A, Type B, or Type C in accordance with 29 CFR 1926.652, Appendix A. Soil classifications shall be listed on the daily inspection checklist. The soils analysis checklist provided in Attachment B or equivalent shall be used for soil classifications.

5.9 Sloping and Benching

All sloping and benching shall be done in accordance with 29 CFR 1926.652, Appendix B. Selection of the sloping method and evaluation of surface surcharge loads shall be made by a competent person familiar with the requirements contained therein. Sloping and benching methods and specifications shall be listed on the daily inspection checklist.

5.10 Protective Systems

Protective systems are required on all excavations over 5 feet in depth or in excavations less than 5 feet when examination of the ground by a competent person reveals conditions that may result in cave-ins.

Selection and installation of protective systems shall be done in accordance with 29 CFR 1926.652, Appendices C & D, or manufacturers data for shoring and shielding systems. Selection of a protective system shall be made based upon soil classification and job requirements by a competent person.

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Protective systems and specifications shall be listed on the daily inspection checklist.

5.11 Training

Competent persons shall have an adequate combination of experience and training to classify soil types and select protective systems as outlined in 29 CFR 1926.652. Training and experience pertaining to qualification as a competent person shall be documented and include the following:

- General safety practices related to working in or near open excavations;
- Inspection requirements and techniques;
- Classification of soils in accordance with 29 CFR 1926.652, Appendix A; and
- Uses, limitations, and specifications of protective systems in accordance with 29 CFR 1926.652.

Training records shall be maintained in accordance with DCN 1-4 Recordkeeping and Reporting Requirements..

6.0 REFERENCES

29 CFR 1926, Subpart P, Excavations. Environmental, Health & Safety - Programs Procedure EHS 1-9, Recordkeeping OSHA (U.S. Department of Labor, Occupational Safety and Health Administration),

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	TETRA TECH INC. EXCAVATION AND TRENCHING	Revision Date: 10/01/2011 Document Control Number: DCN 4-5 Page 10 of 16

DAILY EXCAVATION INSPECTION CHECKLIST To be completed by a "Competent Person"

Indicate for each item by circling: Y (Yes), N (No), - Address in Comments, Not Applicable (N/A.)

I. General Inspection of Job Site

A. Surface encumbrances removed or supported Y N N/A
B. Employees protected from loose rock or soil that could pose a hazard by falling or rolling into the excavation Y N N/A
C. Hard hats worn by all employees Y N N/A
D. Spoils, materials, and equipment set back at least 2 feet from the edge of the excavation Y N N/A
E. Barriers provided at all remotely located excavations, wells, pits, shafts, etc. Y N N/A
F. Walkways and bridges over excavations 4 feet or more in depth are equipped with standard guardrails Y N N/A
G. Warning vests or other highly visible clothing provided and worn by all employees exposed to public vehicular traffic Y N N/A
H. Warning system established and utilized when mobile equipment is operated near the edge of the excavation Y N N/A
I. Employees prohibited from working on the faces of sloped or benched excavations above other employees Y N N/A

II. Utilities

A. Utility companies contacted and/or utilities located Y N N/A
B. Exact location of utilities marked when approaching the utilities Y N N/A
C. Underground installations protected, supported or removed when excavation is open Y N N/A

III. Means of Access and Egress

A. Lateral travel to means of egress no greater than 25 feet in excavations 4 feet or more in depth Y N N/A
B. Ladders used in excavations secured and extended 3 feet above the edge of the trench Y N N/A
C. Structural ramps used by employees designed by a competent person Y N N/A
D. Structural ramps used for equipment designed by a registered professional engineer (RPE) Y N N/A
E. Ramps constructed of materials of uniform thickness, cleated together on the bottom, equipped with a no-slip surface Y N N/A
F. Employees protected from cave-ins when entering or exiting the excavation Y N N/A

IV. Wet Conditions

A. Precautions taken to protect employees from the accumulation of water Y N N/A

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B. Water removal equipment monitored by a competent person Y N N/A
C. Surface water or runoff diverted or controlled to prevent accumulation in the excavation Y N N/A
D. Inspections made after every rainstorm or other hazard increasing occurrence Y N N/A

V. Hazardous Atmospheres

A. Atmosphere within the excavation tested where there is a reasonable possibility of an oxygen deficiency, combustible or other harmful contaminant exposing employees to a hazard Y N N/A
B. Ventilation Y N N/A
C. Testing conducted often to ensure that the atmosphere remains safe Y N N/A
D. Emergency equipment, such as breathing apparatus, safety harness and line, and basket stretcher readily available where hazardous atmospheres could or do exist Y N N/A
E. Safety harness and life line used and individually attended when entering deep confined excavations Y N N/A

VI. Support Systems

A. Materials and/or equipment for support systems selected based on soil analysis, trench depth and expected loads Y N N/A
B. Materials and equipment used for protective systems inspected and in good condition Y N N/A
C. Materials and equipment not in good condition have been removed from service Y N N/A
D. Damaged materials and equipment used for protective systems inspected by a RPE after repairs and before being placed back into service Y N N/A
E. Protective systems installed without exposing employees to the hazards of cave-ins, collapses or from being struck by materials or equipment Y N N/A
F. Members of support system securely fastened to prevent failure Y N N/A
G. Support systems provided to insure stability of adjacent structures, buildings, roadways, sidewalks, walls, etc. Y N N/A
H. Excavations below the level of the base or footing approved by an RPE Y N N/A
I. Removal of support systems progresses from the bottom and members are released slowly as to note any indication of possible failure Y N N/A
J. Backfilling progresses with removal of support system Y N N/A
K. Excavation of material to a level no greater than 2 feet below the bottom of the support system and only if the system is designed to support the loads calculated for the full depth Y N N/A
L. Shield system placed to prevent lateral movement Y N N/A
M. Employees are prohibited from remaining in shield system during vertical movement Y N N/A

VII. Comments

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Site location

Date Time Competent Person

Soil Type(s)

Soil Classification(s)
Excavation depth
Excavation width

Type of protective system used

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SOILS ANALYSIS CHECKLIST

This checklist must be completed when soil analysis is made to determine the soil type(s) present in the excavation. A separate analysis must be performed on each layer of soil in excavation walls. A separate analysis must also be performed if the excavation (trench) is stretched over a distance where soil type may change.

Site location:

Date:

Time:

Competent Person

Where was the sample taken from?

Excavation:

Depth:

Width:

Length:

VISUAL TEST

Particle type: Fine Grained (cohesive) Course grained (sand or gravel)

Water conditions: Wet Dry Surface water present Submerged

Previously disturbed soils? Yes No

Underground utilities? Yes No

Layered soils? Yes No

Layered soil dipping into excavation? Yes No

Excavation exposed to vibrations: Yes No

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Crack-like openings or spallings observed? Yes No
Conditions that may create hazardous atmosphere? Yes No

If yes, identify condition and source:

Surface encumbrances: Yes No

Work to be performed near public vehicular traffic? Yes No

Possible confined space exposure? Yes No

MANUAL TEST

Plasticity: Cohesive Non-cohesive

Dry Strength: Granular (crumbles easily) Cohesive (broken with difficulty)

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NOTE: The following unconfined compressive strength tests should be performed on undisturbed soils.

THUMB TEST (used to estimate unconfined compressive strength of cohesive soil)
Test performed: Yes No

Type A (soil indented by thumb with very great effort)

Type B (soil indented by thumb with some effort)

Type C (soil easily penetrated several inches by thumb with little or no effort).If soil is submerged, seeping water, subjected to surface water, runoff, exposed to wetting.

PENETROMETER OR SHEARVANE (used to estimate unconfined compressive strength of cohesive soils)
Test performed: Yes No

Type A (soil with unconfined compressive strength of 1.5 tsf or greater)

Type B (soil with unconfined compressive strength of 0.5 tsf to 1.5 tsf)

Type C (soil with unconfined compressive strength of 1.5 tsf or less). If soil is submerged, seeping water, subjected to surface water, runoff, exposed to wetting.

WET SHAKING TEST (used to determined percentage of granular and cohesive materials). Compare results to soil textural classification chart to determine soil type. Test performed Yes No

Type A (clay, silty clay, sandy clay, clay loam, and in some cases silty clay, loam and sandy clay loam)
Type B [angular gravel (similar to crushed rock), silt, silt loam, sandy loam, and in some cases, silty clay loam and sandy clay loam
Type C(granular soil including gravel, sand and loamy sand)

% granular

% cohesive

% silt

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NOTE: Type A – no soil is Type "A" if soil is fissured; subject to vibration; previously disturbed; layered dipping into the excavation on a slope of 4H:1V.

SOIL CLASSIFICATION

Type A

Type B

Type C

SELECTION OF PROTECTIVE SYSTEM

Sloping, Specify angle:

Timber Shoring

Aluminum Hydraulic Shoring

NOTE: Although OSHA will accept the above tests in most cases, some states will not. Check your state safety requirements for trenching regulations.

Revision Date	Document Authorizer Name	Revision Details
10/1/2011	Chris McClain	Update

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	TETRA TECH, INC. SPILL AND DISCHARGE CONTROL PRACTICES	Revision Date: 10/1/2008 Document Control Number: SWP 5-14 Page 1 of 3

This safe work practice (SWP) provides contingency measures for spills and unintentional discharges from handling and transporting hazardous materials. Spill and discharge control practices should follow specific procedures to ensure the safety of responders and bystanders and to limit environmental impacts.

1.0 GENERAL PROCEDURES

Immediate action should be taken to control and contain any spill following the general guidelines below:

- Unnecessary personnel should be kept away from the spill or discharge.
- The hazardous area should be isolated.
- If the spill or discharge creates a hazardous situation or results in injury or an environmental release, the emergency procedures of the HASP should be implemented. Emergency response telephone numbers, designated contacts, and special reporting procedures are presented in the HASP.
- Personnel should stay on the upwind side of the spill or discharge.
- Entry into a confined space or low area where liquids or vapors may accumulate should be avoided.
- Sources of ignition should be eliminated if the spill or discharge involves combustible materials.
- Drains, manholes, waterways, sewers, and the like should be identified and covered or protected.
- The spill should be controlled or absorbed using appropriate media or devices.
- When the spill or discharge is fully contained and under control, spill or discharge material should be collected.
- Following cleanup, the spill area should be evaluated by collecting soil samples and screening the area with air monitoring instruments.

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2.0 SOLIDS

If the spill or discharge material is solid and nonreactive, the material should be scooped up and placed in a suitable and compatible container until the disposal method has been determined.

3.0 LIQUIDS

If liquid is discharged, the following general procedures apply:

- The point of discharge should be immediately identified and measures taken to eliminate further discharges by uprighting or patching containers, transferring contents, or other appropriate methods.
- Any discharged liquids or sludge should be removed or retrieved.
- Discharged materials should be cleaned up with absorbent materials or devices.
- Spent absorbent material should be placed into storage or disposal containers.

4.0 REPORTING

In some instances, a release may require reporting to government agencies. If a reportable quantity is released (this quantity is stated on the Material Safety Data Sheet) or human health or the environment is threatened, appropriate national, state, and local administering agency personnel should be notified. The timeframe for notification may vary from agency to agency. Notification may be required immediately or within 24 hours, depending on the type, location, and amount of released material. The appropriate agency to report spills to should be determined during HASP development.

All spills and chemical releases must be reported and investigated in accordance with DCN 2-2 Incident Reporting and Investigation Program. Details must be documented on the IR Form and IR – B.

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Revision Date	Document Authorizer	Revision Details
10/1/2008	Chris McClain	Update from 1998 format

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	TETRA TECH, INC. GENERAL SAFE WORK PRACTICE for HEAT STRESS PREVENTION and MONITORING	Revision Date: 10/1/2008 Document Control Number: SWP 5-15 Page 1 of 4

This safe work practice (SWP) describes situations where heat stress is likely to occur and provides procedures for the prevention and treatment of heat-related injuries and illnesses. Wearing personal protective equipment (PPE), especially during warm weather, puts employees at considerable risk of developing heat-related illness. Health effects from heat stress may range from transient heat fatigue or rashes to serious illness or death.

Many factors contribute to heat stress, including PPE, ambient temperature and humidity, workload, and the physical condition of the employee, as well as predisposing medical conditions. However, the primary factors are elevated ambient temperatures in combination with fluid loss. Because heat stress is one of the more common health concerns that may be encountered during field activities, employees must be familiar with the signs, symptoms, and various treatment methods of each form of heat stress. Heat stroke is the most serious heat-related illness—it is a threat to life and has a 20 percent mortality rate. Direct exposure to sun, poor air circulation, poor physical condition, and advanced age directly affect the tendency to heat stroke. Table 1 lists the most serious heat conditions, their causes, signs and symptoms, and treatment.

Training is an important component of heat stress prevention. Employees are instructed to recognize and treat heat-related illnesses during 8-hour health and safety refresher and first aid training courses. When working in hot environments, specific steps should be taken to lessen the chances of heat-related illnesses. These include the following:

- Ensuring that all employees drink plenty of fluids (Gatorade® or its equivalent)
- Ensuring that frequent breaks are scheduled so overheating does not occur
- Revising work schedules, when necessary, to take advantage of the cooler parts of the day (such as working from 5:00 a.m. to 11:00 a.m. and 6:00 p.m. to nightfall).

When PPE must be worn (especially Levels A and B), suggested guidelines relating to ambient temperature and maximum wearing time per excursion are as shown in Table 2.

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TABLE 1
HEAT STRESS CONDITIONS

Condition	Causes	Signs and Symptoms	Treatment
Heat cramps	Fluid loss and electrolyte imbalance from dehydration	• Painful muscle cramps, especially in legs and abdomen • Faintness • Profuse perspiration	• Move affected worker to cool location • Provide sips of liquid such as Gatorade® • Stretch cramped muscles • Transport affected worker to hospital if condition worsens
Heat Exhaustion	Blood transport to skin to dissipate excessive body heat, resulting in blood pooling in the skin with inadequate return to the heart	• Weak pulse • Rapid and shallow breathing • General weakness • Pale, clammy skin • Profuse perspiration • Dizziness • Unconsciousness	• Move affected worker to cool area • Remove as much clothing as possible • Provide sips of cool liquid or Gatorade® (only if conscious) • Fan the person but do not overcool or chill • Treat for shock • Transport to hospital if condition worsens
Heat Stroke	Life threatening condition from profound disturbance of body's heat-regulating mechanism	• Dry, hot, and flushed skin • Constricted pupils • Early loss of consciousness • Rapid pulse • Deep breathing at first, and then shallow breathing • Muscle twitching leading to convulsions • Body temperature reaching 105 or 106 °F or higher	• Immediately transport victim to medical facility • Move victim to cool area • Remove as much clothing as possible • Reduce body heat promptly by dousing with water or wrapping in wet cloth • Place ice packs under arms, around neck, at ankles, and wherever blood vessels are close to skin surface • Protect patient during convulsions

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TABLE 2
SUGGESTED GUIDELINES WHEN WEARING PPE

Ambient Temperature	Maximum PPE Wearing Time per Excursion
Above 90 °F	15 minutes
85 to 90 °F	30 minutes
80 to 85 °F	60 minutes
70 to 80 °F	90 minutes
60 to 70 °F	120 minutes
50 to 60 °F	180 minutes

Source: National Institute for Occupational Safety and Health (NIOSH). 1985. Memorandum Regarding Recommended Personal Protective Equipment Wearing Times at Different Temperatures. From Austin Henschel. To Sheldon Rabinovitz. June 20.

To monitor the level of an employee's heat stress, the following should be measured:

- Heart Rate: Count the radial (wrist) pulse during a 30-second period as early as possible in the rest period; if heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third and keep the rest period the same.

  If the heart rate still exceeds 110 beats per minute at the next period, shorten the following work cycle by one-third.

- Oral Temperature: Use a clinical thermometer (3 minutes under the tongue) to measure the oral temperature at the end of the work period. If oral temperature exceeds 99.6 °F (37.6 °C), shorten the next work cycle by one-third without changing the rest period. If oral temperature still exceeds 99.6 °F at the beginning of the next rest period, shorten the following work cycle by one-third. Do not permit a worker to wear impermeable PPE when his or her oral temperature exceeds 100.6 °F (38.1 °C).

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	TETRA TECH, INC. GENERAL SAFE WORK PRACTICE for HEAT STRESS PREVENTION and MONITORING	Revision Date: 10/1/2008 Document Control Number: SWP 5-15 Page 4 of 4

Revision Date	Document Authorizer		Revision Details
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10/1/2008	Chris McClain		Update from 1998 format
	Rick Lemmon		

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	TETRA TECH, INC. BIOHAZARD SAFETY	Revision Date: 10/1/2008 Document Control Number: SWP 5-17 Page 1 of 7

Biological hazards, or "biohazards," include plants, animals or their products, and parasitic or infectious agents that may present potential risks to worker health. This safe work practice (SWP) discusses procedures for working with biohazards, preventive guidelines, and first-aid procedures for the most common hazards field staff are likely to encounter. This SWP does not address biohazards such as those associated with medical waste. Procedures for working with this type of biohazard should be addressed in the site-specific health and safety plan (HASP), construction health and safety plan (C-HASP), job safety analyses (JSAs), activity hazard analyses (AHAs), or other health and safety project planning documents on a case-by-case basis.

During preparation for site work, the document preparer should consider which plants, animals, and other biological agents may be encountered; assess their potential risk to project personnel; and attach this SWP to the document if necessary. Office health and safety representatives should become familiar with biological hazards indigenous to the geographical area in which most of their office personnel work and assist in evaluating the risks to personnel on projects staffed from their offices. SWPs for insects, snakes, animals, plants, waterborne pathogens (giardia), and hantavirus are provided below.

1.0 INSECTS

SWPs for reducing the chance of insect bites or stings and for treating bites or stings are listed below.

- Workers should keep as much skin area covered as possible by wearing long-sleeved shirts, long pants, and a hat. Pant legs should be tucked into socks or boots and shirts into pants. In addition, workers should wear light colored clothing.
- A proven insect repellent should be used on bare skin and clothing.
- When possible, tall grasses and brush that could harbor ticks should be avoided.
- Several times during the day and at the end of the work day, each worker should perform a check for evidence of imbedded ticks or previous bites. Particular attention should be paid to the scalp, neck, ankles, back of the legs, and waist.

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- When opening well covers, vaults, or other closed items, workers should watch for hornet or wasp nests and black widow or brown recluse spiders. Workers should never reach into spaces with unprotected arms.
- Workers should watch carefully for bees around open soft drinks or food.
- If a worker is stung by a bee, the stinger should be carefully removed, if present. The wound should be washed and a cold pack applied. Allergic reaction should be watched for and is evidenced by extreme swelling, redness, pain, or difficulty breathing.
- If a worker is stung or bit by a spider or scorpion, medical attention should be obtained immediately.

2.0 SNAKES

SWPs for encounters with snakes and for treating snakebites are listed below.

- Workers should avoid walking in areas known to harbor snakes. Workers should be cautious when picking up or moving items that have been on the ground.
- Workers should wear boots made of heavy material that protect the ankles and pants. Heavy work gloves should be worn for picking up items.
- If one snake is encountered, others may be present. Workers should leave the area by retracing their steps.
- If a worker is bitten, the wound should be washed and the injured area immobilized and kept lower than the heart, if possible. Ice or a tourniquet should not be applied to a snake bite. The wound should not be cut. If medical care is more than 30 minutes away from a work site, a snakebite kit should be available on site and workers should know how to use it.

3.0 ANIMALS

SWPs for encounters with animals and for treating associated wounds are listed below.

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- If workers encounter a wild animal, the animal should be observed for unusual behavior such as a nocturnal animal out during the day, drooling, an appearance of partial paralysis, irritability, meanness, or a strangely quiet demeanor.
- Workers should never touch the body of a dead animal because certain diseases could be carried by fleas still on the body.
- Workers should avoid animal droppings (including bird droppings). Pathogens, some of which can become airborne, may still be present in the droppings.
- If a worker is bitten, he or she should get away from the animal to avoid further bites. Workers should not try to stop, hold, or catch the animal.
- If the wound is minor, it should be washed with soap and water. Any bleeding should then be controlled, and an antibiotic ointment and dressing should be applied. All animal bite wounds should be watched for signs of infection.
- If the wound is bleeding seriously, the bleeding should be controlled but the wound should not be cleaned. Medical assistance should be summoned immediately.
- If a rabid animal is suspected, immediate medical attention should be summoned. If possible, workers should try to remember what the rabid animal looked like and the area in which it was last seen. The animal should be reported by calling the local emergency number.

4.0 PLANTS

SWPs for plants are as follows:

- Workers should be aware of the types and appearances of poisonous plants in the work site area. Poison ivy, oak, and sumac are the most frequently encountered plants that can cause reaction from casual contact. If a worker is extremely sensitive to these plants, he or she should avoid the area entirely because airborne drift could be sufficient to cause a reaction. Other plants, such as fireweed, can cause painful, short-term irritation and should be avoided as well. Workers should avoid touching face and eye areas after contact with any suspicious plant.

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- Workers should wear proper clothing if working in or near overgrown areas. Disposable outerwear should be used, if necessary, and workers should not touch the material with bare hands during removal if the outerwear may have contacted poisonous plants.

- If contact with a poisonous plant has occurred, the affected area should be immediately washed thoroughly with soap and water. If a rash or weeping sore has already begun to develop, a paste of baking soda and water should be applied to the area several times a day to reduce discomfort. Lotions such as Calamine or Caladryl should be applied to help soothe the area. If the condition gets worse and affects large areas of the body or the face, a doctor should be consulted.

- Bushy and wooded areas should be thoroughly checked for thorn-bearing trees, brush, and bramble. In some cases, impalement can cause severe pain or infection.

5.0 WATERBORNE PATHOGENS-GIARDIA

Giardia is a waterborne pathogen consisting of a protoplasmic parasite of the mammalian digestive tract. Giardia is present worldwide, with the highest occurrence in areas with poor sanitation. In the United States, most reported cases are in mountainous regions where drinking water is obtained from streams and is unfiltered or untreated.

Giardia is contracted by ingesting water contaminated with giardia cysts in the dormant state. Giardia parasites can only thrive in the digestive tracts of mammals. Dormant giardia organisms enter water through the feces of infected animals or humans. Giardia symptoms include severe diarrhea and upset stomach. Some people are asymptomatic but can transmit the disease to others. Medical treatment of giardia can be difficult and unpleasant; therefore, prevention is critical. Precautions for preventing exposure to giardia are listed below.

- Workers should assume that all fresh water streams are infected with the giardia organism and not drink any untreated water.

- Team members collecting sediment and water samples from streams should wash their hands thoroughly with soap and water after collecting the samples.

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- Giardia parasites are relatively easy to destroy or filter. Water should be treated for drinking or cooking with iodine or another recommended giardia treatment before use.

6.0 HANTAVIRUS

Hantavirus pulmonary syndrome (HPS) is a potentially fatal infection caused by a rodent-borne hantavirus. HPS begins with a brief illness most commonly characterized by fever, muscle pain, headache, coughing, and nausea or vomiting. Other early symptoms include chills, diarrhea, shortness of breath, abdominal pain, and dizziness. In the first identified cases of HPS, this stage of the infection lasted 2 to 5 days before victims were hospitalized. Typically, by the time of hospitalization, victims were found to have tachycardia (a heart rate of greater than 100 beats per minute) and tachypnea (a breathing rate of greater than 20 breaths per minute). Fever was also common. In most cases, death occurred within 2 to 16 days of the onset of symptoms, and victims exhibited pulmonary edema and severe hypotension.

Currently, experts believe that HPS is spread by the deer mouse (*Peromyscus maniculatus*). Though the deer mouse has been found to be the primary host of hantavirus, several other rodent species have also tested positive for the virus. Pinon mice (*Peromyscus truei*), brush mice (*Peromyscus boylii*), and western chipmunks (*Tamia spp.*) are also likely to carry the virus. Also, cases of HPS have been reported in areas of the United States where these particular rodents are not indigenous.

Infected rodents shed the virus in their urine, feces, and saliva. Humans can be exposed to the virus through (1) inhalation of suspended rodent excreta or dust particles containing rodent excreta, (2) introduction of rodent excreta into the eyes or broken skin, and (3) ingestion of food or water contaminated by rodent excreta. HPS has a reported mortality rate of 55 percent. Transmission of hantavirus from infected individuals to healthy persons has not been documented.

Prevention of HPS infection is essential because no known antidote and no specific treatment exists for treating HPS. Therefore, employees should practice risk reduction and control measures. Guidelines for workers in locations that may have rodent infestations or habitats are listed below.

- The best approach for HPS control and prevention is through environmental hygiene practices that deter rodents from colonizing the work environment.

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- Information about the symptoms of HPS and detailed guidance on preventive measures should be provided to all employees assigned to field activities.

- Medical attention should be sought immediately for workers who develop a febrile or respiratory illness within 45 days of the last potential exposure to rodents. Attending physicians should be advised of each worker's potential for occupational exposure to hantavirus. Physicians should contact local health authorities promptly if hantavirus-associated illness is suspected. A blood sample should be obtained from the affected worker and forwarded with the baseline serum sample through the state health department to the Centers for Disease Control and Prevention for hantavirus antibody testing.

- Respiratory protective equipment should be worn when handling rodents, when removing rodents from traps, and when working in areas with evidence of rodent droppings or hair. Respiratory protective equipment should include, at a minimum, a half-face air-purifying respirator (APR) or powered APR equipped with a high-efficiency particulate air (HEPA) filter (P100). Full-face regulators may be needed under some circumstances. Respiratory protective equipment should be used in accordance with Occupational Safety and Health Administration regulations.

- Dermal protection should be worn when handling rodents or traps containing rodents, or if contact with contaminated surfaces could occur. Dermal protection should include rubber or plastic gloves that should be washed and disinfected before removal.

- A trap contaminated with rodent urine or feces or in which a rodent was captured should be disinfected with a commercial disinfectant or a 0.4 percent bleach solution. A dead rodent should be disposed of by placing the carcass in a plastic bag containing enough general-purpose household disinfectant to thoroughly wet the carcass. The bag should be sealed and disposed of by burning or by burying it in a 2- to 3-foot-deep hole. Local and state health departments can also provide appropriate disposal methods.

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	TETRA TECH, INC. SAFE LIFTING and CARRYING PRACTICES	Revision Date: 10/1/2008 Document Control Number: 5-19 Page 1 of 2

To prevent injuries and adverse health effects, the following general safe work practices (SWP) are to be followed when lifting and carrying while in an office or field environment. These SWPs establish a pattern of general precautions and measures for reducing risks associated with back injury and trauma associated with improper lifting and carrying of heavy objects. This list is not inclusive and may be amended as necessary.

- First, inspect the area where the load will be lifted, transported, and then deposited. Remove any obstacles that could present a tripping or other hazard.
- Perform a "test lift" by slightly pushing or moving the object to gauge your ability to safely lift/move/deposit the item without injuring yourself. IF YOU ARE NOT CONFIDENT THAT YOU CAN MOVE THE OBJECT WITHOUT INJYURING YOURSELF - THEN EITHER GET A MECHANICAL LIFTING AID OR GET HELP. DO NOT ATTEMPT TO MOVE THE OBJECT YOURSELF.
- Get as close to the object as you can, and bend at the knees (not at the back).
- Assure that can get a firm grasp on the object.
- Keeping the load as close to you body as possible, lift with your legs, and avoid turning or twisting while lifting, carrying, or depositing the load.
- Carry the object in a manner that it does not obstruct your vision and so that you can maintain a clear line of sight of your path of travel and the area where you will set it down.
- Set the object down using the same techniques as you did in lifting it (don't turn or twist, keep it close to your body, use your legs - not your back).

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Revision Date	Document Authorizer	Revision Details
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	TETRA TECH, INC. PREVENTION of SUN EXPOSURE	Revision Date: 10/1/2008 Document Control Number: SWP 5-26 Page 1 of 2

By far, the most common cause of skin cancer is overexposure to the sun. Ninety percent of all skin cancers occur on parts of the body that not usually covered by clothing. People who sunburn easily, and those with fair skin and red or blond hair are more prone to develop skin cancer. The amount of time spent in the sun also affects a person's risk of skin cancer. Premature aging of the skin also occurs with prolonged sun exposure. Tetra Tech encourages personnel to avoid prolonged exposure to the sun, and recommends the following:

- Sunburn can occur during any time of the year. To avoid sunburn, wear hats with wide brims.
- Use sunscreen with a Sun Protective Factor (SPF) rating of 15 or higher.
- To prevent skin cancer:
  - Cover up with a wide brimmed hat and a bandanna for your neck. Wear long-sleeved shirts and pants which the sun cannot penetrate.
  - Use sunscreens to help prevent skin cancer as well as premature aging of your skin. Use a Sun Protective Factor (SPF) rating of 15 or higher.
  - Apply sunscreen at least an hour before going into the sun and again after swimming or perspiring a lot.
  - Do not use indoor sun lamps, tanning salons/parlors, or tanning pills.
- You can still get burned on a cloudy day. Try to stay out of the direct sun at midday, because sun rays are their strongest between 10 a.m. and 3 p.m. Beware of high altitudes - where there is less atmosphere to filter out the ultraviolet rays. Skiers should remember that snow reflects the sun's rays, too.
- Know your skin. Whatever your skin type, do a monthly self-examination of your skin to note any moles, blemishes or birthmarks. Check them once a month and if you notice any changes in size, shape or color, or if a sore does not heal, see your physician without delay.

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10/1/2008	Chris McClain		NEW
	Rick Lemmon		

	TETRA TECH, INC. PREVENTION of SUN EXPOSURE	Revision Date: 10/1/2008 Document Control Number: SWP 5-26 Page 2 of 2

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	TETRA TECH, INC. UNDERGROUND UTILITIES	Revision Date: 10/01/2011 Document Control Number: SWP 5-35 Page 1 of 23

1.0 PURPOSE

This program provides requirements for identification, location, and avoidance of underground utilities, appurtenances, and structures during intrusive activities. The program also addresses actions to be taken in response to encountering or contacting underground utilities.

2.0 SCOPE

These requirements are applicable to all Tetra Tech operations. The procedures address the requirements and recommendations for identifying and locating, working around, and encountering or contacting underground utilities.

3.0 MAINTENANCE

The Vice President, Corporate Health and Safety or designee is responsible for updating this procedure. Approval authority rests with Tetra Tech's Senior Vice President, Corporate Administration. Suggestions for revision shall be submitted to Corporate Administration department.

4.0 DEFINITIONS

4.1 Aggressive Methods

The use of mechanized equipment such as excavators, backhoes, drill rigs, directional drilling, road saws, etc. Non-Aggressive methods involve the use of manual or non-mechanized methods such as hand-digging with shovels and air/hydro/vacuum methods.

4.2 Buffer Zone

As defined in this procedure, the area around a utility where only non-aggressive excavation methods may be utilized, unless specific conditions are met.

The definition cited above, and the excavation requirements and restrictions associated with it, will vary depending on the particular state regulations. Tetra Tech requires the imposition of a four-foot

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Buffer Zone on all sides of the utility as measured from the outside edges of the utility, both horizontally and vertically. Since most jurisdictions recognize Buffer Zones which vary somewhere in the range of 18 to 36 inches, this distance must be verified by consulting the applicable state regulations before excavating so that adjustments to surface markings can be made to achieve the required four-foot buffer zone.

Referred to as the "Tolerance Zone", "Safety Zone", or "Approximate Location of Underground Utilities" in some jurisdictions.

Information relative to excavation within the buffer zone is contained in Section 5.2.2.4.

4.3 Competent Person

A Competent Person has the ability to recognize hazards associated with underground utilities and the authority to stop or direct operations to ensure the safety of personnel and conformance with this procedure. The Competent Person has an understanding of this procedure, and the "One-Call" system requirements for the jurisdiction where excavation is occurring. The Competent Person must be capable of notifying One-Call agencies and maintaining and tracking One-Call Locate Numbers. Additionally, they must have knowledge of methods and work practices for utility identification, avoidance, and protection.

4.4 De-Energize

As applicable to a utility, to physically eliminate and/or prevent the presence, transmission, flow, or release of energy or materials which may cause harm to personnel or property.

4.5 Excavation

An operation for the purpose of movement or removal of earth, rock, or the materials in the ground, including but not limited to; digging, blasting, auguring, backfilling, test boring, drilling, pile driving, directional drilling, grading, plowing-in, hammering, pulling-in, jacking-in, trenching, tunneling, structural demolition, milling, scraping, tree and root removal (grubbing), fence or sign post installation. Tetra Tech requires that the designated One-Call agency for the applicable jurisdiction be contacted any time an intrusive activity is planned.

4.6 Jurisdiction

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The authority having legal jurisdiction relative to regulations and requirements for notification of excavation activities and associated identification and marking. In the United States, the states have jurisdiction, and most consider the regulations applicable when excavation is to be performed in any location, including any public or private way, any company right-of-way or easement, or any public or privately owned land or way.

4.7 Locate

To indicate the existence of a utility by establishing a mark through the use of flags, pins, stakes, paint, or some other customary manner, that approximately determines the location of a line or facility.

4.8 Locate Request

A communication between an entity performing intrusive activities and a utility marking agency (One-Call, etc.).

4.9 Observer

The person assigned to visually monitor and, as needed, signal the operator during mechanized intrusive activity when the activity is occurring within four feet of the outside edge of the buffer zone. This person remains in close communication with the equipment operator(s) and will stop the activity if needed.

4.10 One-Call Agency

An entity that administers a system through which a person can notify owners/operators of underground lines or utilities of the intent to perform intrusive activities in proposed public areas.

4.11 Positive Response

Communication with the entity performing intrusive activities, prior to the activity, to ensure that all contacted (typically via the One-Call agency) owner/operators have located and marked the underground utilities.

4.12 Potholing

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The practice of exposing an underground facility by safe, non-aggressive excavation methods in order to ascertain the precise horizontal and vertical position and orientation of underground lines or utilities.

4.13 Underground Utility

An underground or submerged conductor, pipe, or structure used in providing electric or communications service (including but not limited to, traffic control loops and similar underground or submerged devices), or an underground or submerged pipe used in carrying, providing, or gathering gas, oil or oil product, sewage, storm drainage, water or other liquid service (including, but not limited to, irrigation systems), and appurtenances thereto. As used in this procedure, utility includes all underground appurtenances and structures.

The following are examples of the types of underground utilities that may be present in a given location:

- Natural gas pipelines
- High voltage electric cables
- Water pipelines
- Fiber optic telecommunications lines
- Steam pipelines
- Gasoline, oil, or other fuels
- Sewer pipelines
- Hazardous Materials
- Underground Storage Tanks (USTs)
- Abandoned underground structures containing hazardous materials, hazardous wastes, and radioactive materials

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Note: Electrical and pressurized mechanical underground utilities that are not energized shall be considered as applicable to the requirements of this procedure until they are disconnected and removed or protected by a lockout/tagout system approved by Tetra Tech (see Section 5.2.2.6)

4.14 Underground Utility Owner

Any person, utility, municipality, authority, political subdivision or other person or entity who owns, operates, or controls the operation of an underground line/facility.

4.15 White Lining

The practice whereby the entity which intends to perform intrusive activities pre-marks the site with an outline of the area where intrusive activities will occur. This involves the use of white paint, flags, stakes, or a combination thereof to mark the extent of where work is to be performed. The marking may vary depending on what intrusive activities are to be conducted. For example, for general excavation, an area outline of the excavation shall be marked, while for drilling, the individual boreholes shall be marked. Studies have shown that pre-marking is a practice that does prevent utility contact incidents.

5.0 DISCUSSION

5.1 Responsibilities

5.1.1 Competent Person

The Competent Person shall be responsible for:

- Obtaining a copy of, and understanding the applicable regulations for the state of jurisdiction where the excavation activities are to be performed.
- Contacting the appropriate One-Call agency or private locating service, as applicable.
- Recording One-Call locate numbers.
- If necessary, renewing One-Call locate numbers before expiration.
- Ensuring that white-lining of the area to be excavated is performed.

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- Ensuring that a "positive response" has been received from every utility owner/operator identified by the One-Call agency and that they have located their underground utilities and have appropriately marked any potential conflicts with the areas of planned intrusive activities.
- Completion of the Ground Disturbance Permit (Excavation/Utility Locates) or equivalent.
- Reviewing applicable AHAs or other client specific requirements with all project members before work begins.
- Conducting training on communication protocols to be used by the excavation observer and equipment operator.
- Ensuring Implementation of appropriate work practices during intrusive activities (including maintaining the prescribed buffer zone for use of aggressive methods).
- Conducting daily inspections of the excavation area to make sure that all markings are intact.
- Maintaining required records.
- Providing the Project Manager or Site Supervisor with all required documentation on a daily basis.

5.1.2 Observer

Whenever intrusive operations with mechanized equipment are being conducted within four feet of the outside edge of the buffer zone, horizontally and vertically, an observer must be assigned to monitor the activities. The observer is responsible for:

- Observing the operation to ensure that the operator stops operations if utilities are observed.
- Reviewing hand signals and other forms of communication with the operator.
- Properly signaling the operator.

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- Stopping the operation immediately if the observer's attention must be diverted even momentarily.
- Stopping the operation immediately if a hand signal or other directive is not followed. Operations will not resume until the observer and operator mutually agree that the reason(s) for not complying with the directive(s) are/is identified and fully corrected.
- Maintaining required records, such as logbook entries, or other, as requested by line management.

5.1.3 Line Management

The Project Manager (PM) shall be responsible for:

- Ensuring compliance with this procedure.
- Providing the necessary resources for compliance with this procedure.
- Designating Competent Personnel in consultation with the Site Safety Coordinator prior to the start of work.

5.1.4 Site Safety Coordinator

The Site Safety Coordinator (SSC) shall be responsible for:

- Providing oversight on the implementation of the requirements contained in this procedure.
- Consulting with the PM and Competent Person on underground utility issues.

5.2 Procedure

The following sections provide the requirements and recommendations of this procedure, which are intended to prevent injury to personnel, damage to infrastructure, and associated indirect effects associated with encountering or contacting underground utilities during the execution of intrusive work. Underground utilities present multiple potential hazards that must be recognized before and during work which occurs near them, therefore, this procedure is divided into sections addressing underground utility identification and location, working around or near underground utilities, and actions to be taken in the event that underground utilities are encountered or

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contacted. Hazards that may be presented by underground utilities include explosion and fire, electrocution, toxic exposures, pathogens, and drowning.

5.2.1 Identifying and Locating Underground Utilities

The possibility of the existence of underground utilities must be evaluated as early as possible in the planning phase for any project which involves intrusive activities. The Project Safety Checklist or equivalent should be used for documentation of the identification of this potential hazard and the procedures to be followed to address them. The following sections describe various methods for identifying and locating utilities on a site. Plans should be verified during the readiness review. The Ground Disturbance Permit (Excavations/Utility Locate) or equivalent must be completed before any activities meeting the definition of excavation are conducted. This document is intended to be used as a guide during the process of locating and marking utilities in the area and in the overall process of underground utilities management during the course of the project.

All underground utilities on a site involving excavation, must be located and identified before intrusive activities commence, by one or more of the following entities:

- The Utility Owner
- A Private or Public Utility Locating Service
- An Approved Tetra Tech Competent Person

These options are described in greater detail in the following Sub-Sections:

5.2.1.1 Pre-Planning and the Site Specific Health and Safety Plan

The Site-Specific Health and Safety Plan developed for the project must:

- Identify the location and types of underground utilities that are believed to be present on the site.
- Reference this procedure and describe how it will be implemented on the project.
- Contain an Activity Hazard Analysis in which the hazards associated with underground utilities are identified, as well as the measures used to control them.

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- Contain, as an appendix, a copy of the applicable regulations from the state of jurisdiction where excavation activities are to be performed. These can usually be obtained via the Internet.
- Contain clear and concise procedures to be followed in the event that contact with underground utilities occurs.
- Address underground utilities and potential associated scenarios in the emergency response section.

5.2.1.2 "One-Call" Locating and Marking Services

Every state has utility marking service programs having various names such as "One-Call", "Dig-Safe", "Call-Before-You-Dig", "Dig-Safely", and many others. These services will identify the types and locations of any utility that may exist in an area to be excavated, as long as the property is in the public domain.

The appropriate One-Call service for the jurisdiction where the project is located must be contacted prior to beginning excavation work. The One-Call agency should be given as detailed a description of the property as possible; address, cross street, utility pole numbers, physical description, etc.

Notification to the One-Call service shall allow sufficient lead time for the agency to mark the utilities before excavation begins. The lead times vary, but range from two to ten days, depending on the state of jurisdiction.

A complete listing of One-Call agencies and telephone numbers for all states is available in the "Call-Before-You-Dig Call Center Directory", which can be accessed online.

Once notified, the One-Call agency will provide the contractor with a unique "locate number" or "reference number". This reference number must be kept in the project files by the Competent Person or designee. Additionally, the reference numbers have expiration dates, which may vary depending on the particular One-Call agency. The valid period of the locate number and required renew notification date shall be requested from the One-Call agency.

On a project with multiple contractors, each contractor must request a separate locate number. Under no circumstances will any other contractor or entity be allowed to work under our locate number. Subcontractors to Tetra Tech may excavate under the locate number secured by Tetra

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Tech, provided that they are excavating within the area which was previously white-lined by Tetra Tech and subsequently marked. However, the One-Call agency must be contacted and notified of this arrangement so that the subcontractor can be recorded as working under the existing locate number. If a Tetra Tech subcontractor will be excavating in an area not white-lined by Tetra Tech, then the Tetra Tech subcontractor must request a new locate.

The area where work is to be performed shall be white-lined by Tetra Tech personnel before the locating service goes to the site.

It is good practice to arrange a pre-excavation meeting at the project site with the personnel performing the utility location and marking. This meeting will facilitate communications, coordinate the marking with actual excavation, and assure identification of high-priority utilities.

The One-Call agency should provide the identities of the utility owners that will be notified of the locate request. This information shall be recorded on the Ground Disturbance Permit maintained in the project files. The contact person and phone number for each utility owner shall also be recorded.

The utility owners should provide a “positive response” relative to the locate request, which can consist of two types of action by the utility owner. The facility owner or operator is required to 1) mark it’s underground utilities with stakes, paint, or flags, or 2) notify the excavator that the utility owner/operator has no underground utilities in the area of the excavation.

The positive responses shall be recorded on the Ground Disturbance Permit and cross-checked with the list of utility owners that the One-Call agency stated that they would notify. If it is discovered that a utility owner has not provided a positive response, then the One-Call agency must be notified.

Excavation shall not be conducted until positive responses have been received from all utility owners identified by the One-Call agency as having underground utilities on the property.

Before beginning excavation, the excavator must verify that the location marked was correct, and the distinct, color-coded markings of all utility owners are present.

Examine the site to check for any visible signs of underground utilities that have not been located and marked such as pedestals, risers, meters, warning signs, manholes, pull boxes, valve boxes,

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patched asphalt or concrete pavement, areas of subsidence, fresh sod or grass, lack of grass or vegetation, and new trench lines.

The markings placed by the utility owners must be documented by Tetra Tech using a still, digital, or video camera. The photo-documentation shall be maintained with the project files indefinitely.

The markings placed by the utility owners or marking services shall follow the American Public Works Association Uniform Color Code as described in ANSI Standard Z 535.1. This code appears below.

American Public Works Association Uniform Color Code

Red - Electric Power Lines, Cables, Conduit

Orange - Communications, Telephone, Cable TV

Yellow - Gas, Oil, Steam, Petroleum or Gaseous Materials

Green - Sewers and Drains

Blue - Potable Water Systems

Purple - Reclaimed Water, Irrigation, Slurry Lines

Pink - Temporary Survey Markings

White - Proposed Excavation

5.2.1.3 Private Utility Locating and Marking Services

As discussed, One-Call agencies arrange for the identification and marking of underground utilities only on public property, up to the point of contact with private property. In the event that excavation activities are to be conducted on non-public properties, the presence, location, depth, and orientation of all underground utilities within the white-lined area shall be ascertained through records review, including any site plot plans, utility layout plans, and as-built drawings available from the property owner, as well as through interviews with knowledgeable personnel associated with the property. Additionally, the information gathered from these sources shall be verified by physical detection methods (non-aggressive), performance of a geophysical survey, or by procuring

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the services of a private utility locating and marking service. If any detection methods are to be self-performed, the requirements of 5.2.1.4 must be followed.

The above requirements are also intended to address the potential presence of unknown or undocumented underground utilities, therefore, the area to be excavated must also be evaluated by the PM to determine if the potential for unknown or undocumented underground utilities exist. If the determination is made that the presence of these unknown or undocumented underground utilities is unlikely, then a variance should be requested to eliminate the requirement to identify them.

Variance to this requirement above must be approved by the PM and SSC.

5.2.1.4 Self-Performance of Utility Locating and Marking

The techniques and instruments used to locate and characterize underground utilities can be extremely complicated and difficult to use effectively. Additionally, interpretation of the data generated by this instrumentation can be difficult. The utility marking services described in 5.2.1.1 and 5.2.1.2 are staffed by well-trained, experienced professionals who perform locating activities on a regular basis. For these reasons, it is most desirable that these professional services are used for utility location and marking on projects.

In some instances, such as long-term projects where excavation is a primary task, and the presence of underground utilities is extensive, it may be prudent to self-perform locating and marking activities.

If locating and marking is to be self-performed, all personnel using instrumentation will be trained on the use of the equipment that will be used, and the interpretation of the data.

There are a variety of locating methods which may be utilized for self-performance of utility locating as categorized below:

- Magnetic field-based locators or path tracers
- Buried electronic marker systems (EMS)
- Ground penetration radar-based buried –structure detectors
- Acoustics-based plastic pipe locators

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- Active probes or beacons for non-metallic pipes
- Magnetic polyethylene pipe

Before self-performing any underground utility locating on a project, approval must be obtained from the Operating Unit Health and Safety Manager.

5.2.2 Working Near or Around Underground Utilities

After the site has been properly evaluated for the presence of underground utilities, intrusive activities may begin. Since there is no perfect way of eliminating the hazards presented by underground utilities, an effort must be made to perform the tasks following the direction and guidance as described by the following best practices that should be implemented during the execution of the project.

5.2.2.1 Work Site Review

Before beginning intrusive activities, a meeting shall be held between all members of the project team. This shall consist of a review of the marked utility locations with the equipment operators, observers, laborers, etc.

5.2.2.2 Preservation of Marks

During excavation, efforts must be made to preserve the markings placed by the utility owners until they are no longer required. If any markings are obliterated, the One-Call agency must be contacted for re-marking. No intrusive activities are to take place if markings are not visible.

5.2.2.3 Excavation Observer

Whenever intrusive operations are being conducted within four feet of the edge of the buffer zone, an observer must be assigned to monitor the activities. The observer will be designated each day, and a review of hand signals and other forms of communication between the observer and operator will be conducted. The directives of the observer will be followed precisely and immediately by those operating equipment.

5.2.2.4 Excavation Within The Buffer Zone

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Performing intrusive activities within the buffer zone requires careful adherence to proper guidelines and procedures to minimize the risk of contact with underground utilities.

The purpose of the buffer zone is to designate and define an area where careful, prudent, and reasonable excavation practices are to be used to prevent contact with underground utilities. However, there may be occasions where it is necessary to perform aggressive excavation methods in this designated area.

The boundaries of the buffer zone as defined in Section 4.2 will be observed at all times during intrusive activities. Aggressive excavation methods (excavators, backhoes, drill rigs) must be restricted to areas outside of the 4-foot buffer zone unless a special exemption to this requirement is obtained.

Consider whether the objective of the project can be completed without performing intrusive activities in the buffer zone at all. This will greatly reduce the risks presented by performing work in close proximity to underground utilities. If after consideration, the determination is made that intrusive activities in the buffer zone are necessary, then a formal exemption request shall be made to the PESM according to the guidelines below.

A request to utilize aggressive excavation methods in the buffer zone may be made if:

There is no other appropriate and reasonable alternative to using aggressive methods in the buffer zone; and

- The utility has been de-energized (and purged if necessary), verified as de-energized, and locked-out (per Section 5.2.2.6); or
- the depth and orientation of the utility has been adequately and visually determined through the use of non-aggressive methods such as air/hydro/vacuum excavation, potholing, probing, hand-digging, or a combination thereof; and
- for utilities containing electrical energy, the depth of the existing water table is below the location of the utility; and
- application for the exemption has been submitted to the SSC; and
- the exemption has been granted and approved in writing by the SSC.

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The following conditions will apply to this request:

- Aggressive methods may be used in the buffer zone only to the extent allowed by the applicable state or other jurisdictional regulations.
- Appropriate physical protection measures for exposed utilities as described in Section 5.2.2.5 shall be implemented to eliminate the potential for equipment contact with utilities.
- The extent of the project excavation area to be covered by the exemption request must be specified.
- When evaluating the use of aggressive excavation methods in the buffer zone, the SSC will consider the type of utility involved and the associated risk potential.

Based on this evaluation, the SSC may impose further conditions and requirements, which will be detailed in the HASP.

Even if the above exemption conditions are met, the SSC has authority to deny the request, the reasons for which will be provided.

Unless exempted according to the above provisions of this procedure, only non-aggressive methods may be used within the buffer zone. Non-aggressive, or non-mechanized equipment is used in order to prevent mechanical contact with underground utilities which could result in damage to the utility and create the potential for personal injury and property damage. Following are examples of non-aggressive excavation methods:

- Hand-digging
- Non-conductive hand tools must be used when digging within the buffer zone surrounding underground electrical utilities.
- If conductive hand tools must be used near electrical lines, then the SSC shall be consulted to determine additional requirements relative to safe electrical practices, procedures, and equipment.
- Hydro-excavation (water pressure).
- Air excavation (air pressure).

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- Vacuum extraction (soil excavation/removal).
- Air excavation/vacuum extraction combination.
- Aggressive methods may be used for the removal of pavement over a utility, if allowed by the state regulations.

5.2.2.5 Protection of Underground Utilities

It is very important that consideration be given to the protection of underground utilities when performing adjacent intrusive activities. This is necessary not only to prevent physical damage and associated indirect effects, but also to prevent the potential for injury to employees and the public.

When using aggressive excavation methods within the buffer zone around exposed underground utilities, physical protection may be appropriate. Basically, this involves creation of a physical barrier between the mechanized operation and the utility. The following are some possible types of physical protective measures:

- Heavy timbers, similar to swamp mats.
- Sheets of plywood.
- Blasting mats.
- Once exposed, underground utilities no longer have the support provided by surrounding soil and may need to be physically supported to prevent shifting, bending, separation, or collapse, which could result in damage to the utility, and possibly personnel. Following are suggested support methods:
- Timber shoring underneath the utility.
- Timbers or girders over the top of the excavation fitted with hangers that support the utility.
- Design by a PE for complicated or large applications.
- Utilities must also be protected from objects that may fall into the excavation such as rocks and equipment. This can be accomplished by following these guidelines:

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- Cast spoils as far away from the excavation as possible. Excavated and loose materials shall be kept two feet from the edge of excavations, as required by OSHA.
- Relocate large rocks, cobbles, and boulders away from the excavation and sloped spoils piles.
- When vehicles and machinery are operating adjacent to excavations, warning systems such as soil berms, stop logs or barricades shall be utilized to prevent vehicles from entering the excavation or trench.
- Scaling or barricades shall be used to prevent rock and soils from falling into the excavation.
- Barriers shall be provided to prevent personnel from inadvertently falling into an excavation.

5.2.2.6 De-Energizing Utilities

Utilities can carry many types of potential energy, including electricity, flowing liquids, liquids under pressure, gasses under pressure, etc. A release, such as may happen if a utility conveyance is compromised, could result in personal injury, property damage, and other indirect effects. If the white lines of the proposed excavation area overlaps or extends into the buffer zone of a known underground utility, then if at all possible, that utility shall be de-energized to physically prevent the transmission, flow, or release of energy. Conversely, if the buffer zone of the known utility lies outside of the white-lined, proposed excavation area, then de-energization is not required.

The owner of the utility shall be contacted to determine the feasibility and methodology of de-energizing the utility. Plenty of lead-time should be provided for this since it may take utility companies weeks to de-energize some utilities.

Depending on the utility and the material being conveyed, isolation points which may be suitable for de-energizing include but are not limited to the following:

- Electrical circuit breakers
- Slide gate

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- Disconnect switches
- Piping flanges
- Other similar devices

When utilities are de-energized, it must be verified by demonstration. This can be accomplished by testing equipment, switching on a machine or lighting, opening a valve, etc. For any current-carrying electrical equipment, such as cables, electrical panels, etc., successful de-energization must be certified through the use of appropriate electrical testing equipment.

Whenever a utility is de-energized, a means of ensuring that the energy isolation device and equipment cannot be operated until the device is removed must be provided. Typically, this is achieved by utilizing a lockout device, accompanied by a written tag that physically controls the configuration of the energy isolation point. Lockout devices include but are not limited to the following:

- Locks
- Chains
- Valve covers
- Circuit breaker hasps
- Blind flanges
- Slip blinds, and
- Multiple lock hasps

When de-energizing and locking out of utilities is practiced, the provisions of DCN 2-16 Control of Hazardous Energy Lockout/Tagout, shall be followed, as applicable.

In the event that a utility is de-energized, but there is no means of adequately providing a physical locking-out of the utility, then a spotter must be posted at the point of isolation to ensure that the utility is not re-energized. The spotter must be supplied with a communication device such as a site radio.

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5.2.2.7 Damage Discovery

During excavation, utility damage may be discovered which is pre-existing or otherwise not related to a known contact. Disclosure to the utility owner is very important because the possibility of utility failure or endangerment of the surrounding population increases when damage has occurred. The utility may not immediately fail as a result of damage, but the utility owner or operator must be afforded the opportunity to inspect the utility and make a damage assessment and effect repairs if necessary. The following guidance applies:

- Observe and photograph the utility from a safe distance and determine in there is damage. Damage would be all breaks, leaks, nicks, dents, gouges, grooves, or other damages to utility lines, conduits, coatings, or cathodic protection systems.
- The One-Call agency or private location service must be contacted immediately.

5.2.3 Encountering or Contacting Underground Utilities

In the event that encountering or contacting an underground utility occurs, it is imperative that the appropriate actions are taken to minimize damage to the utility, prevent personal injury, and minimize indirect effects.

5.2.3.1 Encountering Underground Utilities

It is possible that underground utilities will be encountered in locations that have previously been "cleared" of having underground utilities by the locating service, or are found outside of the area which has been marked as having underground utilities. In either case, if this occurs, the following applies:

- Intrusive activities must be curtailed
- The One-Call agency or private location service must be contacted immediately
- The PM and PESM must be notified
- No further intrusive activities may be conducted until:
- The One-Call agency/private location service and/or the subject utility owner visit the site;

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- Identification of the utility owner and the type of material/energy being conveyed by the utility has been made; and
- The orientation and depth of the subject utility has been determined and suitably marked.
- A Tetra Tech Incident Report and Investigation form must be completed per DCN 2-2 Incident Reporting and Investigation Program. The report should be accompanied by photographs clearly showing the marking(s), and the actual location, with a distance gauge to document how far off the mark the utility was encountered.

5.2.3.2 Contacting Underground Utilities

If excavation or other equipment being used for intrusive activities makes contact with an underground utility, the following guidelines apply:

- Intrusive activities must be stopped immediately.
- Observe the utility from a safe distance and determine if there is damage. Damage would be all breaks, leaks, nicks, dents, gouges, grooves, scratched coatings, cathodic protection compromise, material leakage, obvious electrical energy.
- Move all personnel to the evacuation meeting point as described in the SSHP.

EXCEPTION: If an electrical line has been contacted and it is your belief that equipment (such as an excavator) is electrically energized, do not approach the equipment. Order the operator to remain in the equipment until emergency personnel can de-energize the source (unless the equipment is on fire, at which time the operator should jump off of the vehicle and shuffle along the ground to a safe area). Shuffling is required because current flows outward through the soil in a ripple pattern called a power gradient, creating a pattern of high and low potential, Shuffling decreases the chance that these gradients could be bridged, causing current to flow through the body, resulting in electrocution.

- Secure the area to prevent the public from entering.
- Contact emergency responders as specified in the SSHP.
- The One-Call agency or if known, the utility owner must be contacted immediately.

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- The PM and SSC must be notified.
- No further intrusive activities may be conducted until:
- The utility owner inspects the scene and after repairs, verifies that all danger has passed.
- The orientation and depth of the subject utility has been determined and suitably marked.
- Permission from the emergency responders to resume work has been given.

A Tetra Tech Incident Report and Investigation form must be completed per DCN 2-2. The report should be accompanied by photographs clearly showing the marking(s), and the actual location, with a distance gauge to document how far off the mark the utility was encountered.

State and Local regulations must be reviewed to determine if reporting to any additional agencies is required.

5.3 Training

Competent Persons shall have adequate experience and/or training to carry out the requirements of this procedure.

6.0 SOURCES OF INFORMATION

6.1 Organizations

- Common Ground Alliance
- Center for Subsurface Strategic Action (CSSA)
- DigSafely
- National Utility Contractors Association (NUCA)
- National Utility Locating Contractors Association (NULCA)
- Underground Focus Magazine

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- NUCA State Listing of One-Call centers
- Utility Safety Magazine

6.2 Vendors and Commercial Sites

- RadioDetection, Inc. (Detection Instruments)
- Heath Consultants (Detection Instruments)
- Ben Meadows Company (Detection Instruments)
- So-Deep, Inc. (Complete Utilities Services)
- Concept Engineering Group, Inc. (Air Excavation Equipment)
- Rycom Instruments, Inc. (Detection Instruments)
- Schonstedt Instrument Company (Detection Instruments)
- Forestry Suppliers, Inc. (Fiberglass Probe – "Fiberglass Tile Probe", Part #77543, Approx. $20.00, Telephone 800-647-5368)

7.0 REFERENCES

Common Ground Study of One-Call Systems and Damage Prevention Best Practices, August, 1999, Sponsored by US DOT.

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Revision Date	Document Authorizer Name	Revision Details
10/01/2011	Chris McClain	Update

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	TETRA TECH, INC. SPILL PREVENTION AND CLEANUP	Revision Date: 01/31/2013 Document Control Number: SWP 5-47 Page 1 of 14

1.0 PURPOSE

Tt employees involved in remediation of spills or hazardous waste releases may be required to handle containers of hazardous waste. Services performed at hazardous and non-hazardous waste sites may also necessitate handling materials such as gasoline and oil for equipment operation, and chemicals for preservation of samples brought onto a site. Tt facilities may also maintain chemicals on-site in the construction materials engineering (CME) and analytical laboratories. These scenarios present the primary potential for spills or container leaks.

This safe work practice (SWP) addresses general guidance for spill prevention and cleanup. Specific guidance for spill response can also be found in site-specific health and safety plans developed for hazardous waste sites, work plans for non-hazardous waste sites, the chemical hygiene plan, and the facility emergency response plan. Spill and discharge control practices should follow specific procedures to ensure the safety of responders and bystanders and to limit environmental impacts.

2.0 SPILL PREVENTION

The best spill response approach is to prevent spills from occurring. In order to achieve this, the following practices should be employed at Tt facilities and client job sites.

- Make sure that all containers are appropriately labeled and that material safety data sheets (MSDS) are available. Before handling operating and analysis materials or hazardous waste, appropriate precautions should be in place to prevent spills and exposure to individuals.

- Store chemicals in appropriate locations. Make sure that incompatible chemicals are not stored in the same area. Refer to Appendix A for a general listing of incompatible chemicals.

- When transporting chemicals, ensure that the containers are properly closed, secured, and labeled. Do not carry more than one container at one time. If this is required, place containers within totes.

- Only keep the necessary quantity of each chemical on hand. For ease of use, keep chemicals in working containers that are appropriately sized for handling.

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- Ensure that chemicals that are no longer needed and expended chemical containers are disposed of according to regulations pertaining to the specific material.

3.0 GENERAL SPILL RESPONSE PROTOCOLS

In the event that a spill does occur, the following general steps should be followed:

- The first concern should be for human health and safety. Tend to injuries immediately, evacuate the area if necessary, and alert appropriate response personnel.
- If the material is flammable or combustible, an attempt should be made to remove all sources of heat or ignition. However, this does NOT mean unplugging machinery; doing so may cause sparks.
- Consult the MSDS before spill cleanup activities to determine the proper PPE and cleanup equipment to be utilized.
- If the material is still spilling or leaking, attempt to stop additional spillage and contain the area to prevent spread of the contamination.
- Cleanup should be conducted according to the proper techniques described in the MSDS, site-specific health and safety plan, and/or emergency response plan.
- Cleanup should only be attempted by properly trained personnel wearing appropriate PPE.
- All waste should be disposed of according to applicable regulations.
- IF THE SPILL IS TOO LARGE – CALL IN APPROPRIATE RESPONSE PERSONNEL. DO NOT ATTEMPT TO MANAGE THE SPILL YOURSELF.

4.0 DETAILED SPILL RESPONSE PROTOCOLS

This section provides more detailed steps to follow in the event of a spill or leak.

4.1 Immediate Actions

In the event of a spill, employees should immediately:

- Check for injured personnel.
- Clear the affected area.
- Contain the spill and isolate it, if it is safe to do so.
- Contact the facility manager, project manager (PM) or site safety coordinator (SSC).

Immediate action should be taken to control and contain any spill following the general guidelines below:

- Unnecessary personnel should be kept away from the spill or discharge.
- The hazardous area should be isolated.
- If the spill or discharge creates a hazardous situation or results in injury or an environmental release, the emergency procedures of the HASP should be implemented. Emergency response telephone numbers, designated contacts, and special reporting procedures are presented in the HASP.
- Personnel should stay on the upwind side of the spill or discharge.
- Entry into a confined space or low area where liquids or vapors may accumulate should be avoided.

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- Sources of ignition should be eliminated if the spill or discharge involves combustible materials.

- Drains, manholes, waterways, sewers, and the like should be identified and covered or protected.

- The spill should be controlled or absorbed using appropriate media or devices.

- When the spill or discharge is fully contained and under control, spill or discharge material should be collected.

- Following cleanup, the spill area should be evaluated by collecting soil samples and screening the area with air monitoring instruments.

4.2 Decontamination of Personnel

If an individual is contaminated while handling or transporting hazardous materials, emergency response personnel must be notified and a spill team activated. The individual must also be decontaminated and receive medical attention. If decontamination procedures would cause further injury, decontamination should not be performed. Instead, use a blanket or other material to contain the contamination during transport, and inform emergency response personnel that the victim has not been decontaminated.

4.3 Risk Assessment

The risk assessment is based upon the hazards posed by the chemicals, the quantity of materials involved, and the location of the spill. A spill response leader should be designated if the spill warrants activation of a spill team (i.e., when a person is injured or contaminated, or a spill is beyond the control of the individual or site personnel). He/she is responsible for all aspects of the response until relieved by a qualified replacement. The spill response leader should determine the level of risk by answering the following questions:

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4.3.1 What chemical is involved?

This may be determined by interviewing the person(s) who reported the spill and reviewing associated MSDS. Use knowledge of the work area and visual inspection to make a preliminary identification. This will be verified by direct inspection by the entry team.

4.3.2 How much has spilled?

Information gained when answering the question above should determine the quantity involved. For a continuing leak, attempt to estimate the leak rate. If the quantity cannot be determined, you must assume release of the complete contents of the container.

4.3.3 Where is the incident located?

Take into account the relative area as well as the physical location. For example, determine where the spill is located relative to drains, water bodies, and other potential receptors.

4.4 Development of Spill Cleanup Plan

The spill response leader should develop a spill cleanup plan that includes the following elements:

- Ensure that safety is the number one priority and that all safety issues are addressed prior to beginning spill cleanup.
- Ensure that communication links between the spill response leader, members of the spill response team and emergency response personnel are in place.
- Determine if the risk level associated with the spill allows for internal personnel to conduct the cleanup or if emergency response personnel should be summoned.
- Determine the number of workers needed to safely and effectively perform the cleanup.

- Identify spill response materials and ensure that materials are adequate for the anticipated spills.

- Assign cleanup duties and responsibilities to the spill response team members.

- Inform the appropriate facility manager, project manager, and client contacts.

- Determine the required PPE to be worn by entry and backup spill team members and ensure that it is worn during the activities. Use the site health and safety plan contingency section or the facility emergency response plan to assist in this activity. Typical protective equipment may be Level C or D. In the event that the spill warrants a higher level of protection, Tt personnel should summon emergency response personnel.

- If the spill or discharge material is solid and nonreactive, the material should be scooped up and placed in a suitable and compatible container until the disposal method has been determined.

- If liquid is discharged, the following general procedures apply:

  - The point of discharge should be immediately identified and measures taken to eliminate further discharges by uprighting or patching containers, transferring contents, or other appropriate methods.

  - Any discharged liquids or sludge should be removed or retrieved.

  - Discharged materials should be cleaned up with absorbent materials or devices.

  - Spent absorbent material should be placed into storage or disposal containers.

- Determine proper equipment and spill control media to be used based on the chemical of concern. Typical equipment needed to accomplish spill cleanup may include:

- Seal/plug material
- Absorption socks and booms
- Broom
- Shovel
- Open head 55-gallon drum with liner
- 85-gallon salvage drum

- Control the area so that unnecessary personnel do not enter and situations that may escalate the hazards in the area are eliminated. Ideally, the exclusion zone should be physically barricaded off. At a minimum, barricade tape can be placed.

- An exclusion zone, contamination reduction zone, and a support zone may be needed. Only authorized personnel will be allowed in these areas. Wind direction, plant and surrounding populations, and the properties of the spilled material must be considered in establishing the initial controlled zone. Exclusion zones should be barricaded (or at least taped off with barricade tape) to prevent general public access. The zone can be expanded or contracted as more information is gathered about the spill.

- Determine if the situation requires monitoring of explosive atmosphere, oxygen deficiency, or toxic levels of chemicals. This will also help determine the level of PPE required and conditions that would require the area to be evacuated and emergency response personnel summoned.

4.5 Implementation Spill Cleanup Plan

After the spill response leader has developed a plan to containerize and remove all material contaminated by the spill, the assigned members of the spill team will complete the following steps.

4.5.1 Cleanup, containerize, and decontaminate the area

- Attempt to control the source of the leak if the full contents of a drum or container have not spilled. Perhaps the simplest procedure is to position the drum or container so that the leak is above the liquid level. Alternatively, a drum patch or plug can be applied to the leak. The leaking chemical may also be controlled using absorbent spill berms positioned around the drum or container.
- Contain free-flowing liquids by diking or absorbing.
- Place all spill residues and cleanup equipment in an appropriate container.
- If solvent is used to decontaminate equipment, floors, or walkways, appropriate fire protection should be used.
- Decontaminate and salvage as much equipment as possible.
- Use only a final water wash where it is safe and appropriate to do so.

4.5.2 Analyze the affected area for proper decontamination safety

- Use monitoring and detection equipment, if needed.
- Check equipment for problems.
- Examine walkways, floors, and stairs for obstructions or hazards (i.e. slip/fall exposure from liquid residue).
- Use any resources needed (safety, industrial hygiene, environmental, etc.) to ensure that the area has been decontaminated and is safe to re-enter.

4.5.3 Secure all response equipment

- Restock spill supplies.

- Repair damaged equipment.

4.5.4 Release site resumption of operations

- Notify operating personnel.
- Document spill or release in on-site or facility log.

As soon as the area is safe for reoccupancy, the spill response leader, in conjunction with the site or facility manager, must initiate actions to allow the facility to resume normal operations.

- Use established procedures to announce an "All Clear."
- Properly mark spill residue containers for hazardous waste management.
- Clean and prepare all emergency response materials for immediate use storage.
- Complete all spill response reports as required.

5.0 FINAL TERMINATION OF THE INCIDENT

The project manager (PM) and site safety coordinator (SSC) should conduct a formal review and debriefing of the responders at the conclusion of the project. Corrective actions may need to be implemented if a cause for the spill was determined and can be prevented from happening again.

Final termination of the incident will be complete when the appropriate personnel review all reports and any corrective actions are completed.

6.0 REPORTING

In some instances, a release may require reporting to government agencies. If a reportable quantity is released (this quantity is stated on the Material Safety Data Sheet) or human health or the environment is threatened, appropriate national, state, and local administering agency personnel should be notified. The timeframe for notification may vary from agency to agency.

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Notification may be required immediately or within 24 hours, depending on the type, location, and amount of released material. The appropriate agency to report spills to should be determined during HASP development.

All spills and chemical releases must be reported and investigated in accordance with Tt Program 2.1 Incident Reporting and Investigation. Details must be documented on the Forms IR and IR–B and entered into the Tetra Tech TOTAL system for appropriate incident review and tracking.

INCOMPATIBLE CHEMICALS

When certain hazardous chemicals are stored or mixed together, violent reactions may occur because the chemicals are incompatible (i.e., unsuitable for mixing). Classes of incompatible chemicals should be segregated according to hazard class during storage. Use the following general guidelines for hazard class storage.

- Flammable/combustible liquids and organic acids
- Flammable solids
- Mineral acids
- Caustics
- Oxidizers
- Perchloric acid
- Compressed gases

Separate hazardous chemicals in storage as follows:

- Oxidizing acids are segregated from organic acids, and flammable and combustible materials.

- Acids are separated from inorganic bases.
- Acids are separated from active metals such as sodium, potassium, and magnesium.
- Acids are separated from chemicals that could generate toxic gases upon contact, such as iron sulfide and sodium cyanide.
- Water-reactive chemicals such as calcium oxide are stored in a cool, dry place away from any potential water source.
- Oxidizers are physically segregated from flammable and combustible chemicals or materials.
- Oxidizers are physically segregated from reducing agents such as zinc, alkaline metals, and formic acid.
- Large bottles of corrosives are stored on a low shelf or in specially designed (i.e., UL listed) cabinets. Single-glass bottles of acids and corrosives can also be placed within buckets or other means for both safe handling and as a means of secondary containment in the event of breakage.

Carefully read the label before storing any chemical substance. Use the materials safety data sheets (MSDS) to find special storage information and information on incompatibilities. If you have questions regarding proper storage of chemicals or if a container is not clearly labeled, contact a qualified individual for additional information.

Before mixing, storing, or transporting any chemicals, refer to the following partial list of incompatible chemicals, the chemicals' MSDS, or other reliable reference for further information or to verify compatibility.

List of Incompatible Chemicals

Chemical	Incompatible Chemical(s)
Acetic Acid	Aldehyde, bases, carbonates, hydroxides, metals, oxidizers, peroxides,

Chemical	Incompatible Chemical(s)
	phosphates, xylene
Acetylene	Halogens (chlorine, fluorine, etc.), mercury, potassium, oxidizers, silver
Acetone	Acids, amines, oxidizers, plastics
Alkali and alkaline earth metals	Acids, chromium, ethylene, halogens, hydrogen, mercury, nitrogen, oxidizers, plastics, sodium chloride, sulfur
Ammonia	Acids, aldehydes, amides, halogens, heavy metals, oxidizers, plastics, sulfur
Ammonium nitrate	Acids, alkalis, chloride salts, combustible materials, metals, organic materials, phosphorous, reducing agents, urea
Aniline	Acids, aluminum, dibenzoyl peroxide, oxidizers, plastics
Azides	Acids, heavy metals, oxidizers
Bromine	Acetaldehyde, alcohols, alkalis, amines, combustible materials, ethylene, fluorine, hydrogen, ketones (acetone, carbonyls, etc.), metals, sulfur
Calcium oxide	Acids, ethanol, fluorine, organic materials
Carbon (activated)	Alkali metals, calcium hypochlorite, halogens, oxidizers
Carbon tetrachloride	Benzoyl peroxide, ethylene, fluorine, metals, oxygen, plastics, silanes
Chlorates	Powdered metals, sulfur, finely divided organic or combustible materials
Chromic acid	Acetone, alcohols, alkalis, ammonia, bases
Chromium trioxide	Benzene, combustible materials, hydrocarbons, metals, organic materials, phosphorous, plastics
Chlorine	Alcohols, ammonia, benzene, combustible materials, flammable compounds (hydrazine), hydrocarbons (acetylene, ethylene, etc.), hydrogen peroxide, iodine, metals, nitrogen, oxygen, sodium hydroxide
Chlorine dioxide	Hydrogen, mercury, organic materials, phosphorous, potassium hydroxide, sulfur
Copper	Calcium, hydrocarbons, oxidizers
Hydroperoxide	Reducing agents
Cyanides	Acids, alkaloids, aluminum, iodine, oxidizers, strong bases
Flammable liquids	Ammonium nitrate, chromic acid, hydrogen peroxide, nitric acid, sodium peroxide, halogens
Fluorine	Alcohols, aldehydes, ammonia, combustible materials, halocarbons, halogens, hydrocarbons, ketones, metals, organic acids
Hydrocarbons (e.g. butane, propane benzene, turpentine, etc.)	Acids, bases, oxidizers, plastics
Hydrofluoric acid	Metals, organic materials, plastics, silica (glass), (anhydrous) sodium
Hydrogen peroxide	Acetylaldehyde, acetic acid, acetone, alcohol's carboxylic acid,

Chemical	Incompatible Chemical(s)
	combustible materials, metals, nitric acid, organic compounds, phosphorous, sulfuric acid, sodium, aniline
Hydrogen sulfide	Acetylaldehyde, metals, oxidizers, sodium
Hypochlorites	Acids, activated carbon
Iodine	Acetylaldehyde, acetylene, ammonia, metals, sodium
Mercury	Acetylene, aluminum, amines, ammonia, calcium, fulminic acid, lithium, oxidizers, sodium
Nitrates	Acids, nitrites, metals, sulfur, sulfuric acid
Nitric acid	Acetic acid, acetonitrile, alcohol's, amines, (concentrated) ammonia, aniline, bases, benzene, cumene, formic acid, ketones, metals, organic materials, plastics, sodium, toluene
Oxalic acid	Oxidizers, silver, sodium chlorite
Oxygen	Acetaldehyde, secondary alcohol's, alkalis and alkalines, ammonia, carbon monoxide, combustible materials, ethers, flammable materials, hydrocarbons, metals, phosphorous, polymers
Perchloric acid	Acetic acid, alcohols, aniline, combustible materials, dehydrating agents, ethylbenzene, hydriotic acid, hydrochloric acid, iodides, ketones, organic material, oxidizers, pyridine
Peroxides, organic	Acids (organic or mineral)
Phosphorous (white)	Oxygen (pure and in air), alkalis
Potassium	Acetylene, acids, alcohols, halogens, hydrazine, mercury, oxidizers, selenium, sulfur
Potassium chlorate	Acids, ammonia, combustible materials, fluorine, hydrocarbons, metals, organic materials, sugars
Potassium perchlorate (also see chlorates)	Alcohols, combustible materials, fluorine, hydrazine, metals, organic matter, reducing agents, sulfuric acid
Potassium permanganate	Benzaldehyde, ethylene glycol, glycerol, sulfuric acid
Silver	acetylene, ammonia, oxidizers, ozonides, peroxyformic acid
Sodium	Acids, hydrazine, metals, oxidizers, water
Sodium nitrate	Acetic anhydride, acids, metals, organic matter, peroxyformic acid, reducing agents
Sodium peroxide	Acetic acid, benzene, hydrogen sulfide metals, oxidizers, peroxyformic acid, phosphorous, reducers, sugars, water
Sulfides	Acids
Sulfuric acid	Potassium chlorates, potassium perchlorate, potassium permanganate

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Revision Date	Document Authorizer Name	Revision Details
01/31/2013	Chris McClain	New

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	TETRA TECH, INC. HAND TOOLS	Revision Date: 01/31/2013 Document Control Number: SWP-5-51 Page 1 of 4

1.0 INTRODUCTION

Hand tools are used routinely in many Tetra Tech Operations. In order to prevent accidents associated with their use, our employees must be aware of the dangers associated with the different types of tools and the safety precautions necessary to prevent accidents. The following safe work practices must be followed when using hand tools.

2.0 GENERAL SAFETY RULES

All tools, regardless of ownership, shall be of an approved type and maintained in good and safe condition. Tools not meeting the requirements detailed in this safe work practice are prohibited. Tools are subject to inspection at any time. The supervisor has the authority and responsibility to condemn unserviceable tools, regardless of ownership.

- Defective tools shall be tagged to prevent their use and shall be removed from the job site.
- Employees shall always use the proper tool for the job performed.
- Hammers with metal handles, screwdrivers, knives with metal continuing through the handle and metallic measuring tapes shall not be used on or near energized electrical circuits or equipment.
- Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool buckets or firmly attached to hand lines.
- Tools shall never be placed unsecured on elevated places.
- Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists vapors, or gases shall be provided with the designated PPE necessary to project them from the hazard. The designated PPE should be determined on a case by case basis.

3.0 HAND TOOLS

- All impact tools such as chisels, punches, drift pins, etc., that become mushroomed or cracked shall be dressed, repaired, or replaced before further use.
- Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.
- Shims shall not be used to make a wrench fit.
- Wrenches with sprung or damaged jaws shall not be used.
- Pipe shall not be used to extend a wrench handle for added leverage unless the wrench was designed for such use.
- Tools shall be used only for the purposes for which they have been approved.
- Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets.

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- Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire.
- All cutting tools such as saws, wood chisels, drawknives, or axes shall be kept in suitable guards or in special compartments.
- Tools shall not be left lying around where they may cause a person to trip or stumble.
- When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present or the danger area shall be barricaded or guarded.
- The insulation on hand tools shall not be depended upon to protect users from shock.

4.0 PORTABLE ELECTRIC TOOLS

- The non-current carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless the tool is an approved double-insulated type and the tool is connected to the power supply by means of an isolating transformer or other isolated power supply, such as a 24-volt DC system.
- All powered tools shall be examined prior to use to ensure general serviceability and the presence of all applicable safety devices. The electric cord and electric components shall be given an especially thorough examination.
- Powered tools shall be used only within their capability and shall be operated in accordance with the instructions of the manufacturer.
- All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.
- Electrical tools shall not be used where there is a hazard of flammable vapors, gases, or dusts.
- All power tools and cord sets shall be protected by ground fault circuit interrupters (GFCI).
- When using any power source, ensure that GFCI is functional. Otherwise, external GFCI must be used.

5.0 PNEUMATIC TOOLS

- Compressed air and compressed air tools shall be used with caution.
- Pneumatic tools shall never be pointed at another person.
- Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
- Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
- Compressed air shall not be used for cleaning purposes except when reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.

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- Compressed air shall not be used to blow dust or dirt from clothing.
- The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
- The use of hoses for hoisting or lowering tools shall not be permitted.
- All hoses exceeding ½ inch inside diameter shall have a safety device at the source of supply or branch fine to reduce pressure in case of hose failure or disengagement of a connection.
- Before making adjustments or changing air tools, unless equipped with quick change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.
- Eye, foot and hearing protection devices shall be worn during pneumatic tool use.
- Pneumatic tools shall be operated only by competent persons who have been trained in their use.
- A pneumatic tool used where it may contact exposed live electrical parts shall have a nonconductive hose and an accumulator to collect moisture.
- Employees shall not use any part of their bodies to locate or attempt to stop an air leak.

6.0 POWDER ACTUATED TOOLS

A powder actuated tool must always be treated the same as a loaded firearm. ALWAYS ASSUME THE TOOL IS LOADED. These tools come in both low and high velocity models, and both should have built-in safeguards; however, extreme caution must be used when working with this tool. Powder actuated tools can be used only by employees who have been trained in their operation. The user must have a current operator's card.

The following checklist, which may not be complete for all scenarios, is required at a minimum before each use of a powder actuated tool. (Project Managers are responsible for identifying other site specific requirements.)

- Check the safety for proper operation and make sure the bore is clear.
- Select the proper cartridge for the job to be done; never use a higher charge than is necessary.
- Make sure that the drive part of the tool will not penetrate the mounting surface and fly out the other side. The work area must be backed up by a plank or beam.
- Do not use this tool on hard steel, cast iron, rock, or other extremely hard materials.
- Make sure no one else is in the immediate area; concrete chips, metal spalls or rebounding studs could injure bystanders. Insure protective shield is in place to confine flying fragments or particles when the tool is fired.
- Make sure the tool is at the correct angle to the work surface, and maintain pressure against the surface.
- Always wear proper eye and hearing protection.

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- Do not use in an explosive or flammable atmosphere.
- Never point the tool at anyone.
- Do not load until ready for use and never leave a loaded tool unattended.
- If the tool develops a defect during use, it should be tagged and removed from service until it is properly repaired.

7.0 GUARDS

Hazardous moving parts - belts, gears, shafts, pulleys or other reciprocating, rotating or moving parts of equipment must be guarded if such parts are exposed. Guards must be provided as necessary to protect the operator and others from point of operation hazards, in-running nip point hazards, rotating parts, flying chips, and sparks etc. All guards shall meet the requirements set forth by ANSI.

SAFETY GUARDS SHALL NEVER BE REMOVED OR TAMPERED WITH

Revision Date	Document Authorizer Name	Revision Details
1/31/2013	Chris McClain	Update

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APPENDIX C
SAFETY DATA SHEETS AND CHEMICAL INVENTORY

Chemical Inventory Listing:

- Liquinox
- Alconox
- Hydrochloric acid (Preservative)
- Isobutylene calibration gas
- Fire extinguisher
- Diesel Fuel
- Gasoline
- Automotive grease
- Chemical Oxidant (RemOX-S ISCO Reagent)

Safety Data Sheet

Effective date: 11 May 2020 **Revision** : 11 May 2020

Trade Name: Liquinox®

1 Identification of the substance/mixture and of the supplier

1.1 GHS Product identifier

Trade Name: Liquinox®
Product number: 1201, 1201-1, 1205, 1215, 1230, 1232, 1232-1, 1255

1.2 Application of the substance / the mixture: Cleaning material/Detergent

1.2.1 Recommended dilution ratio: 1 - 2% in water

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer:

Alconox Inc.
30 Glenn St
White Plains, NY 10603
(914) 948-4040

Supplier:

Emergency telephone number:
ChemTel Inc
North America: 1-888-255-3924
International: +1 813-248-0573

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272, 29CFR1910/1200 and GHS requirements.

Hazard-determining components of labeling:
Alcohol ethoxylate
Sodium alkylbenzene sulfonate
Sodium xylenesulphonate
Lauramine oxide

2.2 Label elements:

Eye damage, category 1.
Skin irritation, category 2.

Product at recommended dilution:

Eye irritation, category 2B

Hazard pictograms:



Signal word: Danger

Hazard statements:
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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Trade Name: Liquinox®

P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Hazardous Elements at Use Dilution:

Hazard pictograms:



Signal word: Warning

Hazard statements:
H320 Causes eye irritation

Precautionary statements:
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P501 Dispose of contents and container as instructed in Section 13

Additional information: None.

Hazard description
Hazards Not Otherwise Classified (HNOC): May cause surfaces to become slippery. Use caution in areas of foot traffic if on floors.

Information concerning particular hazards for humans and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:
The classification is according to EC regulation No. 1272, 29CFR1910/1200 and GHS, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization: None

3.2 Description: None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	Wt. %
CAS number: 68081-81-2 or 68411-30-3	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Dam. 1; H318	10-25
CAS number: 1300-72-7	Sodium Xylenesulphonate	Eye Irrit. 2;H319	2.5-10
CAS number: 84133-50-6	Alcohol Ethoxylate	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	2.5-10
CAS number: 1643-20-5	Lauramine oxide	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	1-2

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At use dilution:				
	CAS number: 68081-81-2 or 68411-30-3	Sodium Alkylbenzene Sulfonate	Eye Irr. 2B; H319	0.1-0.25

3.4 Additional Information: None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:
Maintain an unobstructed airway.
Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:
Wash affected area with soap and water.
Seek medical attention if symptoms develop or persist.

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes.
Remove contact lens(es) if able to do so during rinsing.
Seek medical attention if irritation persists or if concerned.

After swallowing:
Rinse mouth thoroughly.
Seek medical attention if irritation, discomfort, or vomiting persists.

4.2 Most important symptoms and effects, both acute and delayed

None

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

First aid measure at recommended dilution:

General information: None.

After inhalation:
Maintain an unobstructed airway.
Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:
Wash affected area with soap and water.

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes.
Remove contact lens(es) if able to do so during rinsing.

After swallowing:
Rinse mouth thoroughly. Seek medical attention if irritation, discomfort, or vomiting develops.

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Trade Name: Liquinox®

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents: None

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.
Refer to Section 8.

5.4 Additional information:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.
Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Ensure air handling systems are operational.

6.2 Environmental precautions:

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections: None

7 Handling and storage

7.1 Precautions for safe handling:

Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated area.

7.3 Specific end use(s):

No additional information.

8 Exposure controls/personal protection





8.1 Control parameters :

25322-68-3, Poly(ethylene oxide), AIHA TWA 10 mg/m3 (<0.15% present in concentrate)

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Trade Name: Liquinox®

8.2 Exposure controls

Appropriate engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:
Not needed under normal conditions.

Protection of skin:
Select glove material impermeable and resistant to the substance.

Eye protection:
Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:
Wash hands before breaks and at the end ofwork.
Avoid contact with skin, eyes and clothing.

Exposure Control and Personal Protective Equipment at recommended dilution:

Under normal use and operational conditions, no special personal protective equipment or engineering controls will be necessary. Handle with care.

9 Physical and chemical properties

Appearance (physical state, color):	Pale yellow liquid	**Explosion limit lower**: **Explosion limit upper**:	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	**Vapor pressure at 20°C**:	Not determined or not available.
Odor threshold:	Not determined or not available.	**Vapor density**:	Not determined or not available.
pH-value:	8.5 (as is)	**Relative density**:	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	**Solubilities**:	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	**Partition coefficient (n-octanol/water)**:	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	**Auto/Self-ignition temperature**:	Not determined or not available.
Evaporation rate:	Not determined or not available.	**Decomposition temperature**:	Not determined or not available.
Flammability (solid, gaseous):	Not flammable	**Viscosity**:	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.
Density at 20°C:	1.08 g/mL		

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Trade Name: Liquinox®

10 Stability and reactivity

10.1 Reactivity: Not determined or not available.
10.2 Chemical stability: Not determined or not available.
10.3 Possibility hazardous reactions: Not determined or not available.
10.4 Conditions to avoid: Not determined or not available.
10.5 Incompatible materials: Not determined or not available.
10.6 Hazardous decomposition products: Not determined or not available.

11 Toxicological information

11.1 Information on toxicological effects:

Acute Toxicity:

Oral:

: LD50 >5000 mg per kg (Rat, Oral) - product.

Chronic Toxicity: No additional information.

Skin corrosion/irritation (raw materials):

Alcohol Ethoxylate: May cause mild to moderate skin irritation.

Sodium Alkylbenzene Sulfonate: Causes skin irritation.

Lauramine oxide: Causes skin irritation.

Serious eye damage/irritation (raw materials):

Sodium Alkylbenzene Sulfonate: Causes serious eye damage.

Alcohol Ethoxylate: Causes moderate to severe eye irritation and conjunctivitis.

Sodium xylenesulphonate: irritating to eyes.

Lauramine oxide: Causes serious eye damage.

Product information at recommended dilution:

Eye irritation may occur upon direct contact with eyes. No specific hazards for skin contact, inhalation, or chronic exposure are expected within normal use parameters.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information.

Reproductive toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

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Trade Name: Liquinox®

12 Ecological information

12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.
Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.9 mg/l, 48 hours. Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
Lauramine oxide: Fish, LC50 24.3 mg/l, 96h [Killifish (Cyprinodontidae)]
Lauramine oxide: Aquatic invertebrates, (LC50): 3.6 mg/l 96 hours [Daphnia (Daphnia)].
Lauramine oxide: Aquatic plants, EC50 Algae 0.31 mg/l 72 hours [Algae]
Alcohol Ethoxylate: Aquatic invertebrates, (LC50): 4.01 mg/l 48 hours [Daphnia (daphnia)].

12.2 Persistence and degradability: No additional information.

12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: No additional information.

vPvB: No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)

Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: None
ADR, ADN, DOT, IMDG, IATA

14.2 UN Proper shipping name: None
ADR, ADN, DOT, IMDG, IATA

14.3 Transport hazard classes:
ADR, ADN, DOT, IMDG, IATA

Class: None
Label: None
LTD. QTY: None

US DOT
Limited Quantity Exception: None

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Bulk: **RQ (if applicable):** None **Proper shipping Name:** None **Hazard Class:** None **Packing Group:** None **Marine Pollutant (if applicable):** No additional information. **Comments:** None	**Non Bulk:** **RQ (if applicable):** None **Proper shipping Name:** None **Hazard Class:** None **Packing Group:** None **Marine Pollutant (if applicable):** No additional information. **Comments:** None
14.4 Packing group: ADR, ADN, DOT, IMDG, IATA	None
14.5 Environmental hazards:	None
14.6 Special precautions foruser:	None
Danger code (Kemler):	None
EMS number:	None
Segregation groups:	None
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.	
14.8 Transport/Additional information:	
Transport category:	None
Tunnel restriction code:	None
UN "Model Regulation":	None

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed.
Section 302 (extremely hazardous substances): None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act)

Reportable Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed as active.
Rules and Orders: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

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Trade Name: Liquinox®

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

Germany MAK: Not classified.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements:

H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

	At recommended dilution:
NFPA: 1-0-0	NFPA: 1-0-0
HMIS: 1-0-0	HMIS: 1-0-0

MATERIAL SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT NAME: ISOBUTYLENE (1 PPM – 0.9%) IN AIR

MSDS NO: 248 **Version:3** **Date: August, 2010**

1. Chemical Product and Company Identification

Gasco Affiliates, LLC
320 Scarlett Blvd.
Oldsmar, FL 34677

TELEPHONE NUMBER: (800) 910-0051 **24-HOUR EMERGENCY NUMBER: 1-800-424-9300**
FAX NUMBER: (866) 755-8920
E-MAIL: info@gascogas.com

PRODUCT NAME: ISOBUTYLENE (1 PPM – 0.9%) IN AIR
CHEMICAL NAME: Isobutylene in air
COMMON NAMES/ SYNONYMS: None
TDG (Canada) CLASSIFICATION: 2.2
WHIMIS CLASSIFICATION: A

2. COMPOSITION/ INFORMATION ON INGREDIENTS

INGREDIENT	%VOLUME	PEL-OSHA	TLV-ACGIH	LD_{50} or LC_{50} Route/Species
Isobutylene FORMULA: C_4H_8	0.0001-0.9	N/A	N/A	N/A
Air FORMULA: Mixture	99.0 to 99.9999	N/A	N/A	N/A

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Release of this product may produce oxygen-deficient atmospheres (especially in confined spaces or other poorly ventilated environments); individuals in such atmospheres may be asphyxiated. Isobutylene may cause drowsiness and other central nervous system effects in high concentrations; however, due to the low concentration of this gas mixture, this is unlikely to occur.

ROUTE OF ENTRY:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
No	No	No	Yes	No

HEALTH EFFECTS:

Exposure Limits	Irritant	Sensitization	Reproductive Hazard	Mutagen
Yes	No	No	No	No

Carcinogenicity: --NTP: No IARC: No OSHA: No

EYE EFFECTS:
N/A.

SKIN EFFECTS:
N/A.

MATERIAL SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT NAME: ISOBUTYLENE (1 PPM – 0.9%) IN AIR

INGESTION EFFECTS:
Ingestion unlikely. Gas at room temperature.

INHALATION EFFECTS:
Due to the small size of this cylinder, no unusual health effects from over-exposure are anticipated under normal routine use.

NFPA HAZARD CODES		HMIS HAZARD CODES		RATING SYSTEM
Health:	1	Health:	1	0= No Hazard
Flammability:	0	Flammability:	0	1= Slight Hazard
Reactivity:	0	Reactivity:	0	2= Moderate Hazard
				3= Serious Hazard
				4= Severe Hazard

4. FIRST AID MEASURES

EYES:
N/A

SKIN:
N/A

INGESTION:
Not required

INHALATION:
PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASED OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED THE SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. If breathing has stopped administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

These containers hold gas under pressure, with no liquid phase. If involved in a major fire, they should be sprayed with water to avoid pressure increases, otherwise pressures will rise and ultimately they may distort or burst to release the contents. The gases will not add significantly to the fire, but containers or fragments may be projected considerable distances - thereby hampering fire fighting efforts.

6. ACCIDENTAL RELEASE MEASURES

In terms of weight, these containers hold very little contents, such that any accidental release by puncturing etc. will be of no practical concern.

7. HANDLING AND STORAGE

Suck back of water into the container must be prevented. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Use only in well-ventilated areas. Do not heat cylinder by any means to increase rate of product from the cylinder. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Use adequate ventilation for extended use of gas.

MATERIAL SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT NAME: ISOBUTYLENE (1 PPM – 0.9%) IN AIR

---

9. PHYSICAL AND CHEMICAL PROPERTIES

PARAMETER:	VALUE:
Physical state	: Gas
Evaporation point	: N/A
pH	: N/A
Odor and appearance	: Colorless, odorless gas

---

10. STABILITY AND REACTIVITY

Stable under normal conditions. Expected shelf life 48 months.

---

11. TOXICOLOGICAL INFORMATION

No toxicological damage caused by this product.

---

12. ECOLOGICAL INFORMATION

No ecological damage caused by this product.

---

13. DISPOSAL INFORMATION

Do not discharge into any place where its accumulation could be dangerous. Used containers are acceptable for disposal in the normal waste stream as long as the cylinder is empty and valve removed or cylinder wall is punctured; but GASCO encourages the consumer to return cylinders.

---

14. TRANSPORT INFORMATION

	United States DOT	Canada TDG
PROPER SHIPPING NAME:	Compressed Gas N.O.S. (Isobutylene in Air)	Compressed Gas N.O.S. (Isobutylene in Air)
HAZARD CLASS:	2.2	2.2
IDENTIFICATION NUMBER:	UN1956	UN1956
SHIPPING LABEL:	NONFLAMMABLE GAS	NONFLAMMABLE GAS

---

15. REGULATORY INFORMATION

Isobutylene is listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds.

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16. OTHER INFORMATION

This MSDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply (Amendment) Regulation 1996. The information is based on the best knowledge of GASCO, and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for other purposes than it is intended.

MSDS/S010/248/ August, 2010

MATERIAL SAFETY DATA SHEET

Section 1. Chemical product and company identification

Product Name:	ABC Dry Chemical Fire Extinguishant
Synonym:	Multi-purpose Dry Chemical (CH550, F15, F18)
Manufacturer:	AMEREX CORPORATION
Internet Address:	www.amerex-fire.com
Address:	7595 Gadsden Highway P.O. Box 81 Trussville, AL 35173-0081
Telephone:	(205) 655-3271
Emergency Contacts:	Chemtrec 1(800) 424-9300 or (703) 527–3887
Revised:	February, 2012

Section 2. Hazard identification and emergency overview

Emergency overview: Light yellow, fine solid powder, odorless.

Adverse health effects and symptoms: Irritating to the respiratory system, eyes and skin. Symptoms may include coughing, shortness of breath, and irritation of the lungs, eyes, and skin. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

Exposure guidelines:

Ingredients	OSHA PEL****	ACGIH TLV	DFG MAK *
Mono-ammonium phosphate	PNOC** Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	PNOC Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3
Ammonium sulphate	PNOC Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	PNOC Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3
Mica	6 mg/m^3	3 mg/m3	NR
Fullers Earth	PNOC Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	PNOC Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3

Silicone oil	NR***	NR	NR
Calcium carbonate	PNOC Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	-------
Amorphous silica	143 mg/m^3 $\frac{80\ mg/m^3}{\%\ SiO_2}$	10 mg/m^3	4 mg/m^3
Yellow 14 pigment	NR	NR	NR

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** NR = Not Regulated. All values are 8 hour time weighted average concentrations. **** Total dust PEL for Washington state= 10mg/ m^3 for PNOC

Hazard symbols: WHMIS (Canadian workplace hazardous materials identification system

D2B Product may irritate eyes, skin, or mucous membranes

Section 3. Composition/information on ingredients

Name/Compound	Weight %	CAS #
Mono-ammonium phosphate and Ammonium sulphate	>94	7722-76-1 7783-20-2
Fullers Earth magnesium aluminum silicate-	<3	8031-18-3
Mica potassium aluminum silicate	1-2	12001-26-2
Silicone oil methyl hydrogen polysiloxane	<1	63148-57-2
Calcium carbonate	<1	1317-65-3
Amorphous silica precipitated synthetic zeolite	<1	112926-00-8
Yellow 14 pigment – di-azo dye	<1	5468-75-7

Section 4. First Aid Measures

Eye Exposure: Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation develops or if vision changes occur.

Skin Exposure: In case of contact, wash with plenty of soap and water. Seek medical attention if irritation develops.

Inhalation: If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if irritation persists.

Ingestion: If victim is conscious and alert, give 2-3 glasses of water to drink and do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

Medical conditions possibly aggravated by exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis (~~-d~~usty lung" disease).

Section 5. Fire fighting measures

Extinguishing media: non combustible and non flammable – product is an extinguishing agent.

Unusual fire/explosion hazards: in a fire this material may decompose, releasing oxides of sulfur and carbon (see Section 10).

Insensitive to mechanical impact or static discharge.

HMIS Hazard Ranking:
health = 1, flammability = 0, reactivity = 0, personal protective equipment: ½ mask APR w/HEPA cartridges (see Section 8).

Section 6. Accidental release measures

Clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Wear appropriate respiratory protection. Bag and drum for disposal. If product is used and/or contaminated, use PPE and containment appropriate to the nature of the mixture. Prevent material from entering waterways.

Section 7. Handling and storage

Avoid skin, eye, or respiratory exposure. Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8). Keep product in original container or extinguisher. Contents may be under pressure – inspect for extinguisher rust periodically to insure container integrity. Do not mix with other extinguishing agents.

Section 8. Exposure controls/ personal protection

During the application of this product against fires, exhaust gases and the products of incomplete combustion (PICs) are the principal respiratory hazards. In the manufacture of extinguishers, automated systems and point source ventilation controls sufficiently minimize respiratory exposure. Employers and employees must use their collective judgment in determining occupational settings where the use of a dust mask or air purifying respirator is prudent. The need for respiratory protection is not likely for short-term use in well ventilated areas.

Respiratory protection: use N95 dust mask or air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters.

Eye protection: wear chemical goggles.

Skin protection: use nitrile, latex, or similar gloves and coveralls. Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. Physical and chemical properties

Appearance: yellow powder, finely divided odorless solid.
Specific gravity: ~ .88 in aerated condition
Solubility: product is coated-not immediately soluble in water
Non –flammable
Flash point: none
Vapor pressure: < 1 mm Hg
pH: approximately 4-5
Boiling point: not applicable
No explosive or oxidizing properties

Section 10. Stability and reactivity

Stability: stable

Incompatibles: strong alkalis (bases), magnesium, strong oxidizers such as calcium hypochlorite (pool chlorine) and isocyanuric acids.

Decomposition products: heat of fire may release carbon monoxide, carbon dioxide, and sulfur dioxide. Oxides of phosphorous and ammonia reported.

Possibility of hazardous reactions: Slight. See incompatibilities above.

Section 11. Toxicological information

Acute toxicity: Mono ammonium phosphate LD_{50} (rat): > 1000mg/kg body weight
Ammonium sulfate LD_{50} (rat): 2840 mg/kg body weight
Target organs in man: respiratory system, eyes, skin. This product is an irritant to epithelial tissue, and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Chronic toxicity: Pneumoconiosis, or ~~-~~dusty lung" disease, may result from chronic exposure to any dust.

Reproductive toxicity: This product's ingredients are not known to have reproductive or teratogenic effects.

Section 12. Ecological information

Ecotoxicity: negative effects unknown. Provides nutrient nitrogen and phosphorus to plant life.

Persistence/ Degradability: degrades rapidly in humid/wet environment.

Bioaccummulation: extent unknown.

Mobility in soil: slow evaporation rate; water soluble, may leach to groundwater.

Section 13. Disposal considerations

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. Transportation information

This product is not a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, and is not regulated by the DOT or Transport Canada –Transportation of Dangerous Goods" regulations.

When shipped in a stored pressure type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class/ division is 2.2. Non-Flammable Gas. Packing Group –N/A.

Section 15. Regulatory information

International Inventory Status:

All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

European Risk and Safety phrases:

EU Classification:	Harmful.	
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Components:

Mono ammonium phosphate:

EU Classification:	Harmful.	
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Ammonium sulfate:

EU Classification:	Irritant	
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

U.S. federal regulatory information:

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

State regulatory information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None
California – Permissible Exposure Limits for Chemical Contaminants: None
Florida – Substance List: Mica Dust, Ammonium Sulfate
Illinois – Toxic Substance List: None
Kansas – Section 302/303 List: None

Massachusetts – Substance List: Mica Dust, Ammonium Sulfate
Minnesota – List of Hazardous Substances: None
Missouri – Employer Information/Toxic Substance List: None
New Jersey – Right to Know Hazardous Substance List: None
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None
Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: Mica Dust, Ammonium Sulfate
Texas – Hazardous Substance List: No
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Section 16

When shipped in a stored pressure type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class/ division is 2.2 Non-Flammable Gas. Packing Group—N/A

Section 17. Other information

This MSDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

The information herein is given in good faith but no warranty, expressed or implied, is made. Updated by Lindsay R. Hill, CIH.

Material Safety Data Sheet

Hydrochloric Acid

Section 1. Product and Company Identification

Product name : Hydrochloric Acid

Product code : HX0607

Synonym : Muriatic Acid

Material uses : Other non-specified industry: Analytical reagent.

Manufacturer : EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
856-423-6300 Technical Service
Monday - Friday: 8:00 - 5:00 PM

Validation date : **4/5/2006.**

Print date :

In case of emergency : 800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Section 2. Hazards Identification

Physical state : Liquid. (Colorless.)

Odor : Pungent.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!
POISON!
MAY BE FATAL IF INHALED OR SWALLOWED.
CAUSES SEVERE EYE AND SKIN BURNS.
CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Severely corrosive to the eyes.

Skin : Severely corrosive to the skin.

Inhalation : Very toxic by inhalation. Severely irritating to the respiratory system.

Ingestion : Very toxic if swallowed. May cause burns to mouth, throat and stomach.

Potential chronic health effects :

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

Section 3. Composition/Information on Ingredients

United States

Name	CAS number	% by Weight

Hydrochloric Acid	7647-01-0	100

The 100% indicates this product is a concentrated acid. Assay (HCl) value is approximately 36-38%.

Section 4. First Aid Measures

Eye contact : Get medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.

Skin contact : Get medical attention immediately. Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing or wear gloves.

Section 5. Fire Fighting Measures

Flammability of the product : No specific hazard.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Not available.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead and zinc.

Section 6. Accidental Release Measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and Storage

Handling : Do not ingest. Do not get in eyes or on skin or clothing. Keep container closed. Use

only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
United States	
Hydrochloric Acid	**ACGIH TLV (United States, 2003).** CEIL: 2 ppm **NIOSH REL (United States, 12/2001).** CEIL: 7 mg/m^3 Form: All forms CEIL: 5 ppm Form: All forms **OSHA PEL (United States, 8/1997).** CEIL: 7 mg/m^3 Form: All forms CEIL: 5 ppm Form: All forms **OSHA PEL 1989 (United States, 3/1989).** CEIL: 7 mg/m^3 Form: All forms CEIL: 5 ppm Form: All forms **ACGIH TLV (United States, 1/2005). Notes: Refers to Appendix A -- Carcinogens. ACGIH 2003 Adoption** CEIL: 2 ppm Form: All forms

Consult local authorities for acceptable exposure limits.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: face shield , splash goggles

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body: Recommended: chemical-resistant protective suit

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: PVC

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and Chemical Properties

Physical state : Liquid. (Colorless.)

Color : Colorless.

Odor : Pungent.

Molecular weight : 36.46 g/mole

Molecular formula : Cl-H

Boiling/condensation point : 110°C (230°F)

Melting/freezing point : -74°C (-101.2°F)

Critical temperature : 51.5°C (124.7°F)

Relative density : 1.2 (Water = 1)

Vapor pressure : 21.3 kPa (160 mm Hg) (at 20°C)

Vapor density : >1 (Air = 1)

Evaporation rate : >1

Solubility : Soluble in water

Section 10. Stability and Reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Reactive or incompatible with the following materials: metals and alkalis.

Hazardous decomposition products : These products are halogenated compounds, hydrogen chloride.

Hazardous polymerization : Will not occur.

Conditions of reactivity : Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead and zinc.
Explosive in the presence of the following materials or conditions: metals.

Section 11. Toxicological Information

Toxicity data

United States

Product/ingredient name	Test	Result	Route	Species
Hydrochloric Acid	LD50 LC50	900 mg/kg 1108 ppm (1 hour/hours)	Oral Inhalation	Rabbit Mouse

Chronic effects on humans : **CARCINOGENIC EFFECTS**: A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC.
Causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.

Other toxic effects on humans : Extremely hazardous in case of skin contact (corrosive), of eye contact (corrosive), of ingestion, of inhalation (lung irritant).
Hazardous in case of inhalation (lung corrosive).

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Teratogenicity / Reproductive toxicity : No known significant effects or critical hazards.

Sensitization

Ingestion : May cause burns to mouth, throat and stomach.

Inhalation : Severely irritating to the respiratory system.

Eyes : Severely corrosive to the eyes.

Skin : Severely corrosive to the skin.

Section 12. Ecological Information

Environmental precautions : No known significant effects or critical hazards.

Products of degradation : These products are halogenated compounds.

Toxicity of the products of biodegradation : The products of degradation are as toxic as the product itself.

Section 13. Disposal Considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	UN1789	HYDROCHLORIC ACID	8	II		**Reportable quantity** 5000 lbs. (2268 kg)

PG* : Packing group

Section 15. Regulatory Information

United States

HCS Classification : Highly toxic material
Corrosive material
Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: Listed

SARA 302/304/311/312 extremely hazardous substances: Hydrochloric Acid
SARA 302/304 emergency planning and notification: Hydrochloric Acid
SARA 302/304/311/312 hazardous chemicals: Hydrochloric Acid
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Hydrochloric Acid : Sudden release of pressure, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Hydrochloric Acid
Clean Air Act (CAA) 112 accidental release prevention: Hydrochloric Acid
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: Hydrochloric Acid

SARA 313

Product name	CAS number	Concentration
Form R - Reporting requirements :		
Hydrochloric Acid	7647-01-0	100
Supplier notification :		
Hydrochloric Acid	7647-01-0	100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Pennsylvania RTK: Hydrochloric Acid : (environmental hazard, generic environmental hazard)
Massachusetts RTK: Hydrochloric Acid
New Jersey: Hydrochloric Acid

Canada

WHMIS (Canada) : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class E: Corrosive material

CEPA DSL/CEPA NDSL : CEPA DSL: Hydrochloric Acid

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations

Hazard symbol/symbols :



Risk phrases : R34- Causes burns.
R37- Irritating to respiratory system.

Safety phrases : S1/2- Keep locked up and out of the reach of children.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

International regulations

International lists : Australia (NICNAS): Hydrochloric Acid

China: Hydrochloric Acid

Germany water class: Hydrochloric Acid

Japan (METI): Hydrochloric Acid

Korea (TCCL): Hydrochloric Acid

Philippines (RA6969): Hydrochloric Acid

Section 16. Other Information

Label requirements : DANGER!
POISON!
MAY BE FATAL IF INHALED OR SWALLOWED.
CAUSES SEVERE EYE AND SKIN BURNS.
CAUSES SEVERE RESPIRATORY TRACT IRRITATION.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.

National Fire Protection Association (U.S.A.) :

	0	**Flammability**
Health	3	0 **Instability**
		Special

Other special considerations : Section 3 lists this product as 100% which indicates that it is a concentrated acid.

Notice to reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

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1. Product and Company Identification

Material name	**UNLEADED GASOLINE**
Version #	03
Issue date	07-28-2011
Revision date	11-13-2012
Supersedes date	09-28-2012
MSDS Number	002
Product use	Motor fuels.
Synonym(s)	Regular/Premium/Midgrade - Unleaded Gasoline, RFG - Reformulated Unleaded Gasoline, Conventional Unleaded Gasoline, Oxygenated Unleaded Gasoline, Non-Oxygenated Unleaded Gasoline, CARB (California Air Resource Board) Unleaded Gasoline, RBOB - Reformulated Blendstock for Oxygenate Blending, CBOB - Conventional Blendstock for Oxygenate Blending, Petrol, Motor Fuel. See section 16 for complete information.
Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates P.O. Box 696000 San Antonio, TX 78269-6000
General Assistance	210-345-4593
Emergency	24 Hour Emergency 866-565-5220 1-800-424-9300 (CHEMTREC USA)

2. Hazards Identification

Physical state	Liquid.
Appearance	Light straw to red clear liquid with characteristic strong odor of gasoline.
Emergency overview	DANGER! Extremely flammable liquid and vapor - vapor may cause flash fire. Will be easily ignited by heat, spark or flames. Heat may cause the containers to explode. Harmful if inhaled, absorbed through skin, or swallowed. Aspiration may cause lung damage. Irritating to eyes, respiratory system and skin. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. Contains benzene. Cancer hazard - can cause cancer. Mutagen. May cause heritable genetic damage. May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Static accumulating flammable materials can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite material and vapor may cause flash fire (or explosion).
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Contact may irritate or burn eyes. Eye contact may result in corneal injury.
Skin	Harmful if absorbed through skin. Irritating to skin. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Inhalation	Harmful if inhaled. Irritating to respiratory system. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea. May cause breathing disorders and lung damage. May cause cancer by inhalation. Prolonged inhalation may be harmful.
Ingestion	Harmful if swallowed. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis. Irritating to mouth, throat, and stomach.
Target organs	Blood. Eyes. Liver. Respiratory system. Skin. Kidneys. Central nervous system.

Chronic effects	Cancer hazard. Contains material which may have reproductive toxicity, teratogenic or mutagenic effects. Liver injury may occur. Kidney injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Signs and symptoms	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.
Potential environmental effects	Toxic to aquatic organisms. Harmful to aquatic life with long lasting effects.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Gasoline	86290-81-5	0-100
Toluene	108-88-3	0-30
Hexane (Other Isomers)	96-14-0	5-25
Xylene (o, m, p isomers)	1330-20-7	0-25
Octane (All isomers)	111-65-9	0-18.5
Ethanol	64-17-5	0-10
1,2,4, Trimethylbenzene	95-63-6	0-6
n-Heptane	142-82-5	1-5
Pentane	109-66-0	1-5
Cumene	98-82-8	0-5
Ethylbenzene	100-41-4	0-5
Benzene	71-43-2	0-4.9
n-Hexane	110-54-3	0-3
Cyclohexane	110-82-7	0-3

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Get medical attention immediately.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General advice	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire Fighting Measures

Flammable properties	Flammable by OSHA criteria. Containers may explode when heated.

Extinguishing media

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical	Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.
Protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.
Specific methods	In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers.
Hazardous combustion products	Carbon monoxide. Carbon Dioxide. Sulfur oxides. Nitrogen oxides (NOx). Hydrocarbons.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.
Environmental precautions	Gasoline may contain oxygenated blend products (Ethanol, etc.) that are soluble in water and therefore precautions should be taken to protect surface and groundwater sources from contamination. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Use non-sparking tools and explosion-proof equipment. Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste. Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity.
Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

Storage

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Cumene (CAS 98-82-8)	TWA	50 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm
Pentane (CAS 109-66-0)	TWA	600 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cumene (CAS 98-82-8)	PEL	245 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3
		300 ppm
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
		1000 ppm
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
Octane (All isomers) (CAS 111-65-9)	PEL	2350 mg/m3
		500 ppm
Pentane (CAS 109-66-0)	PEL	2950 mg/m3
		1000 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	123 mg/m3
		25 ppm
Benzene (CAS 71-43-2)	STEL	8 mg/m3
		2.5 ppm
	TWA	1.6 mg/m3
		0.5 ppm
Cumene (CAS 98-82-8)	TWA	246 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	TWA	344 mg/m3
		100 ppm
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	543 mg/m3
		125 ppm
	TWA	434 mg/m3
		100 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
n-Heptane (CAS 142-82-5)	STEL	2050 mg/m3
		500 ppm
	TWA	1640 mg/m3
		400 ppm
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3
		50 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Octane (All isomers) (CAS 111-65-9)	TWA	1400 mg/m3
		300 ppm
Pentane (CAS 109-66-0)	TWA	1770 mg/m3
		600 ppm
Toluene (CAS 108-88-3)	TWA	188 mg/m3
		50 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	651 mg/m3
		150 ppm
	TWA	434 mg/m3
		100 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Cumene (CAS 98-82-8)	STEL	75 ppm
	TWA	25 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Hexane (Other Isomers) (CAS 96-14-0)	TWA	200 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	20 ppm
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm
Pentane (CAS 109-66-0)	TWA	600 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Cumene (CAS 98-82-8)	TWA	50 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	125 ppm
	TWA	100 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm
Pentane (CAS 109-66-0)	STEL	2210 mg/m3
		750 ppm
	TWA	1770 mg/m3
		600 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	123 mg/m3
		25 ppm
Benzene (CAS 71-43-2)	STEL	15.5 mg/m3
		5 ppm
	TWA	3 mg/m3
		1 ppm
Cumene (CAS 98-82-8)	TWA	246 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	TWA	1030 mg/m3
		300 ppm
Ethanol (CAS 64-17-5)	TWA	1880 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	543 mg/m3
		125 ppm
	TWA	434 mg/m3
		100 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
n-Heptane (CAS 142-82-5)	STEL	2050 mg/m3
		500 ppm
	TWA	1640 mg/m3
		400 ppm
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3
		50 ppm
Octane (All isomers) (CAS 111-65-9)	STEL	1750 mg/m3
		375 ppm
	TWA	1400 mg/m3
		300 ppm
Pentane (CAS 109-66-0)	TWA	350 mg/m3
		120 ppm
Toluene (CAS 108-88-3)	TWA	188 mg/m3
		50 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	651 mg/m3
		150 ppm
	TWA	434 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
		100 ppm

Mexico. Occupational Exposure Limit Values

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	STEL	170 mg/m3
		35 ppm
	TWA	125 mg/m3
		25 ppm
Benzene (CAS 71-43-2)	STEL	16 mg/m3
		5 ppm
	TWA	3.2 mg/m3
		1 ppm
Cumene (CAS 98-82-8)	STEL	365 mg/m3
		75 ppm
	TWA	245 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	STEL	1300 mg/m3
		375 ppm
	TWA	1050 mg/m3
		300 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	3500 mg/m3
		1000 ppm
	TWA	1760 mg/m3
		500 ppm
n-Heptane (CAS 142-82-5)	STEL	2000 mg/m3
		500 ppm
	TWA	1600 mg/m3
		400 ppm
n-Hexane (CAS 110-54-3)	TWA	176 mg/m3
		50 ppm
Octane (All isomers) (CAS 111-65-9)	STEL	1800 mg/m3
		375 ppm
	TWA	1450 mg/m3
		300 ppm
Pentane (CAS 109-66-0)	STEL	2250 mg/m3
		760 ppm
	TWA	1800 mg/m3
		600 ppm
Toluene (CAS 108-88-3)	TWA	188 mg/m3
		50 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm

Engineering controls	Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.
Personal protective equipment	
Eye / face protection	Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.
Skin protection	Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.
General hygiene considerations	Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Light straw to red clear liquid with characteristic strong odor of gasoline.
Physical state	Liquid.
Form	Liquid.
Color	Light straw to red clear.
Odor	Characteristic Gasoline Odor (Strong).
Odor threshold	Not available.
pH	Not available.
Vapor pressure	60.8 - 101.3 kPa (20°C)
Vapor density	3 - 4 (Air=1)
Boiling point	80.1 - 440.1 °F (26.7 - 226.7 °C)
Melting point/Freezing point	44 °F (6.67 °C) May start to solidify at this temperature. This is based on data for the following ingredient: Cyclohexane. Weighted average: -91.9 deg C (-133.4 deg F)
Solubility (water)	Very slightly soluble.
Specific gravity	0.66 - 0.75 (Water=1) (60°F)
Flash point	-40 °F (-40 °C) (closed cup)
Flammability limits in air, upper, % by volume	7.1 %
Flammability limits in air, lower, % by volume	1.3 %
Auto-ignition temperature	> 500 °F (> 260 °C)
VOC	100 %
Evaporation rate	10 - 11 BuAc
Other data	
Flash point class	Flammable IA

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal temperature conditions and recommended use.
Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur oxides. Nitrogen oxides (NOx). Hydrocarbons.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
1,2,4, Trimethylbenzene (CAS 95-63-6)		
Acute		
Dermal		
LD50	Rabbit	> 3160 mg/kg
Inhalation		
LC50	Rat	> 2000 mg/l, 48 Hours
Oral		
LD50	Rat	6 g/kg
Benzene (CAS 71-43-2)		
Acute		
Oral		
LD50	Rat	3306 mg/kg
Cumene (CAS 98-82-8)		
Acute		
Inhalation		
LC50	Mouse	2000 mg/l, 7 Hours
	Rat	8000 mg/l, 4 Hours
Oral		
LD50	Rat	1400 mg/kg
		2.91 g/kg
Cyclohexane (CAS 110-82-7)		
Acute		
Oral		
LD50	Rat	12705 mg/kg
Ethanol (CAS 64-17-5)		
Acute		
Inhalation		
LC50	Rat	30000 mg/m3
Oral		
LD50	Rat	11.5 g/kg
Ethylbenzene (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	5.46 g/kg
n-Heptane (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
Octane (All isomers) (CAS 111-65-9)		
Acute		
Inhalation		
LC50	Rat	118 mg/l, 4 Hours
Pentane (CAS 109-66-0)		
Acute		
Inhalation		
LC50	Rat	364 mg/l, 4 Hours

Components	Species	Test Results
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	14.1 ml/kg
Inhalation		
LC50	Rat	49000 mg/m³, 4 Hours
Oral		
LD50	Rat	636 mg/kg
Xylene (o, m, p isomers) (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	4300 mg/kg

Sensitization This substance may have a potential for sensitization which may provoke an allergic reaction among sensitive individuals.

Acute effects Harmful if inhaled, absorbed through skin, or swallowed. Harmful: may cause lung damage if swallowed. Irritating to eyes, respiratory system and skin. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

Local effects

US. ACGIH Threshold Limit Values

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

Chronic effects Repeated exposure of laboratory animals to high concentrations of gasoline vapors has caused kidney damage and cancer in rats and cancer in mice. Gasoline was evaluated for genetic activity in assays using microbial cells, cultured mammalian cells and rat bone marrow cells. The results were all negative so gasoline was considered nonmutagenic under these conditions. Overexposure to this product or its components has been suggested as a cause of liver abnormalities in laboratory animals and humans. Lifetime studies by the American Petroleum Institute have shown that kidney damage and kidney cancer can occur in male rats after prolonged inhalation exposures at elevated concentrations of total gasoline. Kidneys of mice and female rats were unaffected. The U.S. EPA Risk Assessment Forum has concluded that the male rat kidney tumor results are not relevant for humans. Total gasoline exposure also produced liver tumors in female mice only. The implication of these data for humans has not been determined.

Subchronic effects Subchronic inhalation of benzene by rats produced decreased white blood cell counts, decreased bone marrow cell activity, increased red blood cell activity and cataracts. Blood disorders may occur after prolonged inhalation, prolonged skin contact and/or ingestion. Liver and kidney damage may occur after prolonged and repeated exposure.

Carcinogenicity

ACGIH Carcinogens

Benzene (CAS 71-43-2)	A1 Confirmed human carcinogen.
Ethanol (CAS 64-17-5)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Ethylbenzene (CAS 100-41-4)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Gasoline (CAS 86290-81-5)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Toluene (CAS 108-88-3)	A4 Not classifiable as a human carcinogen.
Xylene (o, m, p isomers) (CAS 1330-20-7)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Cumene (CAS 98-82-8)	2B Possibly carcinogenic to humans.
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Gasoline (CAS 86290-81-5)	2B Possibly carcinogenic to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
Xylene (o, m, p isomers) (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

US NTP Report on Carcinogens: Known carcinogen

Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.

Benzene (CAS 71-43-2) Cancer hazard.

Epidemiology Contains benzene. Human epidemiology studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-producing system and serious blood disorders, including leukemia. Animal tests suggest that prolonged and/or repeated overexposure to benzene may damage the embryo/fetus. The relevance of these animal studies to humans has not been fully established. Studies have shown a risk of spontaneous abortions in women exposed to high concentrations of organic solvents during pregnancy.

Mutagenicity In in-vitro experiments, neither benzene, toluene nor xylene changed the number of sister-chromatid exchanges (SCEs) or the number of chromosomal aberrations in human lymphocytes. However, toluene and xylene caused a significant cell growth inhibition which was not observed with benzene in the same concentrations. In in-vivo experiments, toluene changed the number of sister-chromatid exchanges (SCEs) in human lymphocytes. Toluene may cause heritable genetic damage.

Neurological effects Chronic exposure to high concentrations of various hydrocarbon blends may lead to polyneuropathy (peripheral nerve damage), characterized by progressive weakness and numbness in the extremities, loss of deep tendon reflexes and reduction of motor nerve conduction velocity. Numerous cases of polyneuritis have been reported following prolonged exposures to a petroleum fraction containing various isomers of heptane as major ingredients. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue) and/or damage.

Reproductive effects Benzene, xylene and toluene have demonstrated animal effects of reproductive toxicity. Animal studies of benzene have shown testicular effects, alterations in reproductive cycles, chromosomal aberrations and embryo/fetotoxicity. Ethanol has demonstrated human effects of reproductive toxicity. May damage fertility or the unborn child. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Avoid exposure to women during early pregnancy. Avoid contact during pregnancy/while nursing.

Teratogenicity Abusive inhalation of toluene ("glue sniffing") has been reported to be associated with birth defects in the offspring of abusers. Rats exposed to benzene and xylene vapor during pregnancy showed embryo/fetotoxic effects. Ethanol has demonstrated human effects of teratogenicity.

Further information Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
1,2,4, Trimethylbenzene (CAS 95-63-6)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
Benzene (CAS 71-43-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5.3 mg/l, 96 hours
Cumene (CAS 98-82-8)			
Aquatic			
Crustacea	EC50	Brine shrimp (Artemia sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.7 mg/l, 96 hours
Cyclohexane (CAS 110-82-7)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	3.961 - 5.181 mg/l, 96 hours
Ethanol (CAS 64-17-5)			
Aquatic			
Algae	EC50	Freshwater algae	275 mg/l, 72 Hours
		Marine water algae	1970 mg/l
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
		Freshwater fish	11200 mg/l, 96 Hours

Components		Species	Test Results
Invertebrate	EC50	Freshwater invertebrate	5012 mg/l, 48 Hours
		Marine water invertebrate	857 mg/l, 48 Hours
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1 - 4 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	5.5 mg/l, 96 hours
Xylene (o, m, p isomers) (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8 mg/l, 96 Hours

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

Environmental effects The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Aquatic toxicity Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Persistence and degradability Not available.

Bioaccumulation / Accumulation Not available.

Partition coefficient

Ethanol	-0.31
Benzene	2.13
Toluene	2.73
Ethylbenzene	3.15
Xylene (o, m, p isomers)	3.2
Pentane	3.39
Cyclohexane	3.44
Hexane (Other Isomers)	3.6
Cumene	3.66
n-Hexane	3.9
n-Heptane	4.66
Octane (All isomers)	5.18

13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 °F
D018: Waste Benzene

Disposal instructions Dispose in accordance with all applicable regulations. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

14. Transport Information

DOT

Basic shipping requirements:

UN number UN1203

Proper shipping name Gasoline

Hazard class	3
Packing group	II
Additional information:	
Special provisions	139, B33, B101, T8
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Packing group	II
ERG code	3H

IMDG

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	3
Packing group	II
EmS	F-E, S-E

TDG

Proper shipping name	GASOLINE; MOTOR SPIRIT; or PETROL, MARINE POLLUTANT
Hazard class	3
UN number	UN1203
Packing group	II
Marine pollutant	Yes
Special provisions	17

15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (o, m, p isomers) (CAS 1330-20-7)

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

1,2,4, Trimethylbenzene (CAS 95-63-6)	1.0 %
Benzene (CAS 71-43-2)	0.1 %
Cumene (CAS 98-82-8)	1.0 %
Cyclohexane (CAS 110-82-7)	1.0 %
Ethylbenzene (CAS 100-41-4)	0.1 %
n-Hexane (CAS 110-54-3)	1.0 %
Toluene (CAS 108-88-3)	1.0 %
Xylene (o, m, p isomers) (CAS 1330-20-7)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

1,2,4, Trimethylbenzene (CAS 95-63-6)	Listed.
Benzene (CAS 71-43-2)	Listed.
Cumene (CAS 98-82-8)	Listed.
Cyclohexane (CAS 110-82-7)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (o, m, p isomers) (CAS 1330-20-7)	Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

Gasoline: 100
Toluene: 1000
Hexane (Other Isomers): 100
Xylene (o, m, p isomers): 100
Octane (All isomers): 100
Pentane: 100
Cumene: 5000
Ethylbenzene: 1000
Benzene: 10
n-Hexane: 5000
Cyclohexane: 1000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A)
No

Section 311/312 (40 CFR 370)
No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)
Not controlled

Canadian regulations
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status
Controlled

WHMIS classification
B2 - Flammable Liquids
D1A - Immediate/Serious-VERY TOXIC
D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling



Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

State regulations
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

1,2,4, Trimethylbenzene (CAS 95-63-6) Listed.
Benzene (CAS 71-43-2) Listed.

Cumene (CAS 98-82-8)	Listed.
Cyclohexane (CAS 110-82-7)	Listed.
Ethanol (CAS 64-17-5)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Hexane (Other Isomers) (CAS 96-14-0)	Listed.
n-Heptane (CAS 142-82-5)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Octane (All isomers) (CAS 111-65-9)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (o, m, p isomers) (CAS 1330-20-7)	Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Benzene (CAS 71-43-2)	Listed.
Cumene (CAS 98-82-8)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987 Carcinogenic.
Cumene (CAS 98-82-8)	Listed: April 6, 2010 Carcinogenic.
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997 Developmental toxin.
Toluene (CAS 108-88-3)	Listed: January 1, 1991 Developmental toxin.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Toluene (CAS 108-88-3)	Listed: August 7, 2009 Female reproductive toxin.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997 Male reproductive toxin.

US - New Jersey RTK - Substances: Listed substance

1,2,4, Trimethylbenzene (CAS 95-63-6)	Listed.
Benzene (CAS 71-43-2)	Listed.
Cumene (CAS 98-82-8)	Listed.
Cyclohexane (CAS 110-82-7)	Listed.
Ethanol (CAS 64-17-5)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
n-Heptane (CAS 142-82-5)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Octane (All isomers) (CAS 111-65-9)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (o, m, p isomers) (CAS 1330-20-7)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Benzene (CAS 71-43-2)	Special hazard.

US. Massachusetts RTK - Substance List

1,2,4, Trimethylbenzene (CAS 95-63-6)	Listed.
Benzene (CAS 71-43-2)	Listed.
Cumene (CAS 98-82-8)	Listed.
Cyclohexane (CAS 110-82-7)	Listed.
Ethanol (CAS 64-17-5)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Hexane (Other Isomers) (CAS 96-14-0)	Listed.
n-Heptane (CAS 142-82-5)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Octane (All isomers) (CAS 111-65-9)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (o, m, p isomers) (CAS 1330-20-7)	Listed.

US. New Jersey Worker and Community Right-to-Know Act

1,2,4, Trimethylbenzene (CAS 95-63-6)	500 LBS
Benzene (CAS 71-43-2)	500 LBS
Cumene (CAS 98-82-8)	500 LBS
Cyclohexane (CAS 110-82-7)	500 LBS
Ethylbenzene (CAS 100-41-4)	500 LBS
n-Hexane (CAS 110-54-3)	500 LBS

Pentane (CAS 109-66-0)	500 LBS
Toluene (CAS 108-88-3)	500 LBS
Xylene (o, m, p isomers) (CAS 1330-20-7)	500 LBS

US. Pennsylvania RTK - Hazardous Substances

1,2,4, Trimethylbenzene (CAS 95-63-6)	Listed.
Benzene (CAS 71-43-2)	Listed.
Cumene (CAS 98-82-8)	Listed.
Cyclohexane (CAS 110-82-7)	Listed.
Ethanol (CAS 64-17-5)	Listed.
Ethylbenzene (CAS 100-41-4)	Listed.
Gasoline (CAS 86290-81-5)	Listed.
Hexane (Other Isomers) (CAS 96-14-0)	Listed.
n-Heptane (CAS 142-82-5)	Listed.
n-Hexane (CAS 110-54-3)	Listed.
Octane (All isomers) (CAS 111-65-9)	Listed.
Pentane (CAS 109-66-0)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (o, m, p isomers) (CAS 1330-20-7)	Listed.

16. Other Information

Further information

HMIS® is a registered trade and service mark of the NPCA.

Other information

Note: This Material Safety Data Sheet applies to the listed products and synonym descriptions for Hazard Communication purposes only. Technical Specifications vary greatly depending on the products and are not reflected in this document. Consult specification sheets for technical information.

HMIS® ratings

Health: 2*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 3
Instability: 0

Disclaimer

This Material Safety Data Sheet (MSDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this MSDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use , the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.

Material safety data sheet for SKF automotive wheel bearing grease

1. Chemical product and company identification

Trade name: SKF Automotive wheel bearing grease

Synonyms: Red lithium complex R&O EP-2

Product use: Lubricating grease

Supplier: Chemtool Incorporated
8200 Ridgefield Road
P.O. Box 538
Crystal Lake, IL 60039-0538

2. Composition, information on ingredients

Ingredient name	CAS no.	Weight
Distillates, petroleum, severely hydrotreated heavy naphthenic	64742-52-5	30-50 %
Distillates, petroleum, solvent-dewaxed heavy paraffinic petroleum Distillates	64742-65-0	30-50 %
Residual oils, petroleum, solvent-refined	64742-01-4	10-30 %

Composition comments: Refer to section eight for exposure limits on ingredients.
Chemical ingredients not regulated by OSHA or SARA are treated confidentially.

3. Hazards identification

Emergency overview: Exposure to vapors generated at high temperatures, may cause respiratory irritation. For further information, please refer to section 11.

Acute effects:

Chronic effects:

Sensitization: No known information.

Carcinogenicity: IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

Teratogenicity: No known information.

Health warnings:	**Inhalation.** Heating can generate vapors that may cause respiratory irritation, nausea and headaches. Inhalation hazard at room temperature is unlikely due to the low volatility of this product. **Skin contact.** Repeated or prolonged contact can result in drying of the skin. **Eye contact.** Irritating. **Ingestion.** Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.
Other information:	Route of entry: Inhalation. Skin and/or eye contact. Ingestion.
Medical symptoms:	Medical conditions aggravated by exposure: Not determined

4. First aid measures

Inhalation:	Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor of hot product, immediately remove from source of exposure. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.
Eyes:	Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if discomfort continues.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Ingestion:	**Do not induce vomiting!** Get medical attention immediately!

5. Fire fighting measures

Flash point (°C):	> 149 Cd OC (Cleveland open cup).
Flammability limit - lower(%):	N/D
Flammability limit - upper(%):	N/D
Extinguishing media:	Use: Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.
Special fire fighting procedures:	Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.
Unusual fire & explosion hazards:	Pressure will increase in over heated, closed containers.
Hazardous combustion products:	Acrid smoke/fumes. Oxides of: Carbon. Sulfur.
Protective measures in case of fire:	Self-contained breathing equipment and chemical resistant clothing recommended.

6. Accidental release measures

Personal precautions:	Minimize skin contact.
Precautions to protect the environment:	Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.
Spill clean-up procedures:	Keep all sources of ignition and hot metal surfaces away from spill. Avoid contact with eyes or skin. Place leaking containers in well ventilated area. If fire potential exists, blanket spill with foam or use water spray to disperse vapors. Contain spill to minimize contaminated area and facilitate salvage or disposal. To clean up spill, flush area sparingly with water or use absorbant material. Avoid discharge to natural water ways.

7. Handling and storage

Handling precautions:	Keep away from heat, sparks and open flame. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Do not reuse container. Keep lid closed when not in use. Do not store or mix with strong oxidizers. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place.
Storage precautions:	Store separate from strong acids and oxidizers. Keep away from heat, sparks and open flame.
Storage criteria:	Chemical storage.

8. Exposure controls, personal protection

Component	STD	TWA	STEL	TWA	STEL
Distillates, petroleum, severely hydrotreated heavy naphthenic	OSHA ACGIH	5 mg/m 5 mg/m3	3 N/E 10 mg/m3		
Distillates, petroleum, solvent-dewaxed heavy paraffinic petroleum distillates	OSHA ACGIH	5 mg/m3 5 mg/m3	N/E 10 mg/m3		
Residual oils, petroleum, solvent-refined	OSHA ACGIH	5 mg/m3 5 mg/m3	N/E 10 mg/m3		

Protective equipment



Engineering controls:	Use engineering controls to reduce air contamination to permissible exposure level.
Ventilation:	No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.
Respirators:	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
Protective gloves:	Chemical resistant gloves recommended to prevent prolonged or repeated contact. Use protective gloves made of: Neoprene, nitrile, polyethylene or PVC or latex.
Eye protection:	Wear splash-proof eye goggles to prevent any possibility of eye contact.
Protective clothing:	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygienic work practices:	Wash at the end of each work shift and before eating, smoking and using the toilet.

9. Physical and chemical properties

Appearance/physical state:	Grease.		
Color:	Red.		
Odor:	Mild (or faint). Petroleum.		
Solubility description:	Insoluble in water.		
Density:	0.90	**Temperature (°C)**	16
Vapor density (air=1):	> 5		
Vapor pressure:	< 0.01 mmHg	**Temperature (°C)**	20
Evaporation rate:	Nil	**Reference**	BuAc=1
pH-value, conc. solution:	N/A		

10. Stability and reactivity

Stability:	Normally stable.
Conditions to avoid:	Avoid contact with acids and oxidizing substances.
Hazardous polymerization:	Will not occur.
Polymerization description:	Not applicable.
Hazardous decomposition products:	Oxides of: Carbon. Sulfur.

11. Toxicological information

Toxicological information: No experimental toxicological data on the preparation as such is available.

12. Ecological information

Ecological information: There is no ecological data on the product itself.

13. Disposal considerations

Disposal methods: Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

14. Transport information

DOT hazard class: Not regulated.

Identification no.: N/A

U.S. DOT hazard label: No DOT label requirement noted

Sea transport notes: Not regulated.

Air transport notes: Not regulated.

15. Regulatory information

US Federal regulations:

Component	SARA 302	CERCLA	SARA 313
Distillates, petroleum, severely hydrotreated heavy naphthenic	N/A	N/A	N/A
Distillates, petroleum, solvent-dewaxed heavy paraffinic	N/A	N/A	N/A
Petroleum distillates			
Residual oils, petroleum, solvent-refined	N/A	N/A	N/A

Regulatory status: None.

Clean air act:

US State regulations:

Workplace hazardous materials information system - WHIMIS:

Component	Inventories CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
Distillates, petroleum, severely Hydrotreated heavy naphthenic	DSL	Yes	EINECS	Yes	No	Yes	NAV	Yes
Distillates, petroleum, solvent-dewaxed Heavy paraffinic petroleum distillates	DSL	Yes	NAV	NAV	NAV	NAV	NAV	NAV
Residual oils, petroleum, solvent-refined	DSL	Yes	EINECS	Yes	No	Yes	NAV	Yes

16. Other information

Health: Irritation, minor residual injury (1).

Flammability: Burns only if pre-heated (1).

Reactivity: N/A (0).

Prepared by: John Dingess Maria Maka

Date: 2014-11-01

Disclaimer: While the information and recommendations set forth herein are believed to be accurate as of the date thereof, Chemtool Incorporated makes no warranty with respect thereto and disclaims all liability from reliance therein.

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SKF VSM NA
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Suite 200
Elgin, IL 60123
800-882-0008
www.vsm.skf.com

SAFETY DATA SHEET

Section 1. Identification

Product name Fuels, diesel

Other means of identification DMA LS, Marine Distillate Fuels, Ultra Low Sulfur No. 2 Diesel Fuel

SDS # SMF2115

Code SMF2115

Relevant identified uses of the substance or mixture and uses advised against

Product use Fuel for marine engines.

Supplier

BP Products North America Inc.
150 West Warrenville Road
Naperville, Illinois 60563-8460
USA

EMERGENCY HEALTH INFORMATION: 1 (800) 447-8735

Outside the US: +1 703-527-3887 (CHEMTREC)

EMERGENCY SPILL INFORMATION: 1 (800) 424-9300 CHEMTREC (USA)

OTHER PRODUCT INFORMATION

1 (866) 4 BP - MSDS
(866-427-6737 Toll Free - North America)
email: bpcares@bp.com

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms



Signal word Danger

Hazard statements

Combustible liquid.
Harmful if inhaled.
Causes skin irritation.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

Prevention
Obtain special instructions before use.
Wear protective gloves and eye protection.
Do not breathe vapor.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Use explosion-proof electrical/ventilating/lighting/material-handling equipment.
Avoid release to the environment.

Response
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of soap and water.
Take off contaminated clothing and wash it before reuse.

Storage
Keep cool.

Disposal
Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified
This material may contain significant quantities of polycyclic aromatic hydrocarbons (PAHs), some of which have been shown by experimental studies to induce skin cancer.
Note: High Pressure Applications
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.
See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

Section 3. Composition/information on ingredients

May also contain small quantities of proprietary performance additives.

Substance/mixture Mixture

Ingredient name	CAS number	%
Fuels, diesel, No 2 Contains: naphthalene	68476-34-6 91-20-3	> 99 1 - 3

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.

Inhalation
If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

Ingestion
Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.

Protection of first-aiders
No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

Note: High Pressure Applications
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis.
Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

Specific treatments

No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical

Combustible liquid. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous combustion products

Combustion products may include the following:
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)
other hazardous substances.

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Eliminate all ignition sources.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres.

Large spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dike spill area and do not allow product to reach sewage system and surface or ground water. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Avoid contact of spilled material and runoff with soil and surface waterways. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Do not breathe vapor or mist. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/ containers designed for use with this product. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Light hydrocarbon vapors can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapor in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Do not enter storage tanks. If entry to vessels is necessary, follow permit to work procedures. Entry to any tanks or other confined space requires a full risk assessment and appropriate control measures to be put in place in conformance with appropriate regulations and industry practice on confined space entry. When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure

Section 7. Handling and storage

equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is intrinsically safe (i.e. will not produce sparks). Explosive air/vapor mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurized fuel pipes, the vapor or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Fuels, diesel, No 2	**ACGIH TLV (United States). Absorbed through skin.** TWA: 100 mg/m³, (measured as total hydrocarbons) 8 hours. Issued/Revised: 1/2007 Form: Inhalable fraction and vapor
naphthalene	**ACGIH TLV (United States). Absorbed through skin.** TWA: 52 mg/m³ 8 hours. Issued/Revised: 5/1996 TWA: 10 ppm 8 hours. Issued/Revised: 5/1996 **OSHA PEL (United States).** TWA: 50 mg/m³ 8 hours. Issued/Revised: 6/1993 TWA: 10 ppm 8 hours. Issued/Revised: 6/1993

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Chemical splash goggles.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection

Wear chemical resistant gloves. Recommended: Nitrile gloves.

Do not re-use gloves. Protective gloves must give suitable protection against mechanical risks (i.e. abrasion, blade cut and puncture). Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis. The frequency of replacement will depend upon the circumstances of use.

Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.

Body protection

Use of protective clothing is good industrial practice. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required. Wear suitable protective clothing. Footwear highly resistant to chemicals. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and gloves should all be anti-static. When there is a risk of ignition wear inherently fire resistant protective clothes and gloves. Work clothing / overalls should be laundered on a regular basis. Laundering of contaminated work clothing should only be done by professional cleaners who have been told about the hazards of the contamination. Always keep contaminated work clothing away from uncontaminated work clothing and uncontaminated personal clothes. When the risk of skin exposure is high (from experience this could apply to the following tasks: cleaning work, maintenance and service, filling and transfer, taking samples and cleaning up spillages) then a chemical protective suit and boots will be required. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Use only with adequate ventilation. Do not breathe vapor or mist. If ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and P95 particulate filter. If operating conditions cause high vapor concentrations or the TLV is exceeded, use supplied-air respirator.

CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.

Use with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
If there is a requirement for the use of a respiratory protective device, but the use of breathing apparatus (independent of ambient atmosphere) is not required, then a suitable filtering device must be worn.
The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.
The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

Appearance

Physical state Liquid.

Color Yellow. [Light]

Odor Kerosene

Odor threshold Not available.

pH Not available.

Section 9. Physical and chemical properties

Melting point	Not available.
Boiling point	162.78°C (325°F)
Flash point	Closed cup: >60°C (>140°F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Lower: 0.7% Upper: 5%
Vapor pressure	<0.266 kPa (<2 mm Hg) at 20°C
Vapor density	Not available.
Density	860 kg/m³ (0.86 g/cm³)
Solubility	negligible <0.1%
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	257°C (494.6°F)
Decomposition temperature	Not available.
Viscosity	Dynamic: 0.003 Pa·s (3 cP) at 37.778°C Kinematic: 2 to 11 mm^2/s (2 to 11 cSt) at 40°C

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Keep away from heat, sparks and flame. Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. halogenated compounds.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result	Exposure	Remarks
Fuels, diesel, No 2	LC50 Inhalation Dusts and mists	Rat	4.1 mg/l	4 hours	Based on Diesel fuel
	LD50 Dermal	Rabbit	>4300 mg/kg	-	Based on No. 2 Heating Oil.
	LD50 Dermal	Rabbit	>4300 mg/kg	-	Based on Diesel fuel
	LD50 Oral	Rat	17900 mg/kg	-	Based on No. 2 Heating Oil.
	LD50 Oral	Rat	7600 mg/kg	-	Based on Diesel

Section 11. Toxicological information

fuel

Conclusion/Summary Not available.

Irritation/Corrosion

Product/ingredient name	Species	Result	Score	Exposure	Observation	Conc.	Remarks
Fuels, diesel, No 2	Rabbit	Skin - Irritation	-	-	-	-	Based on No. 2 Heating Oil.
	Rabbit	Skin - Irritation	-	-	-	-	Based on Diesel fuel
	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	Based on No. 2 Heating Oil.
	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	Based on Diesel fuel

Sensitizer

Product/ingredient name	Route of exposure	Species	Result	Remarks
Fuels, diesel, No 2	skin	Guinea pig	Not sensitizing	Based on No. 2 Heating Oil.
	skin	Guinea pig	Not sensitizing	Based on Diesel fuel

Mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
Fuels, diesel, No 2	OECD 471	Experiment: In vitro Subject: Non-mammalian species	Positive	Based on Diesel fuel
	Equivalent to OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ	Negative	Based on Heating Oil.
	not guideline	Experiment: In vivo Subject: Unspecified Cell: Somatic	Negative	Based on Heating Oil.

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Carcinogenicity

Product/ingredient name	Species	Route	Exposure	Test	Result	Remarks
Fuels, diesel, No 2	Mouse	Dermal	Positive - Dermal - Unspecified	2 years	-	Based on Heating Oil.

Conclusion/Summary Suspected of causing cancer.

Classification

Product/ingredient name	OSHA	IARC	NTP
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

IARC :
2B - Possible carcinogen to human.

NTP :
Possible - Reasonably anticipated to be human carcinogens.

Reproductive toxicity

Section 11. Toxicological information

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Result	Exposure
Fuels, diesel, No 2	-	-	Negative	Rat	Dermal	20 days
	-	-	Negative	Rat	Dermal	10 days
	-	-	Negative	Rat	Dermal	10 days

Conclusion/Summary Development: Not classified. Based on available data, the classification criteria are not met.
Fertility: Not classified. Based on available data, the classification criteria are not met.
Effects on or via lactation: Not classified. Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Fuels, diesel, No 2	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Fuels, diesel, No 2	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Skin contact Causes skin irritation.

Inhalation Harmful if inhaled.

Ingestion Irritating to mouth, throat and stomach. Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact Adverse symptoms may include the following:
pain or irritation
watering
redness

Skin contact Adverse symptoms may include the following:
irritation
redness

Inhalation Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Ingestion Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects Vapor, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer. May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs. Vapor, mist or fume may irritate the nose, mouth and respiratory tract. Vapor, mist or fume may cause eye irritation. Exposure to vapor, mist or fume may cause stinging, redness and watering of the eyes.

Potential delayed effects As with all such products containing potentially harmful levels of PCAs, prolonged or repeated skin contact may eventually result in dermatitis or more serious irreversible skin disorders including cancer.

Section 11. Toxicological information

Long term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

General	May cause damage to organs through prolonged or repeated exposure. Vapor, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer.
Carcinogenicity	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information	Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product. Do not siphon by mouth.
Additional information	Middle distillate: From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests, the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact with this product in the absence of good personal hygiene. This particular product has not been tested for carcinogenic activity, but we have chosen to be cautious in light of the findings with other distillate streams. Occasional skin contact with this product is not expected to have serious effects, but good personal hygiene should be practiced and repeated skin contact avoided. This product can also be expected to produce skin irritation upon prolonged or repeated skin contact. Personal hygiene measures taken to prevent skin irritation are expected to be adequate to prevent risk of skin cancer. Diesel exhaust particulates have been classified by the National Toxicological Program (NTP) to be a reasonably anticipated human carcinogen. Exposure should be minimized to reduce potential risk. Naphthalene has been reported to cause developmental toxicity in mice after oral exposure to relatively high dose levels, but developmental toxicity was not observed in NTP (National Toxicology Program) sponsored studies in rats and rabbits. Ingestion or inhalation of naphthalene can result in hemolysis and other blood abnormalities, and individuals (and infants) deficient in glucose-6-phosphate dehydrogenase may be especially susceptible to these effects. Inhalation of naphthalene may cause headache and nausea. Airborne exposure can result in eye irritation. Naphthalene exposure has been associated with cataracts in animals and humans.

Section 12. Ecological information

Toxicity

Product/ingredient name	Species	Test/Result	Exposure	Effects	Remarks

Section 12. Ecological information

Fuels, diesel, No 2	Micro-organism	EL50 >1000 mg/l Nominal Fresh water	40 hours	growth inhibition	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Micro-organism	NOELR 3.217 mg/l Nominal Fresh water	40 hours	growth inhibition	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Algae	Acute EL50 22 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Daphnia	Acute EL50 210 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Daphnia	Acute EL50 68 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Algae	Acute ErL50 78 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Fish	Acute LL50 65 mg/l Nominal Fresh water	96 hours	Mortality	Based on Diesel fuel
	Fish	Acute LL50 21 mg/l Nominal Fresh water	96 hours	Mortality	Based on Diesel fuel
	Algae	Acute NOELR 10 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Algae	Acute NOELR 1 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Daphnia	Acute NOELR 46 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Fish	Chronic NOEL 0.083 mg/l Nominal Fresh water	14 days	Mortality	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Daphnia	Chronic NOELR 0.2 mg/l Nominal Fresh water	21 days	Immobilization	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel

Conclusion/Summary Not available.

Persistence and degradability

Not available.

Product/ingredient name	Test	Result	Remarks

Section 12. Ecological information

Fuels, diesel, No 2	OECD 301 F	60 % - Readily - 28 days	Based on Diesel fuel
	OECD 301 F	57.5 % - Not readily - 28 days	Based on Diesel fuel
	Equivalent to EPA OTS 796. 3100	35 % - Not readily - 28 days	Based on Gas Oils (petroleum), solvent refined

Conclusion/Summary Not available.

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Mobility in soil

Soil/water partition coefficient (K_{OC}) Not available.

Mobility Spillages may penetrate the soil causing ground water contamination. This material may accumulate in sediments.

Other adverse effects No known significant effects or critical hazards.

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

Section 13. Disposal considerations

Disposal methods The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Naphthalene	91-20-3	Listed	U165

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	NA 1993	UN 1202	UN1202	UN1202
UN proper shipping name	DIESEL FUEL	DIESEL FUEL	DIESEL FUEL MARINE POLLUTANT	DIESEL FUEL

Section 14. Transport information

Transport hazard class(es)	Combustible liquid.	3 	3 	3 
Packing group	III	III	III	III
Environmental hazards	No.	No.	Yes.	No.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity. **Reportable quantity** 3333.3 lbs / 1513.3 kg [464.86 gal / 1759.7 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	-	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Proper shipping name MARPOL Annex 1 rules apply for bulk shipments by sea.
Category: gas oils, including ship's bunkers

Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b) All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	naphthalene	91-20-3	1 - 3
Supplier notification	naphthalene	91-20-3	1 - 3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts The following components are listed: NAPHTHALENE

New Jersey The following components are listed: NAPHTHALENE; MOTH FLAKES

Pennsylvania The following components are listed: NAPHTHALENE

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.
naphthalene; ethylbenzene; cumene

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
toluene

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
Benzene

Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including diesel exhaust, a Prop 65 carcinogen, and carbon monoxide, a Prop 65 reproductive toxin.

Other regulations

Australia inventory (AICS) At least one component is not listed.

Canada inventory All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

Japan inventory (ENCS) Not determined.

Korea inventory (KECI) All components are listed or exempted.

Philippines inventory (PICCS) At least one component is not listed.

REACH Status For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0
Personal protection		X

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.)



History

Date of issue/Date of revision	10/07/2014.
Date of previous issue	10/03/2014.
Key to abbreviations	ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

1. Identification

Product identifier	**RemOx® S ISCO Reagent**
Other means of identification	Not available.
Recommended use	Remediation of soils and groundwater.
Recommended restrictions	Use in accordance with supplier's recommendations.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer/Supplier	CARUS CORPORATION
Address	315 Fifth Street, Peru, IL 61354, USA
Telephone	815 223-1500 - All other non-emergency inquiries about the product should be directed to the company
E-mail	salesmkt@caruscorporation.com
Website	www.caruscorporation.com
Contact person	Dr. Chithambarathanu Pillai
Emergency Telephone	For Hazardous Materials [or Dangerous Goods] Incidents ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at CHEMTREC®, USA: 001 (800) 424-9300 CHEMTREC®, Mexico (Toll-Free - must be dialed from within country): 01-800-681-9531 CHEMTREC®, Other countries: 001 (703) 527-3887

2. Hazard(s) identification

Physical hazards	Oxidizing solids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1B
	Specific target organ toxicity, single exposure	Category 1 (Respiratory System)
	Specific target organ toxicity, repeated exposure	Category 1 (Respiratory System, central nervous system)

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. Causes damage to organs (Respiratory System). Causes damage to organs (Respiratory System, central nervous system) through prolonged or repeated exposure.

Precautionary statement

Prevention Keep away from heat. Take any precaution to avoid mixing with combustibles/ Keep/Store away from clothing//combustible materials. Wash thoroughly after handling. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product.

Response In case of fire: Use water for extinction. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Not classified.

Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 1

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Potassium permanganate		7722-64-7	> 97.5

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.

Skin contact Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Get medical attention immediately. Wash contaminated clothing before reuse.

Contact with skin may leave a brown stain of insoluble manganese dioxide. This can be easily removed by washing with a mixture of equal volume of household vinegar and 3% hydrogen peroxide, followed by washing with soap and water.

Eye contact Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Continue rinsing. Get medical attention immediately.

Ingestion Immediately rinse mouth and drink plenty of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately.

Most important symptoms/effects, acute and delayed Contact with this material will cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Decomposition products are alkaline. Brown stain is insoluble manganese dioxide.

General information In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Flood with water from a distance, water spray or fog.

Unsuitable extinguishing media The following extinguishing media are ineffective: Dry chemical. Foam. Carbon dioxide (CO2). Halogenated materials.

Specific hazards arising from the chemical May intensify fire; oxidizer. May ignite combustibles (wood, paper, oil, clothing, etc.). Contact with incompatible materials or heat (135 ºC / 275 ºF) could result in violent exothermic chemical reaction. Oxidizing agent, may cause spontaneous ignition of combustible materials. By heating and fire, corrosive vapors/gases may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Dike fire control water for later disposal. Water runoff can cause environmental damage.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep upwind. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors and contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Keep combustibles (wood, paper, oil, etc.) away from spilled material. Do not let product be released into the environment. This product is miscible in water. Stop leak if possible without any risk. Dike the spilled material, where this is possible. Clean up spills immediately by sweeping or shoveling up the material. Do not return spilled material to the original container; transfer to a clean metal or plastic drum. To clean up potassium permanganate solutions, follow either of the following two options:

Option # 1: Dilute to approximately 6% with water, and then reduce with sodium thiosulfate, a bisulfite or ferrous salt solution. The bisulfite or ferrous salt may require some dilute sulfuric acid (10% w/w) to promote reduction. Neutralize with sodium carbonate to neutral pH, if acid was used. Decant or filter and deposit sludge in approved landfill. Where permitted, the sludge may be drained into sewer with large quantities of water.

Option # 2: Absorb with inert media like diatomaceous earth or inert floor dry, collect into a drum and dispose of properly. Do not use saw dust or other incompatible media. Disposal of all materials shall be in full and strict compliance with all federal, state, and local regulations pertaining to permanganates.

To clean contaminated floors, flush with abundant quantities of water into sewer, if permitted by federal, state, and local regulations. If not, collect water and treat as described above.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the MSDS.

Environmental precautions

Do not allow to enter drains, sewers or watercourses. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling

Take any precaution to avoid mixing with combustibles. Keep away from clothing and other combustible materials. Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe dust or mist or vapor of the solution. If clothing becomes contaminated, remove and wash off immediately. When using, do not eat, drink or smoke. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed and in a well-ventilated place. Store in a cool, dry place. Store away from incompatible materials (See Section 10). Follow applicable local/national/international recommendations on storage of oxidizers. Store in accordance with NFPA 430 requirements for Class II oxidizers.

Before using, read Material Safety Data Sheet (MSDS) for this product.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Potassium permanganate (CAS 7722-64-7)	Ceiling	5 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Potassium permanganate (CAS 7722-64-7)	TWA	0.2 mg/m3

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

Components	Type	Value	Form
Potassium permanganate (CAS 7722-64-7)	TWA	1 mg/m3	Fume.

US NIOSH Pocket Guide to Chemical Hazards: Short Term Exposure Limit (STEL)

Components	Type	Value	Form
Potassium permanganate (CAS 7722-64-7)	STEL	3 mg/m3	Fume.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Follow standard monitoring procedures.

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. An eye wash and safety shower must be available in the immediate work area.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

Skin protection	
Hand protection	Use protective gloves made of: Rubber or plastic. Suitable gloves can be recommended by the glove supplier.
Other	Wear chemical-resistant, impervious gloves.
Respiratory protection	In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Measurement Element: Manganese (Mn) 10 mg/m3 Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100. Any supplied-air respirator. 25 mg/m3 Any supplied-air respirator operated in a continuous-flow mode. Any powered, air-purifying respirator with a high-efficiency particulate filter. 50 mg/m3 Any air-purifying, full-face piece respirator equipped with an N100, R100, or P100 filter. Any supplied-air respirator with a tight-fitting face piece that is operated in a continuous-flow mode. Any powered, air-purifying respirator with a tight-fitting face piece and a high-efficiency particulate filter. Any self-contained breathing apparatus with a full face piece. Any supplied-air respirator with a full face piece. 500 mg/m3 Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode. Emergency or planned entry into unknown concentrations or IDLH conditions - Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode. Escape Any air-purifying, full-face piece respirator equipped with an N100, R100, or P100 filter. Any appropriate escape-type, self-contained breathing apparatus.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Dark purple solid with metallic luster.
Physical state	Solid.
Form	Solid.
Color	Dark purple.
Odor	Odorless.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Starts to decompose with evolution of oxygen (O2) at temperatures above 150 °C. Once initiated, the decomposition is exothermic and self sustaining.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non flammable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	2.7 (20 °C) (Water = 1)
Solubility(ies)	6 % (20 °C) 20 % (65 °C)
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Explosive properties	Not explosive. Can explode in contact with sulfuric acid, peroxides and metal powders.
Molecular weight	158.03
Oxidizing properties	Strong oxidizing agent.

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Contact with combustible material may cause fire. Can explode in contact with sulfuric acid, peroxides and metal powders. Starts to decompose with evolution of oxygen (O2) at temperatures above 150 °C. Once initiated, the decomposition is exothermic and self sustaining.
Conditions to avoid	Contact with incompatible materials or heat (135 °C / 275 °F) could result in violent exothermic chemical reaction.
Incompatible materials	Acids. Peroxides. Reducing agents. Combustible material. Metal powders. Contact with hydrochloric acid liberates chlorine gas.
Hazardous decomposition products	By heating and fire, corrosive vapors/gases may be formed.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Harmful if swallowed.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Contact with this material will cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
Potassium permanganate (CAS 7722-64-7)		
Acute		
Oral		
LD50	Rat	780 mg/kg, 14 days, (Male) 525 mg/kg, 14 days, (Female)

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitization	Not classified.
Skin sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Specific target organ toxicity - single exposure	Causes damage to organs (respiratory system).

Specific target organ toxicity - repeated exposure	Causes damage to organs (respiratory system, central nervous system) through prolonged or repeated exposure.
Aspiration hazard	Not classified.
Chronic effects	May cause damage to respiratory system. Prolonged exposure, usually over many years, to manganese oxide fume/dust can lead to chronic manganese poisoning, chiefly affecting the central nervous system.
Further information	No other specific acute or chronic health impact noted.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Potassium permanganate (CAS 7722-64-7)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	2.7 mg/l, 96 hours, static
			2.3 mg/l, 96 hours, flow through
			2.3 mg/l, 96 hours
			1.8 - 5.6 mg/l
		Carp (Cyprinus carpio)	3.16 - 3.77 mg/l, 96 hours
			2.97 - 3.11 mg/l, 96 hours
		Goldfish (Carassius auratus)	3.3 - 3.93 mg/l, 96 hours, static
		Milkfish, salmon-herring (Chanos chanos)	> 1.4 mg/l, 96 hours
		Rainbow trout (Oncorhynchus mykiss)	1.8 mg/l, 96 hours
			1.08 - 1.38 mg/l, 96 hours
			0.77 - 1.27 mg/l, 96 hours
		Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.275 - 0.339 mg/l, 96 hours

Persistence and degradability	Expected to be readily converted by oxidizable materials to insoluble manganese oxide.
Bioaccumulative potential	Potential to bioaccumulate is low.
Mobility in soil	Not available.
Mobility in general	The product is water soluble and may spread in water systems.
Other adverse effects	None known.

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Ignitable waste The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Rinse container at least three times to an absence of pink color before disposing. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1490
UN proper shipping name	Potassium permanganate
Transport hazard class(es)	5.1
Subsidiary class(es)	-
Packing group	II
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Labels required	5.1
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	152
Packaging non bulk	212
Packaging bulk	240

IATA

UN number	UN1490
UN proper shipping name	Potassium permanganate
Transport hazard class(es)	5.1
Subsidiary class(es)	-
Packaging group	II
Environmental hazards	Yes
Labels required	5.1
ERG Code	5L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IMDG

UN number	UN1490
UN proper shipping name	POTASSIUM PERMANGANATE
Transport hazard class(es)	5.1
Subsidiary class(es)	-
Packaging group	II
Environmental hazards	
Marine pollutant	Yes
Labels required	5.1
EmS	F-H, S-Q
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

Drug Enforcement Administration (DEA) (21 CFR 1310.02 (b) 8: List II chemical.

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (6 CFR 27, Appendix A): Listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	Yes

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Potassium permanganate (CAS 7722-64-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)	Hazardous substance
Safe Drinking Water Act (SDWA)	Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Potassium permanganate (CAS 7722-64-7) 6579

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Potassium permanganate (CAS 7722-64-7) 15 % wt

DEA Exempt Chemical Mixtures Code Number

Potassium permanganate (CAS 7722-64-7) 6579

Food and Drug Administration (FDA) Not regulated.

US state regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

California OSH Hazardous Substance List: Listed.

US. Massachusetts RTK - Substance List

Potassium permanganate (CAS 7722-64-7)

US. New Jersey Worker and Community Right-to-Know Act

Potassium permanganate (CAS 7722-64-7) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

Potassium permanganate (CAS 7722-64-7)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-03-2013

Revision date -

Version # 01

Further information Not available.

List of abbreviations LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.

References HSDB® - Hazardous Substances Data Bank
Registry of Toxic Effects of Chemical Substances (RTECS)
ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

This safety data sheet was prepared in accordance with the Safety Data Sheet for Chemical Products (JIS Z 7250:2005). The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change and, therefore, holders and users should satisfy themselves that they are aware of all current data and regulations relevant to their particular use of product. CARUS CORPORATION DISCLAIMS ALL LIABILITY FOR RELIANCE ON THE COMPLETENESS OR ACCURACY OR THE INFORMATION INCLUDED HEREIN. CARUS CORPORATION MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTIABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE OF THE PRODUCT DESCRIBED HEREIN. All conditions relating to storage, handling, and use of the product are beyond the control of Carus Corporation, and shall be the sole responsibility of the holder or user of the product.

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APPENDIX D

HEAT ILLNESS PRVENTION PLAN



PROCEDURES FOR HEAT ILLNESS PREVENTION

Employer Name: Tetra Tech

Work Site: 10153 Folsom Blvd., Rancho Cordova, CA

The following designated person or persons (Program Administrator Safety Coordinator / Supervisor/Foreman/Field Supervisor/Crew Leader) have the authority and responsibility for implementing the provisions of this program at this worksite.

Name/Title	Responsibility	Telephone No.
Tetra Tech Personnel:		
Betty Li	Program Manager	(916) 853-1800 (office)
Keith Hoofard	Project Manager/SSC	(916) 709-4732 (cell)
Zack Laforet	Field Supervisor	(603) 801-1624 (cell)
Garrett Kuhl	Field Staff	(650) 804-8412 (cell)
Robert Rolon, CIH	Corporate Health & Safety (HSR)	(407) 448-9553

California Employers with any outdoor places of employment must comply with the Heat Illness Prevention Standard T8 CCR 3395. These procedures have been created to assist the employer in crafting their heat illness prevention procedures, and to reduce the risk of work related heat illnesses among their employees.

These procedures are not intended to supersede or replace the application of any other Title 8 regulation, particularly T8 3203 Injury and Illness Prevention Program (IIPP). Title 8 CCR 3203 requires an employer to establish, implement, and maintain an effective IIPP. The measures listed here may be integrated into the Employer's Injury and Illness Prevention Program.

The employer must also be aware that other standards apply to Heat Illness Prevention such as the requirement to provide for drinking water, first aid and emergency response.

Please note: These procedures provide the minimal steps applicable to most outdoor work settings and are essential to reducing the incidence of heat related illnesses. In working environments with a higher risk for heat illness (e.g., during a heat wave, or other severe working or environmental conditions), Tetra Tech will exercise greater caution and additional protective measures beyond what is listed in this document, as needed to protect their employees.

For additional information on preventing Heat Related Illness, please visit the DOSH website at: http://www.dir.ca.gov/DOSH/DOSH/HeatIllnessInfo.html

HEAT ILLNESS PREVENTION ELEMENTS

The elements reflected within this Heat Illness Prevention guide are those contained in Title 8 of the California Code of Regulations, Section 3395 (T8 CCR 3395) and consist of the following:

- Provision of Water
- Access to Shade
- Procedures for Handling a Heat Wave
- Weather Monitoring and Acclimatization
- Written Procedures
- Training



> PROVISION OF WATER

Water is a key preventive measure to minimize the risk of heat related illnesses.

3395 (c) Employees shall have access to potable drinking water meeting the requirements of Sections 1524, 3363, and 3457, as applicable. Where the supply of water is not plumbed or otherwise continuously supplied, water shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Employers may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift as needed to allow employees to drink one quart or more per hour. The frequent drinking of water, as described in (e), shall be encouraged.

To ensure access to sufficient quantities of potable drinking water, the following steps will be taken:

- Tetra Tech employee will bring at least 2 quarts per employee at the start of the shift. Each subcontractor's employer will also bring same quantities of water for their employees.
- Supervisor/designated person will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.
- Water containers will be located as close as practicable to the areas where employees are working (given the working conditions and layout of the worksite), to encourage the frequent drinking of water. If field terrain prevents the water from being placed as close as possible to the workers, bottled water or personal water containers will be made available, so that workers can have drinking water readily accessible.
- When drinking water levels within a container drop below 50%, the water shall be replenished immediately; or water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Disposable/single use drinking cups or bottles will be provided to employees, or provisions will be made to issue employees their own cups or bottles each day.

- Water will be fresh, pure, and suitably cool and provided to employees free of charge. During hot weather, the water must be cooler than the ambient temperature but not so cool as to cause discomfort.
- When employees are working across large areas, water will be placed in multiple locations.
- All water containers will be kept in sanitary condition. Water from non-approved or non-tested water sources (e.g., untested wells) is not acceptable. If hoses or connections are used, they must be governmentally approved for potable drinking water systems, as shown on the manufactures label.

To encourage frequent drinking of potable water, the following steps will be taken:

- Supervisor will provide frequent reminders to employees to drink frequently, and more water breaks will be provided.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift.
- When the temperature equals or exceeds 95 degrees Fahrenheit or during a heat wave, pre-shift meetings will be held before start of work to encourage employees to drink plenty of water, and remind employees of their right to take a cool-down rest when necessary will be conducted. Additionally, the number of water breaks will be increased. Supervisors/foreman will lead by example and workers will be reminded throughout the work shift to drink water.
- Noise making devices, such as air horns, may be used to remind employee's to take their water break.

> ACCESS TO SHADE

Access to rest and shade or other cooling measures are important preventive steps to minimize the risk of heat related illnesses.

3395 (d) Access to shade

(1) Shade shall be present when the temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work area exceeds 80 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling. The amount of shade present shall be at least enough to accommodate the number of employees on recovery or rest periods, so that they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shade shall be located as close as practicable to the areas where employees are working. Subject to the same specifications, the amount of shade present during meal periods shall be at least enough to accommodate the number of employees on the meal period who remain onsite.

(2) Shade shall be available when the temperature does not exceed 80 degrees Fahrenheit. When the outdoor temperature in the work area does not exceed 80 degrees Fahrenheit employers shall either provide shade as per subsection (d)(1) or provide timely access to shade upon an employee's request.

(3) Employees shall be allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade shall be permitted at all times. An individual employee who takes a preventative cool-down rest:

(A) shall be monitored and asked if he or she is experiencing symptoms of heat illness; (B) shall be encouraged to remain in the shade; and (C) shall not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event less than 5 minutes in addition to the time needed to access the shade.

(4) If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the employer shall provide appropriate first aid or emergency response according to subsection (f) of this section

To ensure access to shade at all time and to a preventative recovery period, the following steps will be taken:

- Shade structures will be opened and placed as close as practical to the workers, when the temperature equals or exceeds 80 degrees Fahrenheit. When the temperature is below 80 degrees Fahrenheit, access to shade will be provided promptly, when requested by an employee.

Note: The interior of a vehicle may not be used to provide shade unless the vehicle is air-conditioned and the air conditioner is on.

- Enough shade structures will be available at the site, to accommodate all of the employees who are on such a break at any point in time. During meal periods there will be enough shade for all of the employees who choose to remain in the general area of work or in areas designated for recovery and rest periods. (Employers may rotate employees in and out of meal periods, as with recovery and rest periods.)
- Daily, workers will be informed of the location of the shade structures and will be encouraged to take a five minute cool-down rest in the shade. An employee who takes a preventative cool-down rest break will be monitored and asked if he/she is experiencing symptoms of heat illness and in no case will the employee be ordered back to work until signs or symptoms of heat illness have abated. (see also the section on Emergency Response for additional information)
- Shade structures will be relocated to follow along with the crew and they will be placed as close as practical to the employees, so that access to shade is provided at all times. All employees on a recovery, rest break or meal period will have full access to shade so they can sit in a normal posture without having to be in physical contact with each other.
- In situations where it is not safe or feasible to provide access to shade (e.g., during high winds), a note will be made of these unsafe or unfeasible conditions, and of the steps that will be taken to provide shade upon request.

Procedures for Monitoring the Weather

- The Tetra Tech field supervisor will check the weather in advance to determine whether high temperatures or a heat wave is expected. The field supervisor will check readily available internet National Weather Service website (www.nws.noaa.gov/).
- A thermometer will be used at the jobsite to monitor for sudden increases in temperature, and to ensure that once the temperature exceeds 80 degrees F, shade structures will be opened and made available to the workers. In addition, when the temperature equals or exceeds 95 degrees F, additional preventive measures such as the High Heat Procedures will be implemented.

> PROCEDURES FOR HANDLING A HEAT WAVE:

For purposes of this section only, “heat wave” means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit **and** at least ten degrees Fahrenheit higher than the average high daily temperature in the preceding five days.

- During a heat wave or heat spike, the work day will be cut short or rescheduled (example conducted at night or during cooler hours).
- During a heat wave or heat spike, and before starting work, tailgate meetings will be held, to review the company heat illness prevention procedures, the weather forecast and emergency response. In addition, if schedule modifications are not possible, workers will be provided with an increased number of water and rest breaks and will be observed closely for signs and symptoms of heat illness.
- Tetra Tech will ensure effective employee observation/monitoring by implementing one or more of the following to be on the lookout for signs and symptoms of heat illness and to ensure that emergency procedures are initiated when someone displays possible signs or symptoms of heat illness:
    - Supervisor or designee observation of 20 or fewer employees, or
    - Mandatory buddy system, or
    - Regular communication with sole employee such as by radio or cellular phone, or
    - Some other means of observation.

> HIGH HEAT PROCEDURES:

High Heat Procedures are additional preventive measures that this company will use when the temperature equals or exceeds 95 degrees Fahrenheit.

- Effective communication by voice, direct observation (applicable for work crews of 20 or fewer), mandatory buddy system, or electronic means will be maintained, so that employees at the worksite can contact a supervisor when necessary. If the supervisor is unable to be near the workers (to observe them or communicate with them), then an electronic device, such as a cell phone or text messaging device, may be used for this purpose if reception in the area is reliable.
- Frequent communication will be maintained with employees working by themselves or in smaller groups (keep tabs on them via phone or two-way radio), to be on the lookout for possible symptoms of heat illness. The employee(s) will be contacted regularly and as frequently as possible throughout the day, since an employee in distress may not be able to summon help on his or her own.
- Effective communication and direct observation for alertness and/or signs and symptoms of heat illness will be conducted frequently. When the supervisor is not available, a designated alternate responsible person must be assigned, to look for signs and symptoms of heat illness. If a supervisor, designated observer, or any employee reports any signs or symptoms of heat illness in any employee, the supervisor or designated person will take immediate action commensurate with the severity of the illness (see Emergency Response Procedures).
- Employees will be reminded constantly throughout the work shift to drink plenty of water and take preventative cool-down rest break when needed.

> PROCEDURES FOR ACCLIMATIZATION:

Acclimatization is the temporary and gradual physiological change in the body that occurs when the environmentally induced heat load to which the body is accustomed is significantly and suddenly exceeded by sudden environmental changes. In more common terms, the body needs time to adapt when temperatures rise suddenly, and an employee risks heat illness by not taking it easy when a heat wave strikes or when starting a new job that exposes the employee to heat to which the employee's body hasn't yet adjusted.

Inadequate acclimatization can be significantly more perilous in conditions of high heat and physical stress. Employers are responsible for the working conditions of their employees, and they must act effectively when conditions result in sudden exposure to heat their employees are not used to.

- The weather will be monitored daily. The supervisor will be on the lookout for sudden heat wave(s), or increases in temperatures to which employees haven't been exposed to for several weeks or longer. During a heat wave or heat spike, the work day will be cut short (example 12 p.m.), will be rescheduled (example conducted at night or during cooler hours) or if at all possible cease for the day.
- New employees, or those employees who have been newly assigned to a high heat area will be closely observed by the supervisor or designee for the first 14 days. The intensity of the work will be lessened during a two-week break-in period (such as scheduling slower paced, less physically demanding work during the hot parts of the day and the heaviest work activities during the cooler parts of the day (early-morning or evening). Steps taken to lessen the intensity of the workload for new employees will be documented.
- The supervisor, or the designee will be extra-vigilant with new employees and stay alert to the presence of heat related symptoms. New employees will be assigned a "buddy" or experienced coworker to watch each other closely for discomfort or symptoms of heat illness. During a heat wave, all employees will be observed closely (or maintain frequent communication via phone or radio), to be on the lookout for possible symptoms of heat illness. Employees and supervisors will be trained on the importance of acclimatization, how it is developed and how these company procedures address it

> SAMPLE PROCEDURES FOR EMERGENCY RESPONSE:

- Every morning, Tetra Tech employees will be reminded about site addresses and directions to the worksite and emergency procedures (see HASP), to avoid a delay of emergency medical services.
- Supervisors of each company will carry cell phones or other means of communication, to ensure that emergency services can be called, and check that these are functional at the worksite prior to each shift. See HASP for medical emergency facility location and phone numbers.
- When an employee is showing symptoms of possible heat illness, steps will be taken immediately to keep the stricken employee cool and comfortable once emergency service responders have been called (to reduce the progression to more serious illness). Under no

circumstances will the affected employee be left unattended.

- During a heat wave or hot temperatures, workers will be reminded and encouraged to immediately report to their supervisor any signs or symptoms they are experiencing.
- Employees and supervisors training will include every detail of these written emergency procedures.

> WRITTEN PROCEDURES

Written procedures help reduce the risk of heat related illnesses, and ensure that emergency assistance is provided without delay.

3395 (i) Heat Illness Prevention Plan. The employer shall establish, implement, and maintain shall be in writing in both English and the language understood by the majority of the employees and shall be made available at the worksite to employees and to representatives of the Division upon request. The Heat Illness Prevention Plan may be included as part of the employer's Illness and Injury Prevention Program required by 3203, and shall, at a minimum, contain:

(1) Procedures for the provision of water and access to shade.
(2) The high heat procedures referred to in subsection (e).
(3) Emergency Response Procedures in accordance with subsection (f).
(4) Acclimatization methods and procedures in accordance with subsection (g).

> TRAINING

Training is critical to help reduce the risk of heat related illnesses and to assist with obtaining emergency assistance without delay.

3395 (e) (1) Employee training: Training in the following topics shall be provided to all supervisory and non-supervisory employees:

(A) The environmental and personal risk factors for heat illness;

(B) The employer's procedures for complying with the requirements of this standard;

(C) The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;

(D) The importance of acclimatization;

(E) The different types of heat illness and the common signs and symptoms of heat illness;

(F) The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;

(G) The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;

(H) The employer's procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;

(I) The employer's procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Note: T8 CCR 3203(a)(3) requires that communication for employees shall be in a form readily understandable by all affected employees.

(e) (2) Supervisor training: Prior to assignment to supervision of employees working in the heat, training on the following topics shall be provided:

(A) The information required to be provided by section (e) (1) above.

(B) The procedures the supervisor is to follow to implement the applicable provisions in this section.

(C) The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

To ensure employees are trained and are provided training, the following steps will be taken:

- Tetra Tech and each subcontractor's employees will receive heat illness prevention training from their respective employers prior to working outdoors. Especially all newly hired employees. All workers will read and comply with heat illness prevention brochures attached to this document.
- On hot days, and during a heat wave, supervisors will hold short tailgate meetings to review this important information with all workers.
- All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understood the training and follow the company procedures.
- Supervisors will be trained prior to being assigned to supervise outdoor workers.

> PROCEDURES FOR HANDLING A SICK EMPLOYEE:

Tetra Tech will implement effective emergency response procedures including:

- Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor or emergency medical services when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable. If an electronic device will not furnish reliable communication in the work area, the employer will ensure a means of summoning emergency medical services.
- Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided.
- If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in any employee, the supervisor shall take immediate action commensurate with the severity of the illness.
- If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), the employer must implement emergency response procedures.

- An employee exhibiting signs or symptoms of heat illness shall be monitored and shall not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the employer's procedures.
- Contacting emergency medical services and, if necessary, transporting

APPENDIX B
Perimeter Air and Dust Monitoring Plan

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AIR AND DUST MONITORING PLAN

SOIL CLEANUP
10153 FOLOSOM BLVD,
RANCHO CORDOVA, CALIFORNIA

March 15, 2022

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1.0 INTRODUCTION

This air and dust monitoring plan addresses methods for monitoring potential fugitive dust and volatile organic compound (VOC) emissions – laden dust around the work area perimeter during soil excavation and trenching activities within the 10153 Folsom Blvd, Rancho Cordova (the "Site"). A description of field monitoring instruments, field monitoring protocols, air sampling procedures, action levels, and meteorological monitoring is presented.

The purpose of the perimeter air and dust monitoring is to protect members of the public from being exposed to elevated concentrations of dust and/or VOC contaminants while soil is being excavated and stockpiled on-site. Residential development is present immediately west and north of the proposed excavation area and overall Site boundary. Commercial development is located southwest and south of the Site. Additional residential development present east of the Site along with a Folsom Lake College building.

The primary VOC chemical of concern (COC) at this site is tetrachloroethene (PCE), with lesser concentrations of trichloroethene (TCE) and cis-1,2-dchlorothene (cis-1,2-DCE) having been detected intermittently in on-site media (soil, groundwater, and soil vapor) since initial investigation work in 2008. Subsequent on-site soil vapor and groundwater extraction activities resulted in reduced concentrations of the three COCs. Concentrations of dust (to be measured as particles less than 10 microns in diameter, referred to as "PM10") and VOCs in ambient air around the work perimeter will be compared to action levels to document that the work being performed is protective of public health. Should monitoring results exceed action levels then work practices will be modified in response to the exceedance. Such modifications could include additional soil wetting to minimize dust and volatilization of VOCs, and/or placement of clean soil over suspected VOC-impacted soil to minimize volatilization of VOCs.

While this plan addresses the potential for exposure by members of the public in proximity of the Site while excavating and loading soil into trucks, it does not address the potential for exposure by Site workers. The potential for exposure by Site workers will be handled separately by the contractors under their respective health and safety plans, as different monitoring procedures and action levels apply to Site workers as opposed to members of the public. Tetra Tech has developed a Site-specific Health and Safety Plan for the on-site Tetra Tech employees.

Figure 1 shows the Site and proposed excavation area. The Site is currently a vacant lot which includes vegetated soil areas, some trees, and remnant asphalt paved parking areas. An inactive sewer line runs through the northwest quadrant of the Site, including through the proposed soil excavation area. Perimeter air monitoring stations are indicated on Figure 2, marking the locations where periodic real-time VOC and dust measurements will be collected. As the active work area will be limited to the west half of the Site, the eastern air monitoring station will be established near the center of the Site, instead of the far eastern fence line.

2.0 SUMMARY OF SOIL EXCAVATION

The soil excavation area is planned for a total depth of 15 feet below ground surface (bgs). The excavation includes removing the sanitary sewer line within the excavation limits as well as the balance of the sewer that extends beyond the excavation footprint. The soil will be removed using a standard excavator and loaded into a transport truck for stockpiling and covering just east of the excavation. The resultant excavation sidewalls will be sloped for safety, according to the Competent Person's determination (e.g., 1:1 slope).

Routine real-time air and dust monitoring will be conducted during all excavation, stockpiling and backfilling activities, with laboratory air samples collected three times during the excavation phase of the work at selected depth intervals.

3.0 PERIMETER AIR AND DUST MONITORING LOCATIONS

Perimeter air and dust monitoring will be performed at four fixed locations outside the work area, as shown on Figure 2. The locations will provide monitoring data close to the adjacent residential area.

Visual evidence of fugitive dust emissions will be assessed by the Tetra Tech field representative. Visual dust emissions will trigger additional soil wetting to suppress fugitive dust from becoming airborne and potentially leaving the Site.

4.0 FIELD MONITORING INSTRUMENTS

Perimeter air monitoring will be performed during soil excavation, stockpiling, and backfill, consisting of: 1) real-time dust monitoring using portable dust monitors; and 2) real-time VOC monitoring using a portable screening level photo-ionizing detector (PID). Ambient 8-hour air samples will also be collected three times during the excavation phase for

laboratory analysis of VOCs. Collection of 8-hour ambient air samples will facilitate achieving low laboratory reporting limits of VOCs in air, lower than the field instruments can reach. The laboratory samples will also report concentrations of specific compounds, whereas the field monitoring provides for a total of all VOCs in air that the instrument can recognize (ionize). Since automobile and equipment exhaust and other external sources can affect field instrument readings, the field monitoring results can contain false-positive readings due to influences from compounds not related to the Site.

A description of the real-time field monitoring instrumentation is presented below.

4.1 Real-Time Dust Monitors

Real-time dust monitoring and data logging will be performed using a Thermo Scientific personal DataRAM (pDR-1000AN) instrument, or equivalent. The pDR-1000AN instrument measures mass concentrations of dust, smoke, mists, and fumes in real time, and can sound an audible alarm whenever the user-defined action level is exceeded. According to product literature, the pDR-1000AN is a light scattering photometer (i.e., nephelometer) incorporating a pulsed, high output, near infrared light emitting diode source, a silicon detector/ hybrid preamplifier, and collimating optics and a source reference feedback PIN silicon detector.

The datalogging option will be enabled on the dust monitor, allowing the pDR-1000AN to automatically tag and time stamp the collected data to be stored for subsequent retrieval, printing or computer graphing.

The unit will be calibrated (zeroed) at the beginning of each day before earthwork commences, and the zeroing documented. The unit is zeroed by drawing in filtered ambient air using a “z-pouch”. The instrument provides continuous readouts of instantaneous and time-averaged dust levels and will provide an average dust level at the end of each monitoring period (workday).

The dust monitors will be rented from a reputable equipment supplier such as EnviroTech, Pine Environmental, or Argus-Hazco.

Results of the real time dust monitoring will be used to document field dust (PM-10) conditions throughout each day of field work while soil excavation is being performed within the Site.

Visible dust emissions will trigger response actions to suppress the dust, including additional wetting of the soil.

4.2 Real-Time VOC Monitor

Real-time VOC monitoring will be performed using a ppbRAE 3000 PID equipped with a 10.6 eV lamp. The ppbRAE 3000 has an extended measuring range of 1 part per billion (ppb) to 10,000 parts per million (ppm) and has humidity compensation.

The unit will be calibrated at the beginning of each day with 10 ppm isobutylene calibration gas and zeroed using either ambient air passed through a carbon filter cartridge or certified zero gas, and the calibration documented.

The PID will be rented from a reputable equipment supplier such as EnviroTech, Pine Environmental, or Argus-Hazco.

5.0 FIELD MONITORING PROTOCOLS

A description of the field monitoring protocols is presented below.

5.1 Real-Time Dust Monitoring

Real-time dust monitoring will be performed at four stations located around the excavation and stockpile area (Figure 2). The dust monitors will be mounted to a fence, support pole or placed on a surface approximately 5-feet above grade. The dust monitors will be operational during periods in which soil is being excavated, stockpiled, and backfilled, and will continuously monitor and log dust concentrations at 1-minute intervals. The daily average dust reading will be recorded at the end of each field day. Dust readings will also be recorded manually on a field sheet throughout every 60-mintues throughout the workday.

Field personnel will periodically check each instrument during the day for proper operation and battery life.

Visual evidence of fugitive dust emissions will be assessed by the Tetra Tech field representative during each day soil is excavated and/or loaded into trucks. Visual dust emissions will trigger additional soil wetting to suppress fugitive dust from becoming airborne and potentially leaving the Site. The real-time dust monitoring data will be used to establish actual dust conditions throughout each day that soil is handled, and to

correlate measured dust sample results with observed periods of visible fugitive dust emissions, if any. If visible fugitive dust is observed, a reading from the nearest dust monitor will be recorded within a few minutes of that observation.

5.2 Real-Time VOC Monitoring

Real-time VOC air monitoring will be conducted by field personnel during periods of active earthwork (excavation, stockpiling, backfill). Field measurements will be collected at the four perimeter monitoring station locations with the ppbRAE 3000 PID at approximate 60-minute intervals during active earthwork. The field readings will be collected at the same four locations as the dust reading stations. Monitoring results will be recorded on a field sheet, noting station, time, and current excavation activities/depths below grade. Real-time VOC air monitoring will also be performed more frequently near the areas of active soil excavation during each field day (direct soil readings) and recorded on the field sheet. Direct soil readings will be collected roughly every 15-minutes until a baseline is established in each excavation depth interval (see below), then every 30- to 60-minutes thereafter. Additional direct soil readings will be collected if site conditions change, or unexpected soil impacts are encountered. A grid will be developed for the excavation area to aid in noting the location where direct soil readings were taken and at what depth.

The real-time monitoring results will be compared to a target total VOC concentration value to assess whether response actions are necessary to suppress VOC emissions. Response actions would include soil wetting.

6.0 AIR SAMPLING PROCEDURES FOR LABORATORY ANALYSIS

To augment real-time dust and VOC field monitoring, work perimeter ambient air samples will be periodically collected for laboratory analysis during excavation and stockpiling of soil. A minimum of three sampling episodes will be performed while excavating down to 15-feet below grade – the first event during the 0-to-5-foot depth interval, the second event during the 5-to-10-foot depth interval, and the third event during the 10-to15-foot depth interval. The perimeter ambient air samples will be collected from the same locations as the dust and VOC field monitoring stations. One ambient background air sample will also be collected during the 8-hour air sampling events. The background sample will be placed near the east site boundary, away and upwind of the active work area. If the prevailing wind direction is west to east (or otherwise) during air sample collection, the background sample will be moved to the upwind side of the site.

Each ambient air sample will be collected in a laboratory-supplied SIM-Certified 6-liter Summa canister, equipped with an 8-hour sample flow regulator. The sample intake will be positioned approximately 5-feet above grade. Prior to initiating sample collection, the canister number, sample ID, and vacuum will be noted for each canister and recorded on a chain of custody form. At the end of the 8-hour sample collection period, the final canister vacuum will be noted, the canisters properly packaged, and delivered to Eurofins Air Toxics laboratory for analysis.

Each air sample will be analyzed for tetrachloroethene (PCE), trichloroethene (TCE) and cis-1,2-DCE, in addition to two additional compounds often detected at dry cleaner sites (trans-1,2-DCE and vinyl chloride) using EPA Method TO-15 (SIM). The data will be reported in micrograms per cubic meter ($\mu g/m^3$). The laboratory reporting limits in $\mu g/m^3$ for each compound, dependent on the final sample volume and assuming a dilution factor of 1, are approximately:

PCE – 0.19

TCE – 0.15

Cis-1,2-DCE - 0.11

Trans-1,2-DCE - 0.55

Vinyl chloride – 0.035

The laboratory results of perimeter ambient air monitoring will be compared to screening levels to assess the significance of the results. Screening levels are presented in Section 9.0. As the air sample results will be received following completion of the soil excavation in the target depth interval, they will serve to document air quality conditions for the record.

7.0 METEOROLOGICAL MONITORING

Prior to the on-set of earthwork activities within the Site, a weather monitoring station will be installed along the Site perimeter to continuously monitor daily wind patterns (speed and direction), as well as other conditions such as temperature and humidly.

Meteorological data will be manually recorded at approximately every 60 minutes. The information will be entered into field notes. Photographs of the monitor display may also be taken to supplement the field notes. The weather station will be operational throughout the time that soil is being excavated and stockpiled.

Results of the meteorological monitoring will allow for determination of factors that could have a bearing on field conditions, such as wind speed and direction. The results will allow for determination of up-wind and down-wind areas during different times of each day, and correlation between perimeter air sample results and wind/temperature conditions. Comparing up-wind perimeter air monitoring results to down-wind air monitoring results will be helpful in evaluating whether ambient air conditions may be affected by Site excavation and soil handling activities.

8.0 REPORTING

Results of the perimeter air and dust monitoring will be presented in a written report to be prepared at the conclusion of the soil cleanup activities.

9.0 AIR MONITORING COMPARISON CRITERIA

Comparison levels for VOCs in ambient air will be the California Region 2 Regional Water Quality Control Board Environmental Screening Levels (ESLs) for cancer hazard endpoint, commercial/industrial air (ESL Table 1A-1, 2019 rev 2). If a cancer endpoint value does not exist, the non-cancer hazard value is used. The commercial/industrial air value is used rather than the residential air value because the commercial/industrial air exposure duration of a workday matches the potential exposure posed by the work activities at the site (8-hour workday). Tetra Tech notes that the commercial/industrial ESLs are predicated on chronic exposure over a 25-year time frame. Conversely, potential exposure posed by the soil excavation would only occur over the duration of the soil excavation activities, which are anticipated to take approximately 2 weeks. Therefore, use of the ESLs is conservative and extremely protective.

Comparison levels for the laboratory analytical results of the air samples from the Site are as follows:

PCE	2.0 µg/m^3
TCE	3.0 µg/m^3
Cis-1,2-DCE	35 µg/m^3 (non-cancer hazard)
Trans-1,2-DCE	350 µg/m^3 (non-cancer hazard)
Vinyl chloride	0.16 µg/m^3

9.1 Real-Time Field Monitoring – PID Action Level

Real-time VOC air monitoring will be periodically performed with a part per billion (ppb) level PID instrument, the ppbRAE 3000 model, or equivalent.

The PID measurements will be compared to an action level of 500 ppbv (0.5 ppmv). The 500 ppbv value has been used at DTSC-lead cleanup sites for VOCs and can be used as a real-time screening value for these VOCs at the Site. Additionally, a 500 ppbv value is considered technically achievable using the PID meter.

In practice, ambient total VOC concentrations may periodically approach 500 ppbv depending on climate conditions, construction equipment exhaust, traffic exhaust, and other possible sources of emissions. The PID meter will be field calibrated daily prior to the start of work, and background readings away from the work area will be collected and recorded daily.

As described in the Tetra Tech Health and Safety Plan, a field PID reading of 5 ppmv (5,000 ppbv) will be used as an action level for worker safety. The action level is based on Cal-OSHA permissible exposure levels (PELs) and includes safety factors. Use of PEL values in evaluating potential exposure to non-workers is not appropriate.

9.2 Dust Monitoring and Action Level

Real-time perimeter air monitoring for dust will be periodically performed with an instrument such as a Thermo Scientific personal DataRAM (pDR-1000AN), or equivalent. The instrument records concentrations of dust (suspended particulate matter) less than 10 microns in size (PM10).

The Sacramento Metropolitan Air Quality Management District's (SMAQMD's) Air Quality Standard for PM10 is 50 µg/m^3 (0.050 mg/m^3), measured as a 24-hour TWA. The 24-hour TWA value is converted to an 8-hour TWA value for use as an action level at the Site since work will only be performed over an 8-hour time-period each day. Review of annual 2021 data for the Sacramento Valley Air Basin (Sacramento-T Street location), obtained from the California Air Resources Board AQMIS website, shows an average background PM10 of 23.3 µg/m^3 in 2021 (average of 12-month daily averages).

The 8-hour TWA value is therefore calculated as follows:

$$\text{8-hour TWA} = \frac{(24\text{hrs} \times \text{PM10 Air Quality Standard}) - (16\text{ hrs} \times \text{PM10 Background})}{8\text{ hrs}}$$

$$= \frac{(24\text{ hrs} \times 50\ \mu g/m^3) - (16\text{ hrs} \times 23.3\ \mu g/m^3)}{8\text{ hrs}}$$

$$= \frac{1{,}200\ \text{hrs-}\mu g/m^3 - 372.8\ \text{hrs-}\mu g/m^3}{8\text{ hrs}}$$

$$= \frac{827.2\ \text{hrs-}\mu g/m^3}{8\text{ hrs}}$$

$$= 103.4\ \mu g/m^3$$

The action level for dust (PM10) at the Site will be 103.4 µg/m^3 as an 8-hour TWA value.

Visible dust emissions will be used on a short-term basis as an indication to modify work practices, such as increasing soil wetting to suppress dust.

Background readings will be collected prior to start of work each day and may also be collected later in the day if readings throughout the day become elevated and potential ambient sources are suspected.

Action/Comparison Level Summary

Perimeter air monitoring action levels for use at the Site are as follows:

Monitoring Method	**Compound**	**Action Level**
Real Time	VOCs	500 ppbv
	Dust (PM10)	103 µg/m^3 (8-hr TWA)
Summa Canisters	PCE	2.0 µg/m^3
	TCE	3.0 µg/m^3
	Cis-1,2-DCE	35 µg/m^3
	Trans-1,2-DCE	350 µg/m^3
	Vinyl Chloride	0.16 µg/m^3

9.3 Comparison Criteria Exceedances

The comparison levels to be used for VOCs are based on screening levels (not cleanup values) published by the RWQCB. Screening levels are appropriate for use as comparison levels because they are conservative and protective of human health. As such, if exceeded, that does not necessarily indicate a human health threat.

If dust or PID action levels are exceeded, then additional water will be applied to the soil to suppress fugitive emissions. Clean soil may also be temporarily added to the surface of soil suspected as being impacted to aid in suppressing emissions. If dust or PID levels cannot be adequately controlled through the application of clean soil or additional water, excavation activities will be halted until a plan can be implemented to maintain concentrations below the action level.

Monitoring real-time dust levels throughout each day at the four fixed monitoring station locations, along with looking for visible emissions, will allow for quick response if needed to add additional water to suppress dust. Real time VOC monitoring at the four station locations will also be used to trigger additional water application if VOC concentrations exceed 500 ppbv.

If laboratory test results from the quantitative VOC monitoring events show one or more compounds detected above screening levels, then the RWQCB will be notified of the exceedance(s). As the laboratory data will be received after the soil excavation work has been completed in the excavation depth interval, the data will be for the record only. The use of real-time dust/VOC monitoring instrumentation remains the most effective method for mitigating emissions while actively handling soil.

10.0 REFERENCES

Regional Water Quality Control Board Environmental Screening Levels, ESL Workbook, Table 1A-1, prepared by the Regional Water Quality Control Board, San Francisco Bay Region, dated January 2019 (Rev 2).

2021 Daily PM10 Averages, Sacramento T-Street Monitoring Station, California Air Resources Board AQMIS database, online data retrieval 3/7/2022.



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TITLE: EXTENT OF SOIL EXCAVATION, ADDITIONAL SITE REMEDIATION LOCATIONS, AND SEWER LINE REMOVAL

LOCATION: 10153 Through 10179 Folsom Boulevard
Rancho Cordova, California

TETRA TECH

APPROVED	BL
DRAFTED	CP
PROJECT#	117-9040001
DATE	03-14-22

FIGURE 1

AVB-1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,200
10	200

AVB-2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
10	<13

AVB-3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	15
10	<12

AVB-4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	48
10	150

AVB-5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	160
10	410

AVB-6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	95
10	400

AVB-7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	110
10	490

AVB-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	270
10	190

AVB-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	1,000
10	140

AVB-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	3,300
10	1,600

DB-1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	2,400
15	1,200

DB-2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	78
15	380

DB-3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	56
15	62

DB-4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	15
15	<13

DB-5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	46

DB-6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	75
15	240

DB-7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
14	59

DB-8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	130
15	NS

DB-9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	51

DB-10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	44
14	98

DB-11	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	39
15	140

DB-12	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	140
15	160

TTVP1	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP2	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP3	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP4	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP5	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP6	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP7	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	54

TTVP8	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP9	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP10	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP11	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP12	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP13	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	14

TTVP14	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	<13

TTVP15	
DEPTH (Ft, BGS)	PCE (µg/m3)
5	<13
15	NS

BETTENCOURT LANE

REMOVE ENTIRE OLD SEWER LINE

BACKGROUND

CAPRICE DR

PASEO DRIVE

AM-3

FORMER DRY CLEANER AND SEWER LINE AREA

AM-2

Proposed Stockpile Area

FORMER PARKING LOT AREA

AM-1

AM-4

FOLSOM BOULEVARD

LA LOMA DRIVE

MATHER FIELD ROAD

N

AIR MONITORING STATION

LEGEND

- RISK <= 10^{-6} AND HQ <=1
- 10^{-6} < RISK <= 10^{-4} AND HQ <= 1
- RISK > 10^{-4} OR HQ > 1
- GROUNDWATER EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- PRE-DESIGN INVESTIGATION LOCATION
- SANITARY SEWER LINE LOCATION (APPROXIMATE)
- SOIL EXCAVATION EXTENT

0 120 240

SCALE IN FEET

AIR MONITORING STATIONS

LOCATION: 10153 Through 10179 Folsom Boulevard
Rancho Cordova, California

TETRA TECH

APPROVED	BL
DRAFTED	CP
PROJECT#	117-9040001
DATE	03-14-22

FIGURE 2

P:\ACAD\9040-001-CORD\9040001009A.DWG

Appendices

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Appendix 5.6-2 Site Cleanup Plan Addendum

TETRA TECH

August 30, 2023

Isabella Hagopian
Engineering Geologist, Private Sites Cleanup Unit
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Re: ***Site Cleanup Plan Addendum, Former Lily Company Property, 10153 – 10175 Folsom Boulevard, Rancho Cordova, California***

Dear Ms. Hagopian:

On behalf of City of Rancho Cordova (the City), Tetra Tech, Inc. (Tetra Tech) prepared the Site Cleanup Plan Addendum (the Addendum) for the former Lily Company site located at 10153 – 10175 Folsom Boulevard, Rancho Cordova, California (the Site), in accordance with our call on August 10, 2023.

Background

The environmental impact identified at the Site is related to historical operation of a former dry cleaner. The Site has been previously remediated via soil vapor extraction (SVE) from 2010 – 2016 and groundwater extraction from 2014 to 2017. Residual tetrachloroethene (PCE) was identified in soil vapor after the remediation, which appeared to be emanating from residual PCE in soil along a sewer line onsite. The City plans to conduct additional remediation at the Site, and a *Site Cleanup Plan, Former Lily Company Property, 10153 – 10175 Folsom Boulevard, Rancho Cordova, California* (the Cleanup Plan) was subsequently prepared and approved by the Central Valley Regional Water Quality Control Board (the RWQCB) in a RWQCB letter dated March 30, 2022.

In summary, the planned additional remediation detailed in the Cleanup Plan includes additional SVE and soil excavation, stockpiling, and backfill. The stockpiles of the excavated soil will be sampled. Depending on the soil sampling results, dry potassium permanganate may be added to the stockpiled soil prior to backfill and compaction. The dosing of the oxidant will be based on the results of a bench scale test. For the planned oxidant use, the RWQCB's March 30, 2022 letter indicates that "Central Valley Water Board staff may require additional information on the use of the oxidant addition prior to approval".

The City, the RWQCB, and Tetra Tech had a conference call on August 10, 2023 to discuss the RWQCB's note in the approval letter for oxidant use at the Site. Per the call, this addendum is prepared to provide additional information about the planned soil handling at the Site for the stockpiled soil.

Tetra Tech, Inc.
3101 Zinfandel Drive, Suite 200, Rancho Cordova, California 95670
Tel +1.916.853.4500 | tetratech.com

Planned Soil Handling

Soil will be excavated, stockpiled, and sampled in accordance with the approved Cleanup Plan. Since the highest PCE soil concentration found at the Site was 54 microgram per kilogram (µg/kg)[1] it is expected the PCE concentrations in the stockpiled soil would be low. Based on the stockpile soil PCE concentrations, the excavated soil will be handled as follows:

- Soil with PCE concentrations greater than the San Francisco Bay RWQCB Environmental Screening Level (ESL) for residential Soil Direct Exposure Human Health Risk Screening (i.e., 590 µg/kg): the soil in the stockpiles will be disposed offsite.
- Soil with positive PCE detections at concentrations between 60 and 590 µg/kg: the soil in the stockpiles will be aerated via additional mechanic soil mixing (e.g., relocation of stockpiles) or landfarming. Before backfill, dry potassium permanganate will be mixed with the soil at a dosing of 3 - 4% by weight, in accordance with the soil oxidant demand bench scale test results (Attachment A). As discussed in the Cleanup Plan, the oxidant is expected to react with the residual PCE (if any) and natural organics in the soil when in contact and when tap water is applied as part of the backfill and compaction processes.
- Soil with positive PCE detections at concentrations lower than 60 µg/kg: the soil in the stockpiles will be aerated via additional mechanic soil mixing (e.g., relocation of stockpiles) or landfarming.
- Soil without PCE detections: the soil in the stockpiles will be backfilled directly.

Closing

If additional information is needed or you have any question, please feel free to contact Betty Li at (916) 853-4525.

Sincerely,

Tetra Tech



Betty Li, PhD

Senior Environmental Engineer

Enclosure:

Attachment A

cc: Ms. Kristine Courdy and Mr. Stefan Heisler, City of Rancho Cordova

[1] Tetra Tech, 2022. Additional Soil and Soil Vapor Testing, Former Lily Company Property, 10153 – 10175 Folsom Boulevard, Rancho Cordova, California.

Attachment A – Bench Scale Test Laboratory Report

PRIMA ENVIRONMENTAL INC.
Questions Answered.

August 2, 2023

Betty Li, Ph.D.
Tetra Tech
3101 Zinfandel Drive, Suite 200
Rancho Cordova, CA 95670

RE: Report of Findings, $KMnO_4$ Soil Oxidant Demand and Mixing
Client Project ID: 10153 Folsom
PRIMA Project ID: TT-Folsom

Dear Dr. Li:

This letter report describes the results of the soil oxidant demand (SOD) measurement conducted by PRIMA Environmental, Inc on two soil samples from the 10153 Folsom site.

Sample Receipt and Preparation

Two soil samples (10153Folsom-A, 10153Folsom-B) were received on July 5, 2023. $KMnO_4$ SOD was measured for each sample. Prior to testing, each sample was sieved to remove particles greater than 4 mesh then homogenized.

Materials

Potassium Permanganate, $KMnO_4$. ACS reagent grade $KMnO_4$ was used for these tests.

Procedures

For each soil, five reactors containing 20 g soil and 20 mL of $KMnO_4$ solution were prepared, with each reactor containing a different initial concentration of $KMnO_4$ ranging from 512 to 20,800 mg/L $KMnO_4$. Controls containing $KMnO_4$ solution, but no soil were also prepared. The reactors were placed on a shaker table. At 48 hours, the reactors were destructively sampled and the residual $KMnO_4$ was measured via visible spectroscopy by PRIMA. Because all $KMnO_4$ was consumed in all reactors, two additional reactors were set. These reactors contained 10 g soil and 20 mL $KMnO_4$ solution. The reactors were mixed and analyzed as before. The SOD was calculated as follows:

5070 Robert J. Mathews Parkway, Suite 300, El Dorado Hills, CA 95762
Ph (916) 939-7300 • Fax (916) 939-7398
www.primaenvironmental.com

$$SOD = ([Ox]_{init} - [Ox]_t) \times (V/M)$$

where

- SOD is soil oxidant demand, in g (or mg) oxidant/kg soil
- $[Ox]_{init}$ is the initial concentration of oxidant, in g (or mg) oxidant/L
- $[Ox]_t$ is the concentration of oxidant at time, t, in g (or mg) oxidant/L
- V is total volume of the aqueous phase, in L
- M is mass of soil, in kg

Results

The results of the 48-hour $KMnO_4$ SOD test are shown in **Table 1** (attached)**.** The SOD was similar for both samples, ranging from 32,000 to 43,000 mg $KMnO_4$/kg soil, depending upon the initial concentration of $KMnO_4$. These values are considered very high. Higher SOD values with increasing initial concentration of $KMnO_4$ is a common phenomenon.

If you have any questions regarding these results, please give me a call at 916-939-7300. Thank you for the opportunity to be of service.

Sincerely,
PRIMA Environmental, Inc.

Cindy G. Schreier, Ph.D.
President

Table 1. 48-Hour $KMnO_4$ SOD Results.

Soil ID	Soil to $KMnO_4$ Ratio	Initial $KMnO_4$ mg/L	$KMnO_4$ Remaining mg/L	$KMnO_4$ Consumed^ mg/kg soil
Control (No soil)	1:1*	512	507	not applicable
	1:1*	1,010	947	
	1:1*	2,510	2,530	
	1:1*	5,210	5,180	
	1:1*	20,800	21,000	
	1:2**	20,600	20,700	
	1:2**	43,500	44,000	
Soil 10153 Folsom-A	1:1	512	< 20	> 510
	1:1	1,010	< 5	> 1,000
	1:1	2,510	< 5	> 2,500
	1:1	5,210	< 5	> 5,200
	1:1	20,800	< 5	> 21,000
	1:2	20,600	4,600	32,000
	1:2	43,500	22,480	42,000
Soil 10153 Folsom-B	1:1	512	< 20	> 510
	1:1	1,010	< 5	> 1,000
	1:1	2,510	< 5	> 2,500
	1:1	5,210	< 5	> 5,200
	1:1	20,800	< 5	> 21,000
	1:2	20,600	4,560	32,000
	1:2	43,500	22,100	43,000

* These Controls associated with soil tests using 1:1 ratio.

** These Controls associated with soil tests using 1:2 ratio.

^wet-weight basis

PRIMA ENVIRONMENTAL INC. Questions Answered.

5070 Robert J Mathews Parkway, Suite 300
El Dorado Hills, CA 95762
916-939-7300
www.primaenvironmental.com

Sample Receipt Summary

Date/Time: July 5, 2023

Client/Company: Tetra Tech - Folsom ($KMnO_4$)

Project:

	Yes	No	N/A
Custody seals intact?	☐	☐	☒
Chain of custody Present?	☐	☐	☒

If no, list number of samples and Sample ID

Ice present?	☐	☐	☒
If no, what is temperature? _____			
Samples in good condition?	☒	☐	☐
If no, explain:			
Do sample IDs on containers match IDs on COC?	☒	☐	☐
If no, explain:			

Other Comments:

PRIMA ENVIRONMENTAL INC. Questions Answered.
5070 Robert J. Mathews Parkway, Suite 300 • El Dorado Hills, CA 95762
(916) 939-7300 • www.primaenvironmental.com

Project Manager: Betty Li
Company: Tetra Tech
Phone:
Email: Betty.Li@tetratech.com

Project Name: 10153 Folsom
Project Number:
TAT: standard
Sampler Signature:

SAMPLE ID	Date	Time	Matrix	# Containers	Analysis or Proposal Description/Date (test per Betty Li)	Comments
10153 Folsom-A	7-5-23	900		1		
10153 Folsom-B	"	930		1		
10153 Folsom-Dosage	"	1000		1		

Special Instructions	Relinquished by:		Received by:
	Company Tetra Tech	Date July 5, 2023 (CST)	Company PRIMA
	Printed Name Zach Laforet	Time 1227	Printed Name Cindy Schreier
	Signature		Signature
	Relinquished by:		Received by:
	Company	Date	Company
	Printed Name	Time	Printed Name
	Signature		Signature

Matrix key: S - soil/sediment; W - water; OT - other

Appendices

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Appendix 5.6-3 Site Remediation Notice of Exemption

NOTICE OF EXEMPTION

To: ☐ Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

☒ County Clerk-Recorder
Sacramento County
600 8th Street
Sacramento, CA 95814

From: City of Rancho Cordova
Public Works Department
2729 Prospect Park Drive
Rancho Cordova, CA 95670

Project Title:	**SEWER LINE REMOVAL AND SOIL EXCAVATION AND BACKFILL**
Project Location:	Northeast corner of Folsom Boulevard and La Loma Drive
Assessor's Parcel Number(s):	076-0020-019, -20, -21, -22
Project Description:	The City of Rancho Cordova proposes to remove an old sewer pipe section from an approximately 1.1-acre excavation area at the Project Location. The soil within the excavation area will be stockpiled onsite, and then backfilled to the excavation area. The site will be restored to its original condition after the excavation and backfill.
Lead Agency:	City of Rancho Cordova
Applicant:	City of Rancho Cordova 2729 Prospect Park Drive Rancho Cordova, CA 95670

Exemption Status:

☐ Ministerial [Section 21080(b); 15268];

☐ Declared Emergency [Section 21080(b)(3); 15269(a)];

☐ Emergency Project [Section 21080(b)(4); 15269(b)(c)];

☒ Minor Alterations to Land [Section 15304(f)

☐ Categorical Exemption [Section 15301(a), Existing Facilities];

☐ Approval of Rates, Tolls, Fares, and Charges [Section 21080(b)(8)(D)];

☐ Statutory Exemption [Section 15273(a)(4)].

REASONS WHY THIS PROJECT IS EXEMPT OR DOES NOT REQUIRE FURTHER ENVIRONMENTAL DOCUMENTATION:

The project is exempt under State CEQA Guidelines Section 15304(f), which states (in part):

> *Class 4 consists of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. Examples include, but are not limited to:*
>
> *f) Minor trenching and backfilling where the surface is restored*

The California Environmental Quality Act (Section 21000, et. seq. of the California Public Resources Code, hereafter CEQA) requires analysis of agency approvals of discretionary "projects." A "project," under CEQA, is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." The proposed project would remove an old sewer line section within an approximate 1.1-acre area. The soil within the 1.1-acre area

would also be excavated to approximately 15 feet deep and stockpiled onsite for aeration purpose. The aeration would allow volatile organic compounds in the soil vapor to dissipate, if any. The City will conduct soil testing of the stockpiles and, when determined to be clean, the soil will be returned to the excavation site and the former grades will be established. The overall goal of this project is to remove the sewer line and reduce potential contamination to below the minimum regulatory screening levels for residential projects.

The proposed activity is considered a project as defined by CEQA. Pursuant to CEQA Guidelines Section 15304, trenching and backfilling of soil where the ground surface is restored to the original condition is generally exempt except for parcels of land located in an area of statewide, regional, or areawide concern identified in Section 15206(b)(4) and the property does not have significant values for wildlife habitat or other environmental purposes. The property is not located in an area of statewide, regional, or areawide concern identified in Section 15206(b)(4) and the use of the property and adjacent property has not changed since the time of purchase by the City of Rancho Cordova. Therefore, the project is exempt from further CEQA analysis.

By _____

Stefan Heisler, Environmental Coordinator
City of Rancho Cordova
(916) 851-8757
November 1, 2023

Appendices

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Appendix 5.9-1 Noise Impact Assessment

Noise Impact Assessment

Mills Crossing Project

Rancho Cordova, California

Prepared For:

Placeworks, Inc.
101 Parkshore Drive, Suite 112
Folsom, California 95630

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
55 Hanover Lane, Suite A
Chico, California 95973

June 2023

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ATTACHMENTS

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Attachment B – Federal Highway Noise Prediction Model (FHWA-RD-77-108) Outputs – Project Traffic Noise
Attachment C – Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction
Attachment D – SoundPLAN 3-D Noise Model Outputs – Project Onsite Noise Propagation

LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
ADT	Average Daily Trips
APN	Assessor's Parcel Number
CAlEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
City	City of Rancho Cordova
CNEL	Community Noise Equivalent Level
County	Sacramento County
dB	Decibel
dBA	Decibel is A-weighted
FB-RMU	Residential Mixed-Use
FBSP	Folsom Boulevard Specific Plan
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FTA	Federal Transit Administration
Hz	Hertz
L_{dn}	Day-night average sound level
L_{eq}	Measure of ambient noise
L_{max}	The maximum A-weighted noise level during the measurement period.
L_{min}	The minimum A-weighted noise level during the measurement period.
NIOSH	National Institute for Occupational Safety and Health
OPR	Office of Planning and Research
OSHA	Federal Occupational Safety and Health Administration
PPV	Peak particle velocity
Project	Mills Crossing Project
RMS	Root mean square
RMU	Residential Mixed-Use
RMU (FBSP)	Residential Mixed-Use – Folsom Boulevard Specific Plan
STC	Sound Transmission Class
VdB	Vibration Velocity Level

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the Mills Crossing Project (Project), which proposes the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers in Rancho Cordova, California. This assessment was prepared as a comparison of predicted Project noise levels to noise standards promulgated by the City of Rancho Cordova General Plan Noise Element and the City of Rancho Cordova Municipal Code. The purpose of this report is to estimate Project-generated noise levels and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

The Project Site is a 9.85-acre property located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County, and encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22. The Proposed Project Area is roughly bounded by Folsom Boulevard to the south, La Loma Drive to the west, El Caprice Drive to the east, and residential housing to the north fronting Malaga Way and Ashbury Court. Surrounding land uses includes the residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova Civic Center to the east, light industrial uses to the south, and commercial and residential uses to the west. The Mather Field/Mills Train Station is located directly across Folsom Boulevard from the Project Site and can be accessed via a pedestrian crosswalk with stop-traffic control. Additionally, the site is fronted by a Class II bike lane on Folsom Boulevard.

The Project Site is located within the Folsom Boulevard Specific Plan area. The Folsom Boulevard Specific Plan (FBSP or Specific Plan) is the primary planning tool the City uses to guide future development and redevelopment within the Specific Plan area. It seeks to increase the density of both housing and commercial activity; increase pedestrian, bicycle, and transit trips to, from, and through the area; increase the visibility of the corridor as a destination; and change the dynamic and image to that of a high demand, thriving urban area. The site is zoned Residential Mixed-Use – Folsom Boulevard Specific Plan (RMU [FBSP]). The RMU (FBSP) Zoning District is intended to designate property for the development of medium and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the City encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development.

The Project Site has a City of Rancho Cordova General Plan land use designation of Residential Mixed-Use (FB-RMU).

The Project proposes a mix of land uses as follows:

Community-Commercial Buildings

The community-commercial buildings would include up to 140,000 square feet of uses, and would include the following:

- Health and Wellness
    - Community Health Clinic – up to 30,000 square feet
- Events and Meetings Space
    - Space for meetings, community and cultural events, banquet, and weddings – up to 15,000 square feet
- Arts Center (Subtotal – up to 35,000 square feet)
    - Flex Theater (black/white/green box) – up to 18,000 square feet
    - Flexible Classrooms and Rehearsal Space – up to 6,000 square feet
    - Production/Artist's Studios – up to 4,000 square feet
    - Gallery/Exhibits – up to 4,000 square feet
    - Administrative Space – up to 3,000 square feet
- Community-Commercial Building (Subtotal – up to 52,500 square feet)
    - Commercial Office-Anchor – up to 25,000 square feet
    - Commercial Office-Shared – up to 10,000 square feet
    - Flexible Studios 1 – up to 5,000 square feet
    - Flexible Studios 2 – up to 7,500 square feet
    - Commercial Kitchen – up to 5,000 square feet
- Commercial-Retail (Subtotal – up to 7,500 square feet)
    - Fresh Market, Food and Beverage, Café, Retail – up to 5,000 square feet
    - Café – up to 2,500 square feet

Housing

The Proposed Project would provide up to 120 dwelling units, as follows:

- Between 55-60 Multi-Family Affordable Apartments
- Between 50-60 Zero Lot Line Townhouse-Style Homes for Sale

Public Open Space

The Proposed Project would include up to 2.5 acres of public open space as follows:

- Between 1.3-1.5 acres of Neighborhood and Community Greens
- Between 0.75-1.0-acre of Plaza and Green Space

Parking Structure

The Proposed Project would include a parking structure with between 275-325 parking spaces.

The Project Site would be accessible via Folsom Boulevard to the south and La Loma Drive to the west of the Project Site.

Construction activities would involve the removal of vegetation and paved areas; grading to finished design elevations; excavation to allow construction of building foundations, utilities, roadways, parking areas, sidewalks, and landscaping. Equipment used during construction may include, but is not limited to, crawler tractors, tractors, loaders, backhoes, excavators, graders, scrapers, cranes, forklifts, generator sets, welders, pavers, paving equipment, rollers, and air compressors. It is anticipated that construction of the Project would occur from 2024 through 2029.

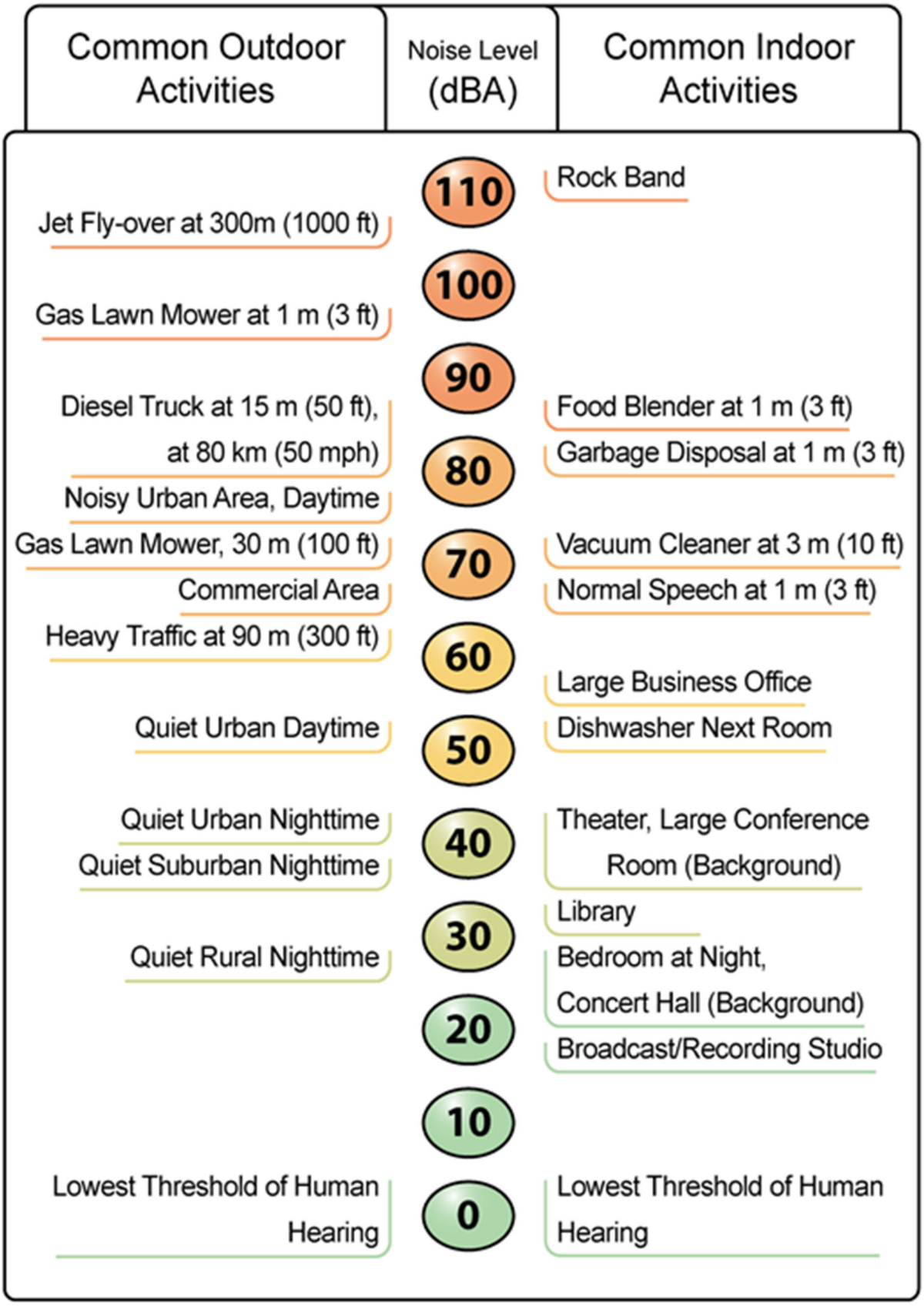
2.0 ENVIRONMENTAL NOISE AND GROUNDBORNE VIBRATION ANALYSIS

2.1 Fundamentals of Noise and Environmental Sound

2.1.1 Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be three dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Under the decibel scale, three sources of equal loudness together would produce an increase of five dB.

Typical noise levels associated with common noise sources are depicted in Figure 2-1.



Source: California Department of Transportation (Caltrans) 2020a

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-1. Common Noise Levels

2023-009 Mills Crossing

2.1.2 Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB (dBA) for each doubling of distance from a stationary or point source (FHWA 2017). Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately three dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2017). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of three dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about five dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the “line of sight” between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (California Department of Transportation [Caltrans] 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. 2006). Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typically residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations.) In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

2.1.3 Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Table 2-1 provides a list of other common acoustical descriptors.

Table 2-1. Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method

for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about ±1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about ±1 to 2 dBA.

2.1.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

2.1.5 Effects of Noise on People

2.1.5.1 Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

2.1.5.2 Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

2.2 Fundamentals of Environmental Groundborne Vibration

2.2.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or manmade causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. For human response, however, an average vibration amplitude is more appropriate because it takes time for the human body to respond to the excitation (the human body responds to an average vibration amplitude, not a peak amplitude). Because the average particle velocity over time is zero, the RMS amplitude is typically used to assess human response. The RMS value is the average of the amplitude squared over time, typically a 1- sec. period (FTA 2018).

Table 2-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 2-2 is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

Table 2-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2020b

3.0 EXISTING ENVIRONMENTAL NOISE SETTING

3.1 Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise sensitive receptors to the Project Site are single-family residences approximately 49 feet from the Project's northeastern boundary, fronting El Caprice Drive. Furthermore, there are several residential apartments on Bettencourt Lane and La Loma Drive that are along the Project's Site's north and western boundaries, with the closest location being 56 feet distant.

3.1.1 Existing Ambient Noise Measurements

The Project Site is currently undeveloped land surrounded mainly by residential and commercial land uses. In order to quantify existing ambient noise levels in the Project Area, ECORP Consulting, Inc. conducted three short-term noise measurements (15-minutes) in the surrounding areas and one long-term noise measurement (24 hours) on the Project Site on April 11th, 2023. The 15-minute measurements were taken between 10:54 a.m. and 11:54 a.m. on April 11th and are representative of typical existing noise exposure within and immediately adjacent to the Project Site during the daytime. The long-term measurement was taken from 12:28 p.m. on April 11th to 12:28 p.m. on April 12th. This 24-hour noise measurement is representative of typical existing noise exposure on the Project Site during a typical 24-hour day. The average noise levels of noise measured at each location are listed in Table 3-1.

Table 3-1. Existing (Baseline) Noise Measurements						
Location Number	**Location**	**L_{eq} dBA**	**L_{dn} dBA**	**L_{min} dBA**	**L_{max} dBA**	**Time**
Short Term Measurements						
1	End of cul-de-sac of White Rock Road adjacent to Aspen Grove Mobile Home Park	**54.0**	N/A	50.3	68.2	10:54 a.m. – 11:09 a.m.
2	On La Verta Court adjacent to the Ashbury Court Apartments	**47.9**	N/A	39.7	62.9	11:39 a.m. – 11:54 a.m.
3	On La Loma Drive behind the Project Site adjacent to the Meadows Apartments	**61.8**	N/A	44.9	74.4	11:16 a.m. – 11:31 a.m.
4	North end of Project Site	57.1	**60.9**	38.3	83.2	12:28 p.m. – 12:28 p.m.

Source: Measurements were taken by ECORP with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See Attachment A for noise measurement outputs.

Notes: L_{eq} is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. L_{min} is the minimum noise level during the measurement period and L_{max} is the maximum noise level during the measurement period.

As shown in Table 3-1, the ambient recorded noise levels range from 47.9 to 61.8 dBA L_{eq} over the course of the three short-term noise measurements taken in the Project vicinity. The ambient noise levels recorded by the long-term measurement indicate that the Project currently experiences a noise level of 60.9 dBA L_{dn}. The most common noise in the Project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) on Folsom Boulevard, noise from light rail train activity, and noises from residential activity.

3.1.1 Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see Attachment B) and traffic volumes from the Mills Crossing Local Traffic Analysis (DKS Associates 2023). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and

that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in Table 3-2.

Table 3-2. Existing Roadway Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway
Folsom Boulevard		
West of Mather Field Road	Commercial	**64.1**
East of Mather Field Road	Commercial	**65.7**
Between La Loma Drive and Paseo Drive	Commercial	**64.1**
Routier Road		
South of Folsom Boulevard	Residential	**59.1**
La Loma Drive		
North of Folsom Boulevard	Commercial and Residential	**51.9**
Paseo Drive		
North of Folsom Boulevard	Commercial and Residential	**50.7**
Mather Field Road		
South of Folsom Boulevard	Commercial and Residential	**65.5**

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by DKS Associates (2023). The most relevant roadway segments were chosen by DKS Associates. Refer to Attachment B for traffic noise modeling assumptions and results.

As shown, the existing traffic-generated noise level on Project-vicinity roadways currently ranges from 50.7 to 65.7 dBA L_{dn} at a distance of 100 feet from the centerline. As previously described, L_{dn} is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}. It should be noted that the modeled noise levels depicted in Table 3-2 may differ from measured levels in Table 3-1 because the measurements represent noise levels at different locations around the Project Area and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise levels are reported in L_{dn}).

4.0 REGULATORY FRAMEWORK

4.1 Federal

4.1.1 Occupational Safety and Health Act of 1970

OSHA regulates onsite noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an eight-hour work shift (29 Code of Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

4.1.2 National Institute of Occupational Safety and Health

A division of the US Department of Health and Human Services, the National Institute for Occupational Safety and Health (NIOSH) has established a construction-related noise level threshold as identified in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998. NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. The intention of these thresholds is to protect people from hearing losses resulting from occupational noise exposure.

4.1.3 Federal Interagency Committee on Noise (FICON)

The FICON thresholds of significance assist in the evaluation of increased traffic noise. The 2000 FICON findings provide guidance as to the significance of changes in ambient noise levels due to transportation noise sources. FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA L_{dn} and the project creates a readily perceptible 5 dBA L_{dn} or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards;
  or
- If the existing noise levels range from 60 to 65 dBA L_{dn} and the project creates a barely perceptible 3 dBA L_{dn} or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards;
  or
- If the existing noise levels already exceed 65 dBA L_{dn} and the project creates a community noise level increase of greater than 1.5 dBA L_{dn}.

4.2 State

4.2.1 State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (State of California 2003), published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

4.2.2 State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

4.2.3 California Department of Transportation

In 2020, Caltrans published the Transportation and Construction Vibration Manual (Caltrans 2020b). The manual provides general guidance on vibration issues associated with the construction and operation of projects concerning human perception and structural damage. Table 2 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

4.3 Local

4.3.1 City of Rancho Cordova General Plan Noise Element

The Noise Element of the General Plan provides policy direction to protect its citizens and community from noise disturbances. By quantifying existing noise sources and identifying noise policies and actions, the City ensures comfortable and safe noise levels throughout the community. The main goals of the document are to improve the noise environment for its residents, employees, visitors, and other persons. The City's existing noise ordinance establishes allowable exterior and interior noise levels for affected land uses. The Noise Element notes that activities that are generally considered to be exempt from the noise standards include construction activities (provided that they occur within the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday), school athletic and entertainment events, activities conducted on public parks and playgrounds, and transportation noise. The General Plan goals and policies applicable to the Proposed Project are listed below.

- **Policy N 1.2:** Ensure that the indoor and outdoor areas of new projects will be located, constructed, and/or shielded from noise sources in compliance with the City's noise standards to the maximum extent feasible [shown below in Table 4-1].

Table 4-1. City of Rancho Cordova Noise Standards		
Land Use Category	**Outdoor Activity Areas L_{dn} [1], dB**	**Interior L_{dn} dB**
Residential	60[3]	45
Transportation Residential[2]	60[3]	40[5]
Transient lodging	60[4]	45
Hospitals, nursing homes	60[3]	45
Theaters, auditoriums, music halls	--	--
Churches, meeting halls	60[3]	--
Office buildings	--	--
Schools, libraries, museums	--	--
Playgrounds, neighborhood parks	70	--

Source: City of Rancho Cordova General Plan Noise Element 2006

Notes:

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

[2] Transportation Residential applies to residence that are subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (e.g., the passing of a single train).

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn} or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

[4] In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

[5] The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

- **Policy N 1.3:** Ensure that proposed non-residential land uses likely to exceed the City's standards do not create noise disturbances in existing noise-sensitive areas.
- **Policy N.1.4**: Mitigate noise created by proposed non-transportation noise sources to comply with the City's noise standards to the maximum extent feasible.
    - **Action N.1.4.1** - Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted in proximity to residential uses.
- **Policy N.1.7**: To the extent feasible and appropriate, the City shall require the use of temporary construction noise control measures for public and private project that may include the use of

temporary noise barriers, temporary relocation of noise-sensitive land uses or other appropriate measures.

5.0 IMPACT ASSESSMENT

5.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act Guidelines Appendix G thresholds of significance. The Project would result in a significant noise-related impact if it would produce:

1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

2) Generation of excessive groundborne vibration or groundborne noise levels.

3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

For purposes of this analysis, Project construction noise is compared to the allowable hours of construction mandated by the City as well as the NIOSH standard of 85 dBA for more than 8 hours per day, since construction work for the Proposed Project is anticipated to span a typical workday of 8 hours daily. The City does not regulate vibrations associated with construction or operations. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, Project groundborne vibration is evaluated against the Caltrans (2020b) recommended standard of 0.2 inches per second PPV.

The noise/land use compatibility associated with locating the proposed residences on the Project Site is determined by a comparison of existing noise levels against the City's noise/land use compatibility standard of 60 dBA L_{dn} for Residential and Transportation Residential land uses (shown in Table 4-1). Furthermore, noise generated by the Project's offsite transportation noise is compared to the FICON thresholds of significance in the evaluation of increased traffic noise, and the Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013) that notes that a doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). Onsite noise generated by Project operations is compared against the City's protective standard of 60 dBA L_{dn} promulgated by the City's General Plan, which establishes exterior and interior noise levels for various land uses.

5.2 Methodology

This analysis of the existing and future noise environments is based on noise-prediction modeling. In order to estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Noise Model (2006). Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human

annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

Transportation-source noise levels associated with the Project were calculated using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) with trip generation rates from the Mills Crossing Local Traffic Analysis (DKS Associates 2023). Onsite stationary source noise levels associated with the Project have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers.

5.3 Impact Analysis

5.3.1 Project Construction Noise

Would the Project Result in Short-Term Construction-Generated Noise in Excess of Standards?

Onsite Construction Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, building construction, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest existing noise sensitive receptors to the Project Site are several residences on the northern boundary of the Project Site, approximately 49 feet distant at the nearest. As previously mentioned, construction is exempt from the noise standards, provided that the construction occurs between the daytime hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday. Outside of the provided time frames where construction is exempt, construction activities are subject to the City's noise standards. Furthermore, City General Plan Noise Element Action N.1.4.1 limits construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted in proximity to residential uses. The Project Site is located in proximity to existing residential land uses and is therefore required to adhere to the construction timing limitations established by Noise Element Action N.1.4.1 (7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends). However, in order to be considered exempt from City noise standards Project construction must be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday.

Outside of the provided time frames where construction is exempt, construction activities are subject to the City's noise standards. As shown in Table 5-1 below, Project construction noise would surpass the City's protective standard of 60 dBA and therefore must be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and 9:00 a.m. to 6:00 p.m. on Sunday in order to be considered a less than significant impact.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptor and in order to evaluate the potential health-related effects (physical damage to the ear, psychological effects) from construction noise, the construction equipment noise levels were calculated using the Roadway Noise Construction Model and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

It is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the Project Site and at various distances from sensitive receptors. Therefore, this analysis employs the Federal Transit Administration (FTA) guidance for calculating construction noise, which recommends measuring construction noise produced by all construction equipment from the center of the Project Site (FTA 2018), which in this case is approximately 341 feet from the closest residence on Bettencourt Lane. The anticipated short-term construction noise levels generated for the necessary equipment for each phase of construction are presented in Table 5-1.

Table 5-1. Construction Average (dBA) Noise Levels at Nearest Receptors			
Construction Phase	**Estimated Exterior Construction Noise Level at Nearest Sensitive Receptor (dBA L_{eq})**	**Construction Noise Standards (dBA L_{eq})**	**Exceeds Standards?**
Pavement Excavation	69.8	*85*	**No**
Site Preparation	70.9	*85*	**No**
Grading	70.1	*85*	**No**
Building Construction, Paving and Painting	73.8	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment C for Model Data Outputs.

Notes: Construction equipment used during construction derived from the California Emissions Estimator Model (CalEEMod) version 2022.1. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project Site (FTA 2018), which is 341 feet from the nearest residence. Construction, paving and painting are assumed to occur simultaneously.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 5-1, construction activities would not exceed the 85 dBA NIOSH construction noise threshold during any phase of construction at the nearby noise-sensitive receptors. It is noted that construction noise was modeled on a worst-case basis. It is very unlikely that all pieces of construction equipment would be operating at the same time for the various phases of Project construction as well as at the point closest to residences.

Offsite Construction Worker Traffic Noise

Project construction would result in additional traffic on adjacent roadways over the period that construction occurs. According to the California Emissions Estimator Model, which is used to predict the maximum number of construction related vehicle trips traveling to and from the Project Site, the maximum number of construction related trips traveling to and from the Project Site during a single construction phase would not be expected to exceed 298 trips in total (241 construction worker commute trips and 57 vendor trips). According to Caltrans' *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). During construction, the Project Site would be accessible from Folsom Boulevard. According to analysis done in conjunction with the Project's Traffic Report from DKS Associates (2023), the portion of Folsom Boulevard between Mather Field Road and La Loma Drive, which includes the Project Site, currently accommodates approximately 19,136 average daily trips (ADT). Thus, the Project construction would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and these trips would cease upon completion of the Project.

5.3.2 Project Operational Noise

Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of City Standards During Operations?

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest existing noise sensitive receptors to the Project Site are several residences on the northern boundary of the Project Site, approximately 49 feet away at the nearest.

The Project proposes the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers. Operational noise sources associated with the Proposed Project include mobile and stationary (i.e., people talking, car door opening and closing, parking garage noise, park activities, the unloading of trucks, typical neighborhood noise, and internal circulation) sources.

Project Land Use Compatibility

The City's General Plan establishes the use of exterior and interior noise standards as seen in Table 4-1 above. The City's noise level standards are applicable to new projects and act as a tool to gauge the compatibility of new land uses relative to existing noise levels. Table 4-1 identifies the exterior noise levels standards for various land uses, including residential, meeting hall, and community park uses such as those proposed by the Project. In the case that the noise levels identified at the Proposed Project Site fall below the protective noise limits presented in the General Plan, the Project is considered compatible with the existing noise environment. As previously stated, the Project is proposing the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers.

The long-term noise measurement taken by ECORP Consulting Inc. on April 11th to April 12th, 2023, can be used to quantify existing ambient noise levels in the Project Area. The ambient noise levels recorded by the long-term measurement indicate that the Project Site currently experiences a noise level of 60.9 dBA L_{dn}. According to the City's noise level standards table, presented in Table 4-1, this noise level falls above the exterior noise standard for residential and meeting hall land uses (60 dBA). However, as noted in the General Plan, where it is not possible to reduce noise in outdoor activity areas to 60 dBA L_{dn} or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dBA L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with the standards identified in Table 4-1. As such, the Project Site currently experiences an ambient noise level of 60.9 dBA L_{dn}, which is just over the exterior noise standard of 60 dBA L_{dn} for residential and meeting hall land uses, yet below the maximum standard of 65 dBA L_{dn} when the application of the best-available noise reduction measures is implemented.

The maximum standard of 65 dBA L_{dn}, to be applied to Projects that employ the best-available noise reduction measures, is appropriate for the Proposed Project. According to the Project's Site Plans, the Project's design and layout would reduce offsite transportation noise sources at the proposed noise-sensitive residential land uses. Specifically, the community commercial, art center, event center, and health and wellness buildings would be located on the southern portion of the Project Site directly fronting Folsom Boulevard, while the northern portion of the Site, farthest from Folsom Boulevard, would accommodate the residential component. As such, the layout of the Proposed Project's nonresidential buildings would effectively shield the residential receptors from offsite traffic noise occurring on Folsom Boulevard. According to the FHWA (2006), when a receiver is shielded from a noise source with a barrier (such as a building) with some gaps it experiences a 5 dBA noise reduction from the source. Thus, the residents located on the northern portion of the Project Site would have an approximate 5 dBA reduction from the traffic noise on Folsom Boulevard due to the positioning of the other proposed nonresidential buildings on Site. This would result in an exterior ambient noise level of approximately 55.9 dBA L_{dn}, which would be under the City's exterior standard for residences. Thus, the Project Site design of placing the proposed nonresidential buildings between the predominate source of noise in the Project Area, Folsom Boulevard, and the proposed noise-sensitive residential buildings represents the best-available noise reduction measure to reduce noise on the Project Site. Furthermore, the exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. 2006). With this reduction, the exterior to interior noise environment would be reduced so that interior noise levels would be maintained below the City's protective interior standards of 45 dBA. For these reasons, the Project complies with the City's noise/land use compatibility standards.

Operational Offsite Traffic Noise

Future traffic noise levels throughout the Project vicinity for the Proposed Project were modeled based on the traffic volumes identified by DKS Associates (2023) to determine the noise levels along Project vicinity roadways. Table 5-2 shows the calculated offsite roadway noise levels with traffic levels during existing levels and the projected levels of project buildout. The City of Rancho Cordova does not regulate noise from transportation sources and does not have noise standards for such sources. As such, the thresholds recommended by FICON will be used in this analysis.

- If the existing ambient noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA L_{dn} and the project creates a readily perceptible 5 dBA L_{dn} or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards;
  or
- If the existing noise levels range from 60 to 65 dBA L_{dn} and the project creates a barely perceptible 3 dBA L_{dn} or greater noise level increase and the resulting noise level would exceed acceptable exterior noise standards;
  or
- If the existing noise levels already exceed 65 dBA L_{dn} and the project creates a community noise level increase of greater than 1.5 dBA L_{dn}.

Table 5-2. Proposed Project Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway		Change	FICON's Standard	Exceed Standard?
		Existing	Existing + Project			
Folsom Boulevard						
West of Mather Field Road	Commercial	64.1	64.5	+0.4	*>3*	**No**
East of Mather Field Road	Commercial	65.7	65.9	+0.2	*>1.5*	**No**
Between La Loma Drive and Paseo Drive	Commercial	64.1	64.5	+0.4	*>3*	**No**
Routier Road						
South of Folsom Boulevard	Commercial & Residential	59.1	59.4	+0.3	*>5*	**No**
La Loma Drive						
North of Folsom Boulevard	Commercial & Residential	51.9	54.7	+2.8	*>5*	**No**
Paseo Drive						
North of Folsom Boulevard	Commercial & Residential	50.7	52.6	+1.9	*>5*	**No**
Mather Field Road						
South of Folsom Boulevard	Commercial & Residential	65.5	65.8	+0.3	*>1.5*	**No**

Source: Traffic noise levels were calculated by ECORP using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by DKS Associates (2023). The most relevant roadway segments were chosen by DKS Associates. Refer to Attachment B for traffic noise modeling assumptions and results.

As shown in Table 5-2, none of the Project vicinity roadway segments would experience an increase of traffic noise in excess of the FICON standards.

Operational Onsite Stationary Noise

The Project is proposing the construction of a community center with a health and wellness center, a parking structure, arts center and theater, a multifamily and single-family housing development, commercial and retail businesses, and community and event centers. The main stationary operational noise associated with the Project would include internal circulation/ parking lot activity at the commercial buildings (i.e., people

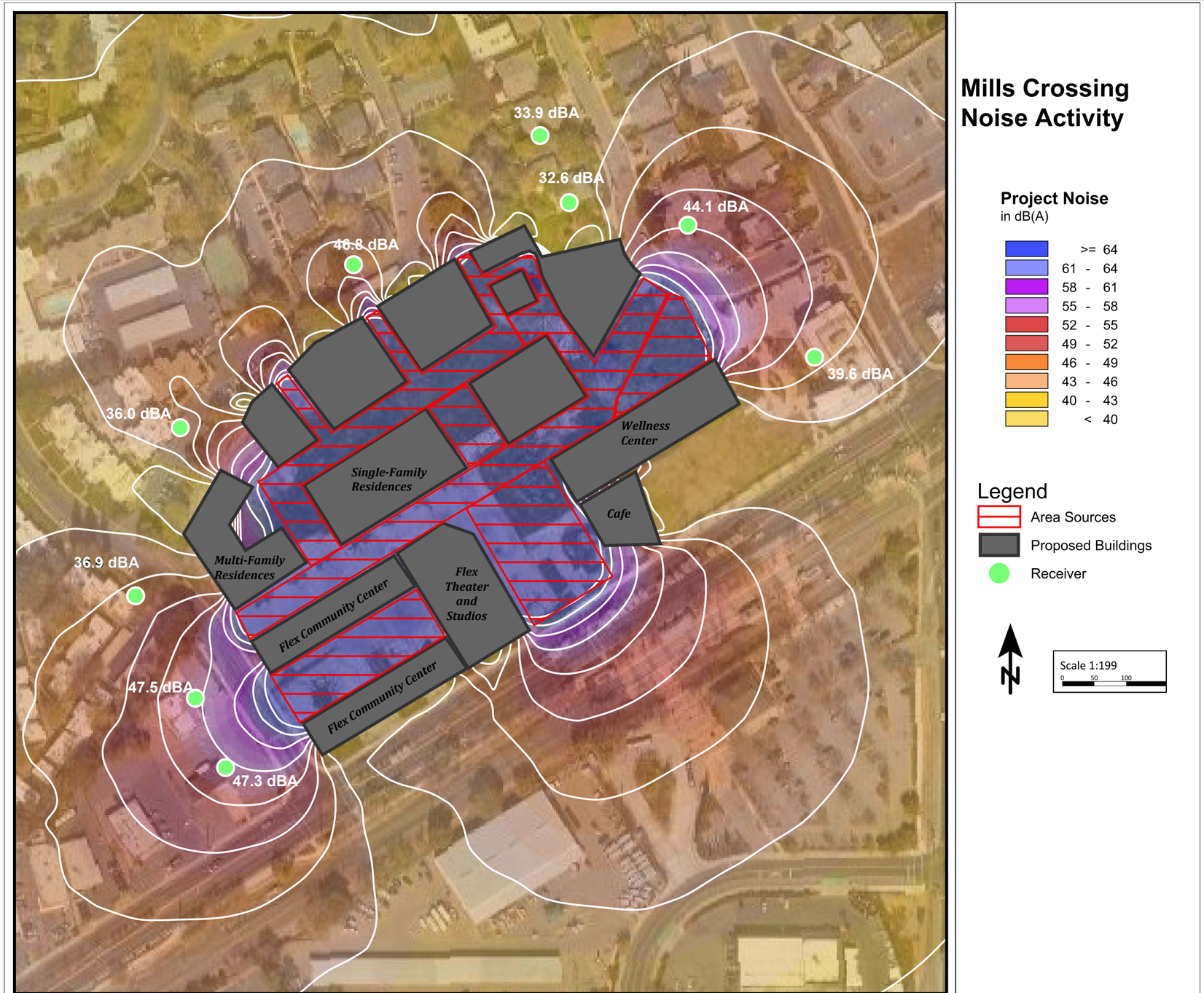
talking, car door opening and closing, and car stereos). Noise associated with residential neighborhoods is quieter than commercial uses and includes activities such as internal circulation, dogs barking, lawnmowers, and other mechanical equipment). Onsite Project operations have been calculated using the SoundPLAN 3D noise model. The modeling scenario includes the features of the Proposed Project, namely the parking lots, community commercial and art center buildings, residential units, and recreational/park plaza. Reference sound power measurements used to inform the 3D noise model representing the parking areas, single-family housing, mixed used developments, and residential parks were previously recorded by ECORP Consulting. The results of the SoundPLAN model can be found in Attachment D.

The City has established noise exterior standards for various land uses, shown in Table 4-1 above. The standard for residential receptors is under 60 dBA. Table 5-3 shows the predicted Project noise levels at nine locations in the Project vicinity, as predicted by SoundPLAN. These locations represent the closest residential and commercial land uses to the Project Site. Additionally, a noise contour graphic (see Figure 5-1) has been prepared to provide a visual depiction of the predicted noise levels in the Project vicinity from Project operations.

Table 5-3. Operational Noise Levels			
Location	**Operational Noise Attributed to Project (dBA)**	**City Exterior Noise Standard (dBA)**	**Exceed Standard?**
#1 Apartments on Bettencourt Lane	40.4 dBA	*60*	**No**
#2 Apartments on La Loma Drive	39.6 dBA	*60*	**No**
#3 Apartments on La Loma Drive	36.0 dBA	*60*	**No**
#4 Auto Repair Shop on La Loma Drive	47.3 dBA	*60*	**No**
#5 Folsom Lake College	39.4 dBA	*60*	**No**
#6 Medical Clinic	47.5 dBA	*60*	**No**
#7 Residence on El Caprice Drive	44.1 dBA	*60*	**No**
#8 Residence on El Caprice Drive	32.6 dBA	*60*	**No**
#9 Residence on El Caprice Drive	33.9 dBA	*60*	**No**

Source: Stationary source noise levels were modeled by ECORP Consulting using SoundPLAN 3D noise model. Refer to Attachment D for noise modeling assumptions and results.

As shown in Table 5-3, the operational noise levels as a result of operational activities on the Project Site would not exceed the City's noise standards (shown in Table 4-1) for the existing residential uses west and south of the Project Site. Furthermore, it is noted that the modeled noise levels identified are a worst-case scenario. All noise producing sources on the Project Site were modeled for noise as if occurring at the same time and at the highest activity level to produce noise levels at the level as those predicted. Not all activities taking place on the Project Site would generate as much noise as predicted.



Map Date: *6/27/2023*
Photo (or Base) Source: *SoundPLAN*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 5-1 SoundPLAN Noise Contour

2023-009 Mills Crossing Project

5.3.3 Project Groundborne Vibration

Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project Site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance, and it is acknowledged that construction activities would occur throughout the Project Site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with standard construction equipment at 25 feet distant are summarized in Table 5-4.

Table 5-4. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Vibratory Roller	0.210
Impact Pile Driver	0.170
Large Bulldozer	0.089
Caisson Drilling	0.089
Hoe Ram	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2018; Caltrans 2020b

The City does not have a numeric threshold associated with construction vibrations. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020b) recommended standard of 0.2 inches per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating vibration generated from construction equipment, construction vibration was measured from the center of the Project Site (FTA 2018). The nearest structure of concern to the construction site are residences located 341 feet from the center of the Site.

Based on the representative vibration levels presented for various construction equipment types in Table 5-4 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential Project construction vibration levels. The FTA provides the following equation:

$$[PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}]$$

Table 5-5 presents the expected Project related vibration levels at a distance of 341 feet.

Table 5-5. Onsite Construction Vibration Levels at 341 Feet

Receiver PPV Levels (in/sec)[1]						Peak Vibration	Threshold	Exceed Threshold
Impact Pile Driver	Vibratory Roller	Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jack-hammer	Small Bulldozer			
0.003	0.004	0.002	0.001	0.001	0.000	**0.004**	0.2	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 5-3 (FTA 2018). Distance to the nearest structure of concern is approximately 341 feet measured from Project Site center.

As shown in Table 5-5, vibration as a result of onsite construction activities on the Project Site would not exceed 0.2 PPV at the nearest structure. Thus, onsite Project construction would not exceed the recommended threshold.

Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any stationary equipment that would result in excessive vibration levels. Therefore, the Project would not result in groundborne vibration impacts during operations.

5.3.4 Excess Airport Noise

Would the Project Expose People Residing or Working in the Project area to Excessive Airport Noise?

The Project Site is located approximately 2.1 miles northwest of the Mather Airport. According to the Sacramento County Department of Airports (2023), the Project Site is not located within the Mather Airport planning noise contours. The Proposed Project would not expose people residing or working on the Project Site to excess airport noise levels.

6.0 REFERENCES

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LIST OF ATTACHMENTS

Attachment A - Baseline (Existing) Noise Measurements – Project Vicinity

Attachment B – Federal Highway Noise Prediction Model (FHWA-RD-77-108) Outputs – Project Traffic Noise

Attachment C – Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction

Attachment D- SoundPLAN 3-D Noise Model Outputs – Project Onsite Noise Propagation

ATTACHMENT A

Baseline (Existing) Noise Measurements –Project Vicinity

Site Number: 1			
Recorded By: Rosey Worden			
Job Number: 2023-009			
Date: 4/11/2023			
Time: 10:54 a.m. – 11:09 a.m.			
Location: End of cul-de-sac of White Rock Road adjacent to Aspen Grove Mobile Home Park			
Source of Peak Noise: Humming from White Rock SMUD Power Station and light rail train activity			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
54.0	50.3	68.2	90.3

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2021**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2021**	

Weather Data			
Est.	**Duration:** 15 min		**Sky:** Clear
	Note: dBA Offset = 0.04		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	6	62	30.08

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.057.s	Computer's File Name	LxT_0006133-20230411 105411-LxT_Data.057.ldbin
Meter	LxT1 0006133	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2023-04-11 10:54:11	Duration	0:15:00.0		
End Time	2023-04-11 11:09:11	Run Time	0:15:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-04-11 10:52:58	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	54.0 dB		
LAE	83.5 dB	SEA	--- dB
EA	25.1 µPa²h		
EA8	803.8 µPa²h		
EA40	4.0 mPa²h		
LZS_{peak}	90.3 dB	2023-04-11 11:07:33	
LAS_{max}	68.2 dB	2023-04-11 10:58:39	
LAS_{min}	50.3 dB	2023-04-11 11:08:16	
LA_{eq}	54.0 dB		
LC_{eq}	66.3 dB	LC_{eq} - LA_{eq}	12.3 dB
LAI_{eq}	55.4 dB	LAI_{eq} - LA_{eq}	1.4 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZSpeak > 135.0 dB	0	0:00:00.0
LZSpeak > 137.0 dB	0	0:00:00.0
LZSpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
54.0 dB	54.0 dB	0.0 dB

LDEN	LDay	LEve	LNight
54.0 dB	54.0 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	54.0 dB		--- dB		--- dB	
$Ls_{(max)}$	68.2 dB	2023-04-11 10:58:39	--- dB	None	--- dB	None
$LS_{(min)}$	50.3 dB	2023-04-11 11:08:16	--- dB	None	--- dB	None
$L_{Peak(max)}$	--- dB	None	--- dB	None	90.3 dB	2023-04-11 11:07:33

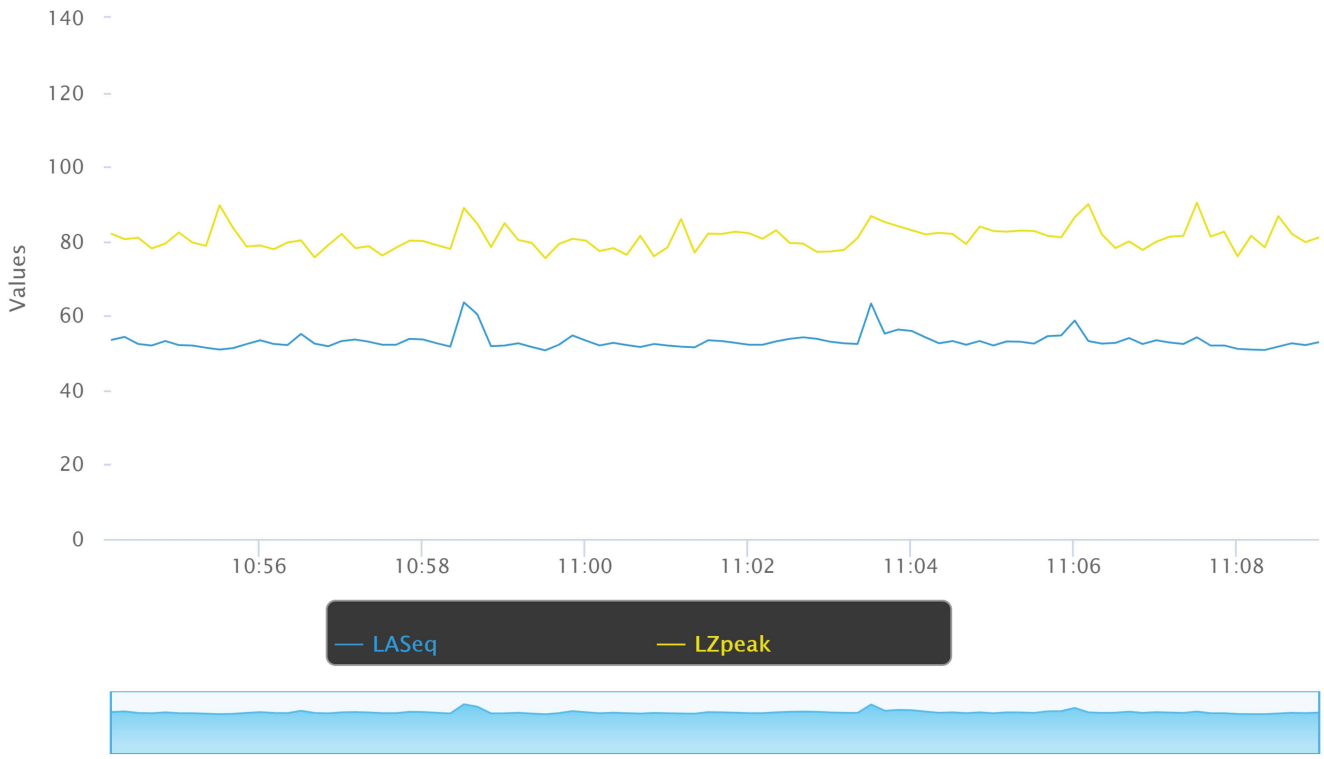
Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	56.1 dB
LAS 10.0	54.8 dB
LAS 33.3	53.1 dB
LAS 50.0	52.5 dB
LAS 66.6	52.1 dB
LAS 90.0	51.3 dB

Time History



Site Number: 2			
Recorded By: Rosey Worden			
Job Number: 2023-009			
Date: 4/11/2023			
Time: 11:39 a.m. – 11:54 a.m.			
Location: On La Verta Court adjacent to the Ashbury Court Apartments			
Source of Peak Noise: People talking and vehicles on La Verta Court			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
47.9	39.7	62.9	87.8

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2021**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2021**	

Weather Data			
Est.	**Duration:** 15 min		**Sky:** Clear
	Note: dBA Offset = 0.04		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	6	62	30.08

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.059.s	Computer's File Name	LxT_0006133-20230411 113946-LxT_Data.059.ldbin
Meter	LxT1 0006133	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2023-04-11 11:39:46	Duration	0:15:00.0		
End Time	2023-04-11 11:54:46	Run Time	0:15:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-04-11 10:52:53	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	47.9 dB		
LAE	77.4 dB	SEA	--- dB
EA	6.2 µPa²h		
EA8	197.3 µPa²h		
EA40	986.6 µPa²h		
LZS_{peak}	87.8 dB	2023-04-11 11:53:20	
LAS_{max}	62.9 dB	2023-04-11 11:44:40	
LAS_{min}	39.7 dB	2023-04-11 11:53:13	
LA_{eq}	47.9 dB		
LC_{eq}	56.9 dB	LC_{eq} - LA_{eq}	9.0 dB
LAI_{eq}	51.1 dB	LAI_{eq} - LA_{eq}	3.2 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZSpeak > 135.0 dB	0	0:00:00.0
LZSpeak > 137.0 dB	0	0:00:00.0
LZSpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
47.9 dB	47.9 dB	0.0 dB

LDEN	LDay	LEve	LNight
47.9 dB	47.9 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	47.9 dB		--- dB		--- dB	
$Ls_{(max)}$	62.9 dB	2023-04-11 11:44:40	--- dB	None	--- dB	None
$LS_{(min)}$	39.7 dB	2023-04-11 11:53:13	--- dB	None	--- dB	None
$L_{Peak(max)}$	--- dB	None	--- dB	None	87.8 dB	2023-04-11 11:53:20

Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	52.5 dB
LAS 10.0	49.9 dB
LAS 33.3	46.7 dB
LAS 50.0	45.6 dB
LAS 66.6	44.5 dB
LAS 90.0	41.8 dB

Site Number: 3			
Recorded By: Rosey Worden			
Job Number: 2023-009			
Date: 4/11/2023			
Time: 11:16 a.m. – 11:31 a.m.			
Location: On La Loma Drive behind the Project Site adjacent to the Meadows Apartments			
Source of Peak Noise: Vehicles on La Loma Drive and Folsom Boulevard			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
61.8	44.9	74.4	98.8

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2021**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2021**	

Weather Data			
Est.	**Duration:** 15 min		**Sky:** Clear
	Note: dBA Offset = 0.04		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	6	62	30.08

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.058.s	Computer's File Name	LxT_0006133-20230411 111641-LxT_Data.058.ldbin
Meter	LxT1 0006133	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2023-04-11 11:16:41	Duration	0:15:00.0		
End Time	2023-04-11 11:31:41	Run Time	0:15:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-04-11 10:52:53	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	61.8 dB		
LAE	91.3 dB	SEA	--- dB
EA	151.4 µPa²h		
EA8	4.8 mPa²h		
EA40	24.2 mPa²h		
LZS_{peak}	98.8 dB	2023-04-11 11:30:36	
LAS_{max}	74.4 dB	2023-04-11 11:30:36	
LAS_{min}	44.9 dB	2023-04-11 11:24:24	
LA_{eq}	61.8 dB		
LC_{eq}	66.2 dB	LC_{eq} - LA_{eq}	4.4 dB
LAI_{eq}	65.5 dB	LAI_{eq} - LA_{eq}	3.7 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZSpeak > 135.0 dB	0	0:00:00.0
LZSpeak > 137.0 dB	0	0:00:00.0
LZSpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
61.8 dB	61.8 dB	0.0 dB

LDEN	LDay	LEve	LNight
61.8 dB	61.8 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	61.8 dB		--- dB		--- dB	
$Ls_{(max)}$	74.4 dB	2023-04-11 11:30:36	--- dB	None	--- dB	None
$LS_{(min)}$	44.9 dB	2023-04-11 11:24:24	--- dB	None	--- dB	None
$L_{Peak(max)}$	--- dB	None	--- dB	None	98.8 dB	2023-04-11 11:30:36

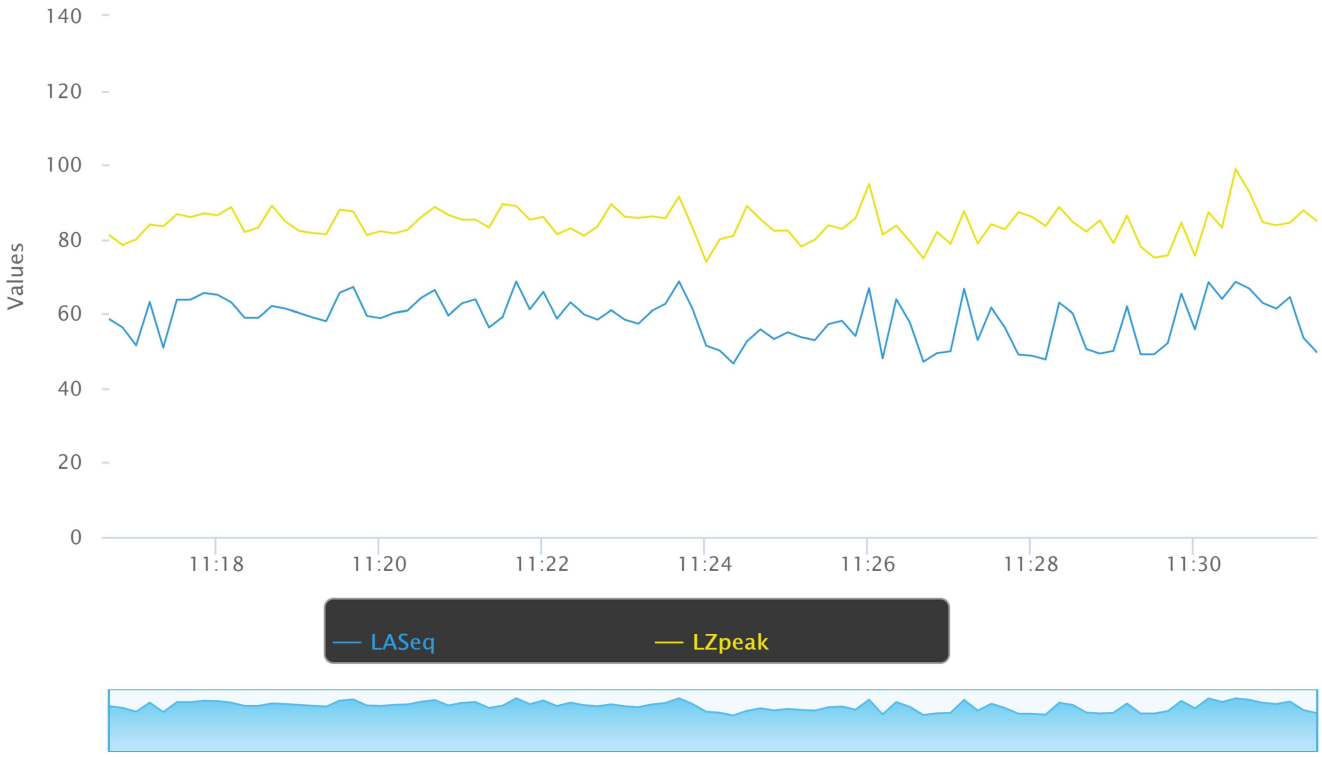
Overloads

Count	Duration
0	0:00:00.0

Statistics

LAS 5.0	68.3 dB
LAS 10.0	66.1 dB
LAS 33.3	60.1 dB
LAS 50.0	57.5 dB
LAS 66.6	54.0 dB
LAS 90.0	48.8 dB

Time History



Site Number: 24 hours
Recorded By: Rosey Worden
Job Number: 2023-009
Date: 4/11/2023
Time: 12:28 p.m. – 12:28 p.m.
Location: North end of Project Site
Source of Peak Noise: Vehicles on Folsom Boulevard

Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Ldn (dB)**
57.1	38.3	83.2	60.9

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0006133**	**02/24/2021**	
	Microphone	**Larson Davis**	**377B02**	**315201**	**02/24/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**069947**	**02/24/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**17325**	**02/25/2021**	

Weather Data			
Est.	**Duration:** 24 hours		**Sky:** Clear
	Note: dBA Offset = 0.04		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	6	62	30.08

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.060.s	Computer's File Name	LxT_0006133-20230411 122828-LxT_Data.060.ldbin
Meter	LxT1 0006133	Firmware	2.404
User		Location	
Job Description			
Note			

Start Time	2023-04-11 12:28:28	Duration	24:00:00.0		
End Time	2023-04-12 12:28:28	Run Time	24:00:00.0	Pause Time	0:00:00.0
Pre-Calibration	2023-04-11 12:20:34	Post-Calibration	None	Calibration Deviation	---

Results

Overall Metrics

LA_{eq}	57.1 dB		
LAE	106.5 dB	SEA	--- dB
EA	4.9 mPa²h		
EA8	1.6 mPa²h		
EA40	8.2 mPa²h		
LZS_{peak}	101.3 dB	2023-04-12 12:15:25	
LAS_{max}	83.2 dB	2023-04-12 04:42:24	
LAS_{min}	38.3 dB	2023-04-12 02:04:42	
LA_{eq}	57.1 dB		
LC_{eq}	62.8 dB	LC_{eq} - LA_{eq}	5.7 dB
LAI_{eq}	58.7 dB	LAI_{eq} - LA_{eq}	1.6 dB

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZSpeak > 135.0 dB	0	0:00:00.0
LZSpeak > 137.0 dB	0	0:00:00.0
LZSpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	60.9 dB	58.5 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	61.2 dB	59.1 dB	54.7 dB	53.2 dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	57.1 dB		--- dB		--- dB	
$Ls_{(max)}$	83.2 dB	2023-04-12 04:42:24	--- dB	None	--- dB	None
$LS_{(min)}$	38.3 dB	2023-04-12 02:04:42	--- dB	None	--- dB	None
$L_{Peak(max)}$	--- dB	None	--- dB	None	101.3 dB	2023-04-12 12:15:25

Overloads	Count	Duration
	0	0:00:00.0

Statistics

LAS 5.0	61.2 dB
LAS 10.0	58.9 dB
LAS 33.3	54.5 dB
LAS 50.0	52.2 dB
LAS 66.6	50.2 dB
LAS 90.0	45.9 dB

ATTACHMENT B

Federal Highway Noise Prediction Model (FHWA-RD-77-108) Outputs – Project Traffic Noise

TRAFFIC NOISE LEVELS

Project Number: 2023-009
Project Name: Mills Crossing

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): Existing
Source of Traffic Volumes: DKS Associates 2023
Community Noise Descriptor: L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) Ldn
Folsom Boulevard													
West of Mather Field Road	Commercial	2	0		19,136	40	100	0.5	0	1.8%	0.7%	0.0	64.1
East of Mather Field Road	Commercial	2	0		28,052	40	100	0.5	0	1.8%	0.7%	0.0	65.7
Between La Loma Drive and Pasero Drive	Commercial	2	0		19,136	40	100	0.5	0	1.8%	0.7%	0.0	64.1
Routier Road													
South of Folsom Boulevard	Residential and Commercial	2	0		6,152	40	100	0.5	0	1.8%	0.7%	0.0	59.1
La Loma Drive													
North of Folsom Boulevard	Residential and Commercial	2	0		3,192	25	100	0.5	0	1.8%	0.7%	0.0	51.9
Paseo Drive													
North of Folsom Boulevard	Residential and Commercial	2	0		2,432	25	100	0.5	0	1.8%	0.7%	0.0	50.7
Mather Field Road													
South of Folsom Boulevard	Residential and Commercial	2	0		19,962	45	100	0.5	0	1.8%	0.7%	0.0	65.5

TRAFFIC NOISE LEVELS

Project Number: 2023-009
Project Name: Mills Crossing

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): **Existing + Project**
Source of Traffic Volumes: DKS Associates 2023
Community Noise Descriptor: L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) Ldn
Folsom Boulevard													
West of Mather Field Road	Commercial	2	0		20,956	40	100	0.5	0	1.8%	0.7%	0.0	64.5
East of Mather Field Road	Commercial	2	0		29,379	40	100	0.5	0	1.8%	0.7%	0.0	65.9
Between La Loma Drive and Paseo Drive	Commercial	2	0		21,366	40	100	0.5	0	1.8%	0.7%	0.0	64.5
Routier Road													
South of Folsom Boulevard	Residential and Commercial	2	0		6,552	40	100	0.5	0	1.8%	0.7%	0.0	59.4
La Loma Drive													
North of Folsom Boulevard	Residential and Commercial	2	0		6,118	25	100	0.5	0	1.8%	0.7%	0.0	54.7
Paseo Drive													
North of Folsom Boulevard	Residential and Commercial	2	0		3,738	25	100	0.5	0	1.8%	0.7%	0.0	52.6
Mather Field Road													
South of Folsom Boulevard	Residential and Commercial	2	0		21,047	45	100	0.5	0	1.8%	0.7%	0.0	65.8

ATTACHMENT C

Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/23/2023
Case Description: Pavement Excavation (Demolition)

Description	**Land Use**
Pavement Excavation (Demolition)	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Dozer	No	40		81.7	341
Dozer	No	40		81.7	341
Excavator	No	40		80.7	341
Excavator	No	40		80.7	341
Excavator	No	40		80.7	341
Concrete Saw	No	20		89.6	341

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Dozer	65	61
Dozer	65	61
Excavator	64	60.1
Excavator	64	60.1
Excavator	64	60.1
Concrete Saw	72.9	65.9
Total	**72.9**	**69.8**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/23/2023
Case Description: Site Preparation

Description	Land Use
Site Preparation	Residential

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Dozer	No	40		81.7	341
Dozer	No	40		81.7	341
Dozer	No	40		81.7	341
Tractor	No	40	84		341
Tractor	No	40	84		341
Tractor	No	40	84		341
Tractor	No	40	84		341

Calculated (dBA)

Equipment		*Lmax	Leq
Dozer		65	61
Dozer		65	61
Dozer		65	61
Tractor		67.3	63.3
Tractor		67.3	63.3
Tractor		67.3	63.3
Tractor		67.3	63.3
	Total	**67.3**	**70.9**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/23/2023
Case Description: Grading

Description	**Land Use**
Grading	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Grader	No	40	85		341
Excavator	No	40		80.7	341
Tractor	No	40	84		341
Tractor	No	40	84		341
Tractor	No	40	84		341

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Grader		68.3	64.3
Excavator		64	60.1
Tractor		67.3	63.3
Tractor		67.3	63.3
Tractor		67.3	63.3
	Total	**68.3**	**70.1**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/23/2023
Case Description: Building construction, paving, and painting

Description	**Land Use**
Building construction, paving, and painting	Residential

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Gradall	No	40		83.4	341
Gradall	No	40		83.4	341
Gradall	No	40		83.4	341
Generator	No	50		80.6	341
Crane	No	16		80.6	341
Welder / Torch	No	40		74	341
Tractor	No	40	84		341
Tractor	No	40	84		341
Tractor	No	40	84		341
Paver	No	50		77.2	341
Paver	No	50		77.2	341
Pavement Scarafier	No	20		89.5	341
Pavement Scarafier	No	20		89.5	341
Roller	No	20		80	341
Roller	No	20		80	341
Compressor (air)	No	40		77.7	341

	Calculated (dBA)	
Equipment	***Lmax**	**Leq**
Gradall	66.7	62.7
Gradall	66.7	62.7
Gradall	66.7	62.7
Generator	64	60.9
Crane	63.9	55.9
Welder / Torch	57.3	53.3
Tractor	67.3	63.3
Tractor	67.3	63.3
Tractor	67.3	63.3
Paver	60.5	57.5
Paver	60.5	57.5
Pavement Scarafier	72.8	65.8
Pavement Scarafier	72.8	65.8
Roller	63.3	56.3
Roller	63.3	56.3
Compressor (air)	61	57
Total	**72.8**	**73.8**

*Calculated Lmax is the Loudest value.

ATTACHMENT D

SoundPLAN 3-D Noise Model Outputs – Project Onsite Noise Propagation

Number	Reciever Name	Floor	Level at Receiver
1	Apartments on Bettencourt Lane	Ground Floor	40.4 dBA
2	Apartments on La Loma Drive	Ground Floor	39.6 dBA
3	Apartments on La Loma Drive	Ground Floor	36.0 dBA
4	Auto Repair Shop on La Loma Drive	Ground Floor	47.3 dBA
5	Folsom Lake College	Ground Floor	39.4 dBA
6	Medical Clinic	Ground Floor	47.5 dBA
7	Residence on El Caprice Drive	Ground Floor	44.1 dBA
8	Residence on El Caprice Drive	Ground Floor	32.6 dBA
9	Residence on El Caprice Drive	Ground Floor	33.9 dBA

Number	Noise Source Information	Citation	Level at Source
1	City Playground/Park	ECORP Noise Measurements	59.0 dBA
2	Single-Family Housing	ECORP Noise Measurements	52.9 dBA
3	Downtown Parking Garage	ECORP Noise Measurements	62.6 dBA
4	Multi-Family Townhouse	ECORP Noise Measurements	59.0 dBA

Appendices

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March 2025 | Final Environmental Impact Report
State Clearinghouse No. 2023010102

MILLS CROSSING PROJECT

for the City of Rancho Cordova

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1. Introduction

1.1 INTRODUCTION

This Final Environmental Impact Report (FEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA), as amended (Public Resources Code Sections 21000 et seq.), and CEQA Guidelines (California Code of Regulations Sections 15000 et seq.).

According to the CEQA Guidelines, Section 15132, the FEIR shall consist of:

(a) The Draft Environmental Impact Report (DEIR) or a revision of the DEIR;

(b) Comments and recommendations received on the DEIR either verbatim or in summary;

(c) A list of persons, organizations, and public agencies commenting on the DEIR;

(d) The responses of the lead agency to significant environmental points raised in the review and consultation process; and

(e) Any other information added by the lead agency.

This document contains responses to comments received on the DEIR for the Mills Crossing Project during the 45-day public review period, which began June 7, 2024, and closed July 22, 2024. This document has been prepared in accordance with CEQA and the CEQA Guidelines, and represents the independent judgment of the lead agency. This document and the circulated DEIR comprise the FEIR, pursuant to CEQA Guidelines, Section 15132.

1.2 FORMAT OF THE FEIR

Section 1, Introduction. This section describes the CEQA requirements and contents of this FEIR.

Section 2, Response to Comments. This section provides a list of agencies and interested persons that commented on the DEIR; copies of comment letters received during the public review period, and the lead agency's responses to written comments. To facilitate review of the responses, each comment letter has been reproduced and assigned an alphanumeric designator (A through E for letters received from agencies and organizations, and 1 and 2 for letters received from residents). Individual comments have been numbered for each letter, and the letter is followed by responses with references to the corresponding comment number.

In accordance with CEQA, Public Resources Code Section 21092.5, copies of the lead agency's written responses to public agencies will be forwarded to those agencies at least 10 days prior to certifying the EIR. The responses will be forwarded with copies of this FEIR, as permitted by CEQA, and will conform to the legal standards established for response to comments on DEIRs.

Section 3, Corrections, Clarifications, and Additions to the DEIR

Section 3.1, Introduction

This section provides an introduction to the suggested DEIR revisions that follow.

Section 3.2, Revision to the DEIR in Response to Comments

This section consolidates revisions to the DEIR and outlines differences between the proposed project and the revised site plan, along with other items requiring updating, clarification, and/or correction, based on comments received by agencies and interested persons, as described in Section 2.

Section 3.3, Revisions to the Project Description

The project description in Chapter 3 of the DEIR has been updated to incorporate changes from the revised entitlement package received on September 13, 2024. Changes made to the DEIR are identified in strikeout text (e.g., ~~strikeout~~) to indicate deletions and in underlined text (e.g., <u>underline</u>) to signify additions.

Section 3.4, Differences in the Proposed Project vs. Revised Site Plan

Since the issuance of the DEIR, modifications have been made to the proposed project's planning and design. These modifications have been evaluated to assess whether additional analysis is necessary for the FEIR. The DEIR remains sufficient for evaluating the new revised site plan (see Figure 3-4, *Conceptual Site Plan (NEW)*), as it reflects a more conservative development. The DEIR analysis accounts for a larger and more intensive development than the revised project, meaning the new modifications fall within the scope of the original environmental analysis.

As discussed in greater detail in Section 3.4, *Differences in the Proposed Project vs. Revised Site Plan*, the City of Rancho Cordova staff has reviewed these changes and determined that none of the changes constitute significant new information requiring recirculation of the DEIR for further public comment under CEQA Guidelines Section 15088.5. None of the new material indicates that the project will cause a significant new environmental impact not previously disclosed in the DEIR, or that there will be a substantial increase in the severity of a previously identified impact that cannot be mitigated. Additionally, none of the material suggests any other circumstances that would necessitate recirculation, as outlined in CEQA Guidelines Section 15088.5.

1.3 CEQA REQUIREMENTS REGARDING COMMENTS

CEQA Guidelines Section 15204 outlines parameters for persons and public agencies reviewing and commenting on the sufficiency of DEIRs.

Section 15204 of the State CEQA Guidelines states, in pertinent part:

> (a) In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the

adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.

…

(c) Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

(d) Reviewing agencies or organizations should include with their comments the name of a contact person who would be available for later consultation if necessary. Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility.

(e) This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section.

(f) Prior to the close of the public review period for an EIR or mitigated negative declaration, a responsible or trustee agency which has identified significant effects on the environment may submit to the lead agency proposed mitigation measures which would address those significant effects. Any such measures shall be limited to impacts affecting those resources which are subject to the statutory authority of that agency. If mitigation measures are submitted, the responsible or trustee agency shall either submit to the lead agency complete and detailed performance objectives for the mitigation measures, or shall refer the lead agency to appropriate, readily available guidelines or reference documents which meet the same purpose.

1. Introduction

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2. Response to Comments

Section 15088 of the CEQA Guidelines requires the lead agency (City of Rancho Cordova) to evaluate comments on environmental issues received from public agencies and interested parties who reviewed the DEIR and prepare written responses.

Regarding evaluation and responses to public comments, Section 15088 of the State CEQA Guidelines states:

> (a) The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The lead agency shall respond to comments raising significant environmental issues received during the noticed comment period and any extensions and may respond to late comments.
>
> (b) The lead agency shall provide a written proposed response, either in a printed copy or in an electronic format, to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report.
>
> (c) The written response shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the lead agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice. The level of detail contained in the response, however, may correspond to the level of detail provided in the comment (i.e., responses to general comments may be general). A general response may be appropriate when a comment does not contain or specifically refer to readily available information, or does not explain the relevance of evidence submitted with the comment.
>
> (d) The response to comments may take the form of a revision to the draft EIR or may be a separate section in the final EIR. Where the response to comments makes important changes in the information contained in the text of the draft EIR, the lead agency should either:
>
> (1) Revise the text in the body of the EIR, or
>
> (2) Include marginal notes showing that the information is revised in the response to comments.

This section includes all written comments received on the DEIR during the 45-day public review period, discussed in Section 1, and the City of Rancho Cordova's responses to each comment. Brackets delineating the individual comments and an alphanumeric identifier have been added to the right margin of the letter. Responses to each comment identified are on the page(s) following each comment letter. Where sections of the DEIR are excerpted in this document, changes to the DEIR text are shown in <u>underlined text</u> for additions and ~~strikeouts~~ for deletions.

2. Response to Comments

The following is a list of agencies, organizations, and individuals that submitted comments on the DEIR during the public review period.

Letter Reference	Commenting Person/Agency	Date of Letter
Agencies and Organizations		
A	Department of Toxic Substances Control	July 10, 2024
B	Shingle Springs Band of Miwok Indians	July 15, 2024
C	Cordova Recreation and Park District	July 18, 2024
D	Sacramento Area Sewer District	July 19, 2024
E	Sacramento Metropolitan Air Quality Management District	July 19, 2024
Individuals		
1	Karl Haas	June 7, 2024
2	Larry (no last name provided)	June 7, 2024

LETTER A – Department of Toxic Substances Control (3 pages)

Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Yana Garcia
Secretary for
Environmental Protection

Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

July 10, 2024

Stefan Heisler
Housing Manager
City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670
sheisler@cityofranchocordova.org

RE: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MILLS CROSSING PROJECT, DATED JUNE 7, 2024, STATE CLEARINGHOUSE NUMBER 2023010102

Dear Stefan Heisler,

The Department of Toxic Substances Control (DTSC) received a Draft Environmental Impact Report (DEIR) for the Mills Crossing Project (Project). The City of Rancho Cordova is proposing a 9.85-acre mixed use Project located at the corner of Folsom Boulevard and La Loma Drive in Rancho Cordova. The Project will include approximately 140,000 square feet of community-commercial space, up to 120 housing units including multi-family affordable apartments and zero lot line townhouse-style homes, up to 2.5 acres of public open space, and a parking structure with up to 325 parking stalls. Adoption of the Project contemplates approval of the following city entitlements: certification of the EIR; amendment of the City of Rancho Cordova General Plan and Specific Plan; a zoning amendment; a tentative subdivision map; and a Major Design Review approval. DTSC recommends and requests consideration of the following comments:

A-1

1. DTSC recommends that all imported soil and fill material should be tested to ensure any contaminants of concern are within DTSC's and U.S. Environmental Protection Agency Regional Screen Levels for the intended land use. To minimize the possibility of introducing contaminated soil and fill material there should be documentation of the origins of the soil or fill material and, if applicable, sampling be conducted to ensure that the imported soil and fill material meets screening levels outlined in the Preliminary Endangerment Assessment Guidance Manual for the intended land use. The soil sampling should include analysis based on the source of the fill and knowledge of the prior land use. Additional information can be found by visiting DTSC's Human and Ecological Risk Office (HERO) webpage. A-2
2. The City of Rancho Cordova coordinate with the Regional Water Quality Control Board (RWQCB) as the Veterans Martinizing Cleaners once occupied a portion of the proposed Project area. The RWQCB will oversee the cleanup if it is necessary as they manage the Lily Company site. A-3

DTSC appreciates the opportunity to comment on the DEIR for the Mills Crossing Project. Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances. If you have any questions or would like any clarification on DTSC's comments, please respond to this letter or via email for additional guidance.

Sincerely,

Dave Kereazis

Dave Kereazis
Associate Environmental Planner
HWMP-Permitting Division – CEQA Unit
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

cc: (via email)

Governor's Office of Planning and
Research State Clearinghouse
State.Clearinghouse@opr.ca.gov

Isabella Hagopian
Engineering Geologist, Private Sites Cleanup Unit
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114
Isabella.Hagopian@Waterboards.ca.gov

Tamara Purvis
Associate Environmental Planner
HWMP - Permitting Division – CEQA Unit
Department of Toxic Substances Control
Tamara.Purvis@dtsc.ca.gov

Scott Wiley
Associate Governmental Program Analyst
HWMP - Permitting Division – CEQA Unit
Department of Toxic Substances Control
Scott.Wiley@dtsc.ca.gov

A. Response to Comments from Department of Toxic Substances Control (DTSC), dated July 10, 2024.

A-1 *The comment confirms that DTSC received the DEIR, summarizes the proposed project, including a General Plan and Specific Plan amendment, and provides a list of recommendations for the City to consider.*

The City of Rancho Cordova thanks DTSC for their comments on the DEIR. The proposed project does not require an amendment to the General Plan. As outlined in Section 3.4, *Intended Uses of the DEIR*, the necessary approvals for the project include a zoning and Specific Plan amendment, not a General Plan amendment. The project's proposed zoning aligns with the Folsom Boulevard Specific Plan's FB-RMU designation, as discussed in Section 5.7, *Land Use and Planning*. Therefore, only a zoning and Specific Plan amendment is needed, which is detailed in the DEIR in Chapter 3, *Project Description*, and in Section 5.7. Revisions to the DEIR based on this clarification are provided in FEIR Section 3.2, *Revisions to the DEIR in Response to Comments*. These revisions, which clarify that the proposed project would not require a General Plan amendment, constitute minor clarifications to the DEIR and do not alter the findings or result in material changes to the project's environmental analysis.

A-2 *DTSC recommends testing imported soil and fill material to ensure contaminants of concern are within DTSC and U.S. Environmental Protection Agency Regional Screening Levels for the intended land use. The DTSC suggests that to prevent soil and fill materials contamination, documentation of the soil or fill material's origins and, if applicable, sampling should be conducted to ensure imported soil and fill material meet the screening levels in the Preliminary Endangerment Assessment Guidance Manual for the intended land use. DTSC suggests basing soil sampling analysis on the source of the fill and prior land use.*

DTSC's comment recommends testing all imported soil and fill material to ensure contaminants of concern are within established environmental safety levels. Based on the information in Appendix 5.6-1, Site Cleanup Plan, through Appendix 5.6-3, Site Remediation Notice of Exemption. of the DEIR, the site cleanup processes outlined focus on the treatment and management of soil that has been excavated or stockpiled from the project site. The site cleanup plan does not involve the import of additional soil from external sources. DTSC advises that soil samples be analyzed according to screening levels outlined in the Preliminary Endangerment Assessment Guidance Manual written by the Environmental Protection Agency and DTSC. The Preliminary Endangerment Assessment Guidance Manual permits the use of certain human-health-risk-based environmental screening levels (ESL) developed by the San Francisco Bay Regional Water Quality Control Board (RWQCB) as acceptable screening thresholds. These ESLs are used in the site cleanup plan and will continue to be used for evaluating soil at the project site (e.g., Appendix 5.6-1, pp. 6, 16–17; Appendix 5.6-1, Appendix A, Health and Safety Plan, pp. 9–10, of the DEIR). Specifically, pages 1 and 2 of Appendix 5.6-2 of the DEIR

outline the City's methodology for sampling and treating soil fill to ensure contaminant-of-concern levels remain below the San Francisco Bay RWQCB ESLs.

As discussed on pages 5.6-8 to 5.6-16 of Section 5.6, *Hazards and Hazardous Materials*, of the DEIR, Mitigation Measure HAZ-1 incorporates DTSC's comprehensive testing and documentation requirements for ensuring imported soil and fill material comply with ESLs. Mitigation Measure HAZ-1 addresses DTSC's recommendation by mandating that, before issuing construction permits, the project applicant implement all recommendations from the site cleanup plan and its addendum prepared by Tetra Tech (see, e.g., Appendix 5.6-1 and Appendix 5.6-2 of the DEIR). The site cleanup plan bases sampling frequency for import fill on DTSC sampling guidance (see Appendix 5.6-1, pp. 14-15, of the DEIR). Post-cleanup effectiveness sampling will be conducted to ensure contaminant-of-concern levels do not exceed screening levels for the intended use (see, e.g., DEIR Appendix 5.6-1, pp. 16–17; and DEIR Appendix 5.6-1, Appendix A, Health and Safety Plan, pp. 11–12, of the DEIR). As discussed on page 17 of Appendix 5.6-1, a summary report will detail field activities and sampling results and include laboratory data sheets and chain of custody forms.

For these reasons, Mitigation Measure HAZ-1 in the DEIR would adequately address impacts to hazardous materials in the project; therefore, no changes are required.

A-3 *DTSC requests that the City coordinate with the Regional Water Quality Control Board (RWQCB) regarding the proposed project,* a portion of *which* was *previously occupied by Veterans Martinizing Cleaners. DTSC states that the RWQCB will oversee any required cleanup activities* because *they currently manage the Lily Company site. The DTSC appreciates the opportunity to comment on the DEIR for the Mills Crossing Project.*

The City's coordination with the Central Valley RWQCB is detailed in the site cleanup plan and its addendum prepared by Tetra Tech (see Appendix 5.6-1 and Appendix 5.6-2 of the DEIR). The Central Valley RWQCB has been the agency overseeing site characterization and remediation, which dates back to 2008 (see, e.g., Appendix 5.6-1, Appendix A, Health and Safety Plan, p. 8, of the DEIR). The project site has been owned by the City of Rancho Cordova since 2018, and the Central Valley RWQCB is a responsible agency for the project (DEIR, pp. 3-1, 3-12.)

As required by Mitigation Measure HAZ-1, the City will implement the site cleanup plan, which the Central Valley RWQCB approved in a letter dated March 30, 2022 (DEIR, pp. 5.6-14–5.6-16; Appendix 5.6-2, pp. 1–2). Implementation of Mitigation Measure HAZ-1 and the site cleanup plan necessarily involve coordination with the Central Valley RWQCB. For example, the City Engineer will transmit testing results from the project site to the RWQCB for review and concurrence before issuing construction permits (DEIR, pp. 5-16–5-17). Additionally, the air and dust monitoring plan requires notifying the Central Valley RWQCB when compounds exceed screening levels (see Appendix 5.6-1,

Appendix B, Perimeter Air and Dust Monitoring Plan, p. 10, of the DEIR). This coordination is further discussed in a letter from the City to the Central Valley RWQCB on pages 1 and 2 of Appendix 5.6-2 of the DEIR.

For these reasons, Mitigation Measure HAZ-1 in the DEIR would adequately address impacts to hazardous materials in the project; therefore, no changes are required.

2. Response to Comments

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LETTER B – Shingle Springs Band of Miwok Indians (1 page)

SHINGLE SPRINGS BAND
OF MIWOK INDIANS

Shingle Springs Rancheria
(Verona Tract), California
5168 Honpie Road
Placerville, CA 95667
Phone: 530-676-8010
shinglespringsrancheria.com

CULTURAL RESOURCES

July 15, 2024

City of Rancho Cordova

RE: Mather Veterans Village Phase 4 Project

Dear Stefan Heisler,

Thank you for your letter dated June 11, 2024 in regard to the above mentioned project. Based on the information provided, the Shingle Springs Band Of Miwok Indians is not aware of any known cultural resources on this site. However, SSR would like to have continued consultation through updates, as the project progresses. This will foster a greater communication between the Tribe and your agency. B-1

SSR would also like to request any and all completed record searches and or surveys that were done in or around the project area up to and including environmental, archaeological and cultural reports. B-2 If during the progress of the project new information or human remains are found, we would like to be able to go over our process with you to protect such important and sacred artifacts (especially near rivers and streams). B-3

If such finds are made, please contact Kara Perry, Director of Site Protection, at (530) 488-4049 or kperry@ssband.org.
Thank you for providing us with this notice and opportunity to comment.

Sincerely,

Kara Perry
Director of Site Protection

B. Response to Comments from Shingle Springs Band of Miwok Indians, dated July 15, 2024.

B-1 *The Shingle Springs Band of Miwok Indians confirms receipt of the City's letter inviting Tribal consultation, expresses that the Tribe is unaware of known cultural resources on the Project site, and requests consultation in the form of continued updates and communication with the Tribe as the project progresses.*

The City of Rancho Cordova appreciates the Shingle Springs Band of Miwok Indians' response and will ensure that the Shingle Springs Rancheria is kept informed as the project advances. The tribal consultation process with the Shingle Springs Band of Miwok Indians is described in Section 5.13.4.1 in Chapter 5.13 of the DEIR. Tribal consultation is ongoing, but no additional communications have been sent or received since the DEIR comment letter was submitted. This response will be sent to the Shingle Springs Tribe once the FEIR is finalized.

B-2 *The Tribe requests any and all completed record searches and surveys that were done in or around the project site such as environmental, archaeological, and cultural reports.*

The DEIR includes Appendix 5.3-1, Archaeological Resources Inventory, of the DEIR, which provides information on cultural and archaeological resources. On December 9, 2024, the City sent the completed Appendix 5.3-1, Archaeological Resource Inventory Report, to the Shingle Springs Band of Miwok Indians and Wilton Rancheria for their review. On December 10, 2024, the Shingle Springs Band of Miwok Indians confirmed receipt of the report. On December 10, 2024, the Wilton Rancheria responded, stating that they would review the report and contact the City if they had any questions.

B-3 *The Tribe requests that the City contact the Tribe if new information or human remains are found during project development, particularly near rivers and streams, to* give *the Tribe* an *opportunity to review* its *sacred artifact protection processes with the City.*

The City will notify the Tribe if significant new information or human remains are found during project development. The City welcomes comments on the Tribe's sacred artifact protection processes. The mitigation measures related to tribal cultural resource protection as part of this project are detailed in Section 5.13, *Tribal Cultural Resources*, of the DEIR. Relevant mitigation measures can also be found in Section 5.3, *Cultural Resources*. If human remains are discovered, work shall halt in that area and the procedures required by Mitigation Measures CUL-2 and TCR-2, described below, shall be followed, pursuant to requirements of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

Pursuant to Mitigation Measure CUL-2 in Section 5.3, *Cultural Resources*, of the DEIR, if Native American human remains are found, then the Sacramento County Coroner will notify the Native American Heritage Commission, which will designate a Native American Most Likely Descendant for the project. In addition, Mitigation Measure TCR-2, in

Section 5.13, *Tribal Cultural Resources*, of the DEIR states that if any tribal cultural resources are discovered during excavation or construction, work must stop within 100 feet of the find, and a qualified tribal monitor or consultant will be consulted to assess whether the resource requires further study and to recommend measures to protect it.

LETTER C– Cordova Recreation and Park District (3 pages)

Cordova
Recreation & Park District
11070 White Rock Road, Suite 130
Rancho Cordova, California, 95670
(916) 842-3300

July 18, 2024

Stefan Heisler
City of Rancho Cordova Housing Division
2729 Prospect Park Dr.
Rancho Cordova, CA 95670
(916) 851-8757

Regarding: **Mills Crossing Civic Center**
Draft Environmental Impact Report (DSEIR)

Review Documents: **Mills Crossing Draft Environmental Impact Report**

Public Comment Opportunity: **June 7 – July 22, 2024**

Reviewed by: Cordova Recreation and Park District
Laura Taylor, CRPD Park Planning and Development Manager

Cordova Recreation and Park District (CRPD) is responding to the City of Rancho Cordova's public notice of the availability of the Draft Environmental Impact Report for the Mills Crossing Civic Center project.

PROJECT DESCRIPTION

The proposed 10-acre Mills Crossing development is located in the Transit Oriented District Overlay Zone of Mather Field/Mills Light Rail Station on the south side of Folsom Boulevard. Concept 2 of the project will include 130,700 square feet of commercial space, a parking structure for 325 vehicles, 2.5 acres of public open space and up to 120 housing units. The current master plan exhibit shows 48 townhome lots and a four-story apartment building. According to the housing program, the apartment building will include a minimum of 55 units. The final number of residential units within Mills Crossing is not yet known. C-1

The proposed project falls under Quimby parkland requirements for projects with 50 or more lots.

In several sections the DEIR discusses this project's impact to local park and recreation facilities under the jurisdiction of Cordova Recreation and Park District. This letter provides a review of mentions in the report related to CRPD parkland. C-1

REVIEW OF EXECUTIVE SUMMARY

It lists 13 "Areas of Controversy" on Page 1-6, section 1.8 "Areas of Controversy". Bullet 11 lists "Project's contribution of parkland" as one point of controversy that was raised by public comment in the responses to the Notice of Preparation.

On page 1-16, Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation, section 5.12 Recreation:

- Impact 5.12-1: has determined that while the proposed project would increase the use of existing neighborhood and regional parks and other facilities, such that substantial physical deterioration of the facilities would occur or be accelerated, the impact is "less than significant" and "no mitigation measures are required." C-2

- Impact 5.12-2: has determined that while the project implementation would require the construction of expansion of recreational facilities which might have an adverse physical impact on the environment, the impact is "less than significant" and "no mitigation measures are required."

Page 2-3, Table 1-1 Notice of Preparation Comments, Cordova Recreation and Park District – provides a summary of CRPD's comments submitted February 2, 2023. The Table states that CRPD's comments are addressed in Section 5.12 Recreation starting on page 5.12-1.

REVIEW OF SECTION 5.12 RECREATION

5.12.1.2 Existing Conditions

This section provides a calculation for the amount of parkland acres per 1,000 residents in the City of Rancho Cordova. This calculation should not be considered the total amount of Quimby parkland available for City residents. It is more accurate to state in the fifth sentence of paragraph one, "CRPD's standard for dedication of **Quimby** parkland is 5 acres per 1,000 residents....." A Quimby parkland calculation for the City of Rancho Cordova should include the larger linear park corridors in the Villages of Zinfandel development (approximately 63 acres) and the existing CRPD Center property (73 acres) located at 11551 Douglas Road in Rancho Cordova. The Center property is in transition to park and recreation uses. C-3

5.12.4.Environmental Impacts, 5.12-1 and 5.12-2. Impact Analysis: The analysis for both impacts is determined to be "less than significant". CRPD concurs with this analysis. The analysis for both mentions the requirement to comply with the City's General Plan and City Municipal Code Chapter 22.40. Compliance with the City's General Plan and City Municipal Code will result in adequate resources (land and/or fees) to offset the impact of this project on local park and recreation facilities. C-4

5.12.5 Cumulative Impacts states the review of all development proposals to ensure adherence to Chapter 22.40 would provide sufficient resources for design, construction and maintenance of new parks and associated facilities needed to accommodate future growth in the city. Proposed project's contribution to this impact would be less than cumulatively considerable.

C-5

CRPD concurs that no Mitigation Measures are required because City Municipal Code Chapter 22.40 ensures adequate resources for park resources to address the increased population.

CRPD will continue to follow the progress of Rancho Cordova's new Civic Center project with great interest.

Respectfully,

Laura L. Taylor

Laura L. Taylor, ASLA
Park Planning and Development Manager
Cordova Recreation and Park District

Copy: Patrick Larkin, CRPD General Manager
Terry Zeller, CRPD Principal Planner
Andrew Saltmarsh, CRPD Planning Technician

C. Response to Comments Cordova Recreation and Park District, dated July 18, 2024.

C-1 *The Cordova Recreation and Park District (CRPD) summarizes the project description and states that the project falls under the Quimby* p*arkland requirements for projects with 50 or more lots. The CRPD states the DEIR details how the project will impact local park and recreation facilities that fall under the CRPD's jurisdiction.*

The City of Rancho Cordova appreciates CRPD's insights. Please review responses to specific comments in Responses C-2 through C-5.

C-2 *CRPD notes that the project's contribution to parkland was noted as an area of controversy in DEIR Section 1.8. CRPD notes that Impacts 5.12-1 and 5.12-2 were determined to be less than significant and would require no mitigation measures. CRPD notes that Table 1-1, Notice of Preparation of Comments, states that CRPD's February 2, 2023, comments are addressed in Section 5.12, Recreation.*

The comment incorrectly summarizes the impact thresholds. The first column of Table 1-1 provides the significance threshold for each environmental impact and does not represent the City's conclusion.

Regarding Impact 5.12-1, the comment states that the City has determined the proposed project would increase use of existing recreational facilities, such that substantial physical deterioration of the facilities would occur or be accelerated. As discussed on page 5.12-8, the City determined that "[[i]mplementation of the General Plan policies and the City's Municipal Code, discussed above, would ensure that the proposed project's generation of new residents would not cause or accelerate substantial physical deterioration of any parkland facilities"

Regarding Impact 5.12-2, the comment states that the City has determined project implementation would require construction or expansion of recreational facilities that might have an adverse physical impact on the environment. As discussed on page 5.12-8 of the DEIR, the City determined that "[a]lthough the proposed project would require the construction or expansion of recreation facilities, the proposed project would comply with the City's Municipal Code and goals in the General Plan; therefore no adverse physical effect would occur."

This comment does not raise significant environmental issues or describe any inadequacies of the DEIR, and no changes to the DEIR are necessary.

C-3 *CRPD notes* that, in *Section 5.12.1.2, Existing Conditions,* of *the Recreation Chapter*, *the calculation for parkland used should not be considered the total amount of Quimby parkland available but rather state that CRPD's standard for the dedication of Quimby parkland is 5 acres per 1,000 residents.*

In response to this comment, the fifth sentence of paragraph one of Section 5.12.1.2 has been revised to make the suggested change to 5 acres per 1,000 residents. This revision reflects a minor update or clarification to the content of the DEIR and thus does not

represent material changes or revisions that modify the findings. (See Section 3.2, *DEIR Revisions in Response to Written Comments*).

In addition, the CRPD explains that Quimby parkland calculation for the City should include the larger linear park corridors in the Villages of Zinfandel development (approximately 63 acres) and the existing CRPD Center property (73 acres). CRPD notes that the Center property is in transition to provide park and recreational uses.

See Section 3.2, *DEIR Revisions in Response to Written Comments*, which adds the linear park corridors in the Villages of Zinfandel development to the Quimby parkland calculations. This revision reflects a minor update of the existing Quimby parkland numbers but does not modify the findings. The center properties noted by CRPD are park projects proposed or still underway. The calculations in the DEIR are conservative, meaning the project is designed to meet applicable standards without taking into consideration parkland that has not yet been finalized; therefore, no changes are required regarding this comment.

C-4 *CRPD concurs with the analysis for Impacts 5.12-1 and 5.12-2 and the determination that both impacts are less than significant. CRPD agrees that the City's General Plan policies and Municipal Code Chapter 22.40 will offset the project's impact on local park and recreation facilities.*

This comment is noted for the record and will be forwarded to the decision-makers for review and consideration. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

C-5 *The CRPD summarizes the DEIR's analysis of Cumulative Impact 5.12.5, and agrees that no mitigation measure is needed because the City's Municipal Code Chapter 22.40 ensures adequate resources for park and recreational infrastructure to offset project impacts. CRPD will continue to follow the progress of the project with great interest.*

This comment is noted for the record and will be forwarded to the project decision makers for review and consideration. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

LETTER D – Sacramento Area Sewer District (2 pages)

SACRAMENTO AREA SEWER DISTRICT
SERVING YOU 24/7

Administrative Office
10060 Goethe Road
Sacramento, CA 95827
Tel 916.876.6000

EchoWater Facility
8521 Laguna Station Road
Elk Grove, CA 95758
Tel 916.875.9000

July 19, 2024

Stefan Heisler
City of Rancho Cordova
Planning Department
2729 Prospect Park Drive
Rancho Cordova, California 95670

Subject: **NOTICE OF AVAILABILITY (NOA) FOR AN ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE MILLS CROSSING PROJECT**
APN: **076-0020-019, -020, -021, & -022**
File No: **SCH# 2023010102**

Dear Mr. Heisler,

The Sacramento Area Sewer District (SacSewer) has reviewed the subject document and has the following comments.

The City of Rancho Cordova is proposing a 9.85-acre mixed-use project (the Mills Crossing Project) located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova. The property is zoned Residential Mixed Use (RMU) within the Folsom Blvd Specific Plan (FBSP) designation of the General Plan. The project will include approximately 140,000 square feet of community-commercial buildings, up to 120 housing units including multi-family affordable apartments and zero lot line townhouse-style homes, up to 2.5 acres of public open space, and a parking structure with up to 325 parking stalls. The community-commercial component will include health and wellness, community serving commercial, and arts center with black box theater and flex studios, a community event hall, and retail. Adoption of the project contemplates approval of the following City entitlements: certification of the EIR; amendment of the City of Rancho Cordova General Plan and Specific Plan; zoning amendment; tentative subdivision map; and a Major Design Review approval. Future City entitlement approvals may include, but are not limited to, the following: a Development Agreement

D-1

Note: Effective January 1, 2024, the Sacramento Regional County Sanitation District and the Sacramento Area Sewer District merged into one district called the Sacramento Area Sewer District, or SacSewer for short.

SacSewer provides local sewer service to the proposed project site via its collection system and conveys sewage from the collection system to the EchoWater Resource Recovery Facility for treatment, resource recovery, and disposal.

Board of Directors
Representing:
County of Sacramento | City of Citrus Heights
City of Elk Grove | City of Folsom
City of Rancho Cordova | City of Sacramento
City of West Sacramento | County of Yolo

Christoph Dobson
General Manager/District Engineer
Rosemary Clark
Director of Collection System Operations
Sonny Lunde
Director of EchoWater Operations
Mike Huot
Director of Policy & Planning
Matthew Doyle
Director of Internal Services
Masiku Tepa Banda
Director of Finance
Nicole Coleman
Director of Communications

SacSewer is not a land-use authority and plans and designs its sewer systems using information from land-use authorities. SacSewer bases the projects identified within its planning documents on growth projections provided by these land-use authorities. D-1

To receive sewer service, the project proponent must complete Sewer Master Plans that include connection points and phasing information to assess the existing capacity of the collection systems to determine if the current facilities can convey the additional flows generated by the Project.

For SacSewer to more fully evaluate the subject project's impact on the system, a sewer study will be needed. This study shall demonstrate the permanent connection(s) to SacSewer system. The sewer study shall demonstrate the quantity of discharge along with appropriate pipe sizes and related appurtenances from this subject and other upstream areas and shall be done in accordance with SacSewers' most recent "Minimum Sewer Study Requirements". The study shall be done on a no "Shed-Shift" basis unless approved by SacSewer in advance and in compliance with the SacSewer's Standards and Specifications. This study may be refined by supplemental studies as the scope and details of the subject project become more defined. If the proposed density exceeds what was planned in SacSewer's Master Plan, the downstream system capacity may be constrained. SacSewer will model the effects on the downstream system when the sewer study is submitted. D-2

Customers receiving service from SacSewer are responsible for rates and fees outlined within the latest SacSewer ordinance. Fees for connecting to the sewer system recover the capital investment of sewer and treatment facilities that serve new customers. SacSewer does not guarantee sewer service or system capacity to the property until the property obtains proper permits to connect to the system and pays all facility impact (capacity) fees. The SacSewer ordinances are on the SacSewer website at https://www.sacsewer.com/ordinances/. D-3

If you have any questions regarding these comments, please call me at (916) 875-9810, Steve Kiyama at (916) 876-6657, or Douglas Kennedy at (916) 875-4563.

Sincerely,

Chika Oya

Chika Oya
SacSewer Development Services

2. Response to Comments

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D. Response to Comments from the Sacramento Area Sewer District, dated July 19, 2024.

D-1 *The Sacramento Area Sewer District (SacSewer) summarizes the proposed project's project description. SacSewer provides local sewer service to a proposed project site through its collection system, which then transports sewage to the EchoWater Resource Recovery Facility for treatment, recovery, and disposal. SacSewer plans and designs its sewer systems based on growth projections from land-use authorities.*

See Response A-1 regarding the project description, which does not require an amendment to the General Plan. The City of Rancho Cordova appreciates SacSewer's comments on the DEIR. This comment is noted for the record and will be forwarded to the project's decision makers for review and consideration. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

D-2 *SacSewer states that to receive sewer service, the project proponent must complete Sewer Master Plans, including connection points and phasing information, to assess the existing capacity of collection systems and determine if the current facilities can convey the additional flows generated by the project. In addition, SacSewer requests a sewer study to evaluate the project's impact more fully on the sewer system. SacSewer requests that the study demonstrate the permanent connections to the SacSewer system, the quantity of discharge, appropriate pipe sizes, and related appurtenances. SacSewer requires that the sewer study be done in compliance with its most recent "Minimum Sewer Study Requirements" and its Standards and Specifications. SacSewer cautions that, "[i]f the proposed density exceeds what was planned in SacSewer's Master Plan, the downstream system capacity may be constrained."*

As requested by the comment, the City will complete a Sewer Master Plan that includes the required information. The proposed project would need to comply with Section 15.04.070, Permits, of the City's Municipal Code, which states that public sewers cannot be used without obtaining the permits required by this section; therefore, the proposed project would need to go through the City's Municipal Code before connection to a public sewer such as SacSewer. Completion of the Sewer Master Plan is a procedural step to finalize the detailed connection and phasing information, but it will not alter the capacity conclusions already supported by the DEIR and the General Plan EIR. Revisions to the DEIR based on this regulation are provided in Section 3.2, *Revisions to the DEIR in Response to Comments*, of the FEIR. This update is a minor clarification to the DEIR and does not alter the findings or result in material changes to the project's environmental analysis.

As discussed in the DEIR under Impact 5.14-1, the existing infrastructure is sufficient to serve the proposed project. The analysis in the DEIR is based on current data and projections for regional growth, which were factored into the capacity planning for the Sacramento Regional Wastewater Treatment Plant (SRWTP). The SRWTP currently has a permitted capacity of 181 million gallons per day (mgd) for average dry weather flow and 392 mgd for average wet weather flows, which are adequate to support the proposed development. Importantly, the projected growth under the proposed project was included

in the City's regional growth estimates and planning assumptions, which were incorporated into the 2006 General Plan EIR. Therefore, impacts to wastewater treatment facilities, including the SRWTP, have already been accounted for and anticipated in that earlier analysis. Given that the planned growth and its associated wastewater flows were considered in the General Plan EIR and that current infrastructure is projected to accommodate the additional demand, the DEIR's analysis remains accurate and reliable for determining that the proposed project will not exceed the wastewater treatment plant's capacity.

D-3 *SacSewer states that customers receiving service from SacSewer are responsible for the rates and fees in the latest SacSewer ordinance. These fees recover the capital investment of sewer and treatment facilities serving new customers. SacSewer does not guarantee sewer service or system capacity until proper permits are obtained and facility impact fees are paid.*

Future development would be required to comply with all applicable regulations, including those of SacSewer.

Revisions to the DEIR based on this clarification are provided in Section 3.2, *Revisions to the DEIR in Response to Comment*s, of the FEIR. This update is a minor clarification to the DEIR and does not alter the findings or result in material changes to the project's environmental analysis. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

LETTER E – Sacramento Metropolitan Air Quality Management District (1 page)

From: Roberto Ramirez <RRamirez@airquality.org>
Sent: Friday, July 19, 2024 10:18 AM
To: Stefan Heisler
Subject: No Comment - DEIR for Mills Crossing Project

Hi Stefan,

Thank you for giving us the opportunity to review the DEIR for the Mills Crossing Project. We have no comments at this time. E-1

Thank you,

Roberto Ramirez
Air Quality Planner/Analyst
ISA Certified Arborist #WE-14276A
Transportation & Climate Change
Desk: (916) 704-4552
www.AirQuality.org
@AQMD

E. Response to Comments from Sacramento Metropolitan Air Quality Management District, dated July 19, 2024.

E-1 *The Sacramento Metropolitan Air Quality Management District thanks the lead agency for allowing them to review the DEIR and adds that they do not have any comments on the project at this time.*

The City of Rancho Cordova appreciates the Sacramento Metropolitan Air Quality Management District's review of the DEIR. This comment is noted for the record and will be forwarded to the project's decision makers for review and consideration. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

2. Response to Comments

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LETTER 1 – Karl Haas (3 pages)

From: Stefan Heisler
To: Karl Haas
Subject: RE: Mills Crossing Notice of Availability of Draft Environmental Impact Report
Date: Friday, June 7, 2024 2:04:00 PM
Attachments: image001.jpg

Got it, thanks Karl!

This is what I wrote down from our conversation this morning: Take out parking in the grove, put in a playground, add interactive water feature, EV charging and bicycle parking.

1-1

Sincerely,

Stefan
916-851-8757

From: Karl Haas [redacted]
Sent: Friday, June 7, 2024 2:02 PM
To: Stefan Heisler <sheisler@cityofranchocordova.org>
Subject: Re: Mills Crossing Notice of Availability of Draft Environmental Impact Report

On second thought, that Folsom Blvd entrance might have a traffic calming effect. I like the idea of that.

1-2

Yahoo Mail: Search, Organize, Conquer

On Fri, Jun 7, 2024 at 11:18 AM, Stefan Heisler <sheisler@cityofranchocordova.org> wrote:

> Dear Responsible Agencies and Interested Parties,
>
> **Notice of Availability of Draft Environmental Impact Report and Public hearing on the MILLS CROSSING PROJECT**
>
> The City of Rancho Cordova has prepared a draft environmental impact report (DEIR) for the Mills Crossing Project in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (14 California Code of Regulations Section 15000 et seq.).

Description of the Project: The City of Rancho Cordova is proposing a 9.85-acre mixed-use project (the Mills Crossing Project) located ~~on~~ located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova. The property is zoned Residential Mixed Use (RMU) within the Folsom Blvd Specific Plan (FBSP) designation of the General Plan. The project will include approximately 140,000 square feet of community-commercial buildings, up to 120 housing units including multi-family affordable apartments and zero lot line townhouse-style homes, up to 2.5 acres of public open space, and a parking structure with up to 325 parking stalls. The community-commercial component will include health and wellness, community serving commercial, and arts center with black box theater and flex studios, a community event hall, and retail. Adoption of the project contemplates approval of the following City entitlements: certification of the EIR; amendment of the City of Rancho Cordova General Plan and Specific Plan; zoning amendment; tentative subdivision map; and a Major Design Review approval. Future City entitlement approvals may include, but are not limited to, the following: a Development Agreement.

Project Location: The Project is located at 10153-10179 Folsom Blvd (APNs: 076-0020-019, -020, -021, & -022)

Cortese-Listed Sites: Section 15087(c)(6) of the CEQA Guidelines requires that this notice disclose whether the project site is listed on the lists enumerated under Government Code Section 65962.5 (Cortese List). As noted in Chapter 3, Project Description, of the DEIR, there is one remedial site on the northwest corner of the project site of a former dry-cleaning site which operated from 1971 to 2003. The site was found to have elevated levels of tetrachloroethylene (PCE) in groundwater. Remediation efforts, including soil vapor extraction and groundwater extraction, were conducted from 2010 to 2017; however, residual PCE in soil vapor still exceeds safe levels. The City plans further remediation, including soil and sewer line excavation in the former dry cleaner area and in-situ soil treatment in the former parking lot area. Chapter 5.6, Hazards, and Hazardous Materials, of the DEIR outlines additional details regarding hazards and hazardous materials at the site.

Significant Environmental Impacts of the Project: The DEIR evaluates three land use development alternatives at an equal level of detail. Analysis of environmental impacts associated with the project identified potentially significant or significant impacts in the following issue areas: air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, tribal cultural resources. Mitigation measures would reduce all potentially significant impacts to a less than significant level.

Public Review Period: The DEIR is available for review during a 45-day comment period that begins on June 7, 2024, and ends on July 22, 2024. A public hearing on the DEIR will be held on August 28, 2024, from 5:30-7 pm at the Rancho Cordova City Hall located at 2729 Prospect Park Drive, Rancho Cordova, CA 95670. This public hearing will be open to the public and all interested persons are invited to attend and provide testimony on the DEIR. The hearing will begin with a project overview and summary of the DEIR. Written and verbal comments on the DEIR will be accepted during the meeting. The Planning Commission will preside over the meeting; however, it will not take any action on the DEIR or project. Staff will note general themes of verbal comments made and will address them in the Final EIR. Members of the public are encouraged to submit written comments to ensure that their specific comments are represented in the project record and addressed in the Final EIR.

Copies of the DEIR can be reviewed at the following locations:

City of Rancho Cordova Planning Department
2729 Prospect Park Drive
Rancho Cordova, CA 95670

Rancho Cordova Public Library
9845 Folsom Boulevard
Rancho Cordova, CA 95827

The Draft EIR is also available on the City's website at: Mills Crossing | City of Rancho Cordova

Written comments on the DEIR must be postmarked no later than July 22, 2024, and should be sent to the following address:

Stefan Heisler

City of Rancho Cordova

Planning Department

2729 Prospect Park Drive

Rancho Cordova, CA 95670

1. Response to Comments from Karl Haas, dated June 7, 2024.

1-1 *The commenter requests the removal of parking in the grove* and the addition of *a playground with an interactive water feature, electrical vehicle charging, and bicycle parking.*

See Section 3.3, *Revisions to the Project Description*, which changes the project description and includes a bioretention basin, electrical vehicle charging stations, and bicycle parking. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

1-2 *The commenter likes the idea of an entrance on Folsom Boulevard, which might result in a traffic-calming effect.*

Automobile delay, as described by level of service (LOS) or other measurements of vehicular capacity or traffic congestion, is no longer considered a significant impact under CEQA. However, the project's compliance with General Plan Circulation Element Policies related to traffic are discussed on pages 8-9 to 8-10 of the DEIR.

This comment is noted for the record and will be forwarded to the project's decision makers for review and consideration. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

2. Response to Comments

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LETTER 2 – Larry (1 page)

From: Stefan Heisler
To: Megan Siren
Cc: Kristine Courdy; Edgar Medina
Subject: RE: VM - Mills Crossing
Date: Friday, June 7, 2024 3:04:00 PM
Attachments: image001.jpg

Thanks Megan,

He is the owner(?) of 5 Star Auto Sales on Folsom Blvd on the next block west from Mills Crossing. He was excited to hear about the development and asked when it would be completed. He's looking forward to the additional improvement it will bring to the neighborhood and positive economic impacts.

Sincerely,

Stefan
916-851-8757

2-1

From: Megan Siren [redacted]
Sent: Friday, June 7, 2024 2:32 PM
To: Stefan Heisler <sheisler@cityofranchocordova.org>
Subject: VM - Mills Crossing

Stefan:

Could you call this gentlemen back? He left a VM and was curious about Mills Crossing: Yes, hello, how are you doing? My name is Larry. Please give me a call back at [redacted]. I'm curious about the project that you guys are developing over here on Folsom Boulevard in La Loma. Please call me back at [redacted]. Thank you. Have a nice day.

Thanks,

Megan

2. Response to Comments from Larry (no last name provided), dated June 7, 2024.

2-1 *The commenter expressed their excitement about the Mills Crossing development and asked when the project would be completed. The commenter is looking forward to the additional improvements and positive economic impacts it would bring to the neighborhood.*

This comment is noted for the record and will be forwarded to the project's decision makers for review and consideration. As this comment does not raise significant environmental issues or describe any inadequacies of the DEIR, no changes to the DEIR are necessary.

2. Response to Comments

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3. Corrections, Clarifications, and Additions to the DEIR

3.1 INTRODUCTION

This section contains revisions to the DEIR based on (1) additional or revised information or clarifications generated in response to information or concerns raised by a specific comment, or independently by the City; (2) applicable updated information that was not available at the time of DEIR publication; and/or (3) typographical errors. Changes made to the DEIR are identified here in ~~strikeout text~~ to indicate deletions and in underlined text to signify additions.

These corrections, clarifications, and additions to the DEIR are provided to clarify and amplify the DEIR. The revisions incorporate material and updates added to the EIR text as part of the FEIR. None of this new material constitutes "significant new information" requiring recirculation as defined in Section 15088.5(a) of the State CEQA Guidelines. Specifically, the following criteria are not met:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.

4. The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

The revised site plan would change the parking structure to three surface parking lots. The revised site plan would include up to approximately 140,000 square feet of nonresidential uses, which is the same amount of nonresidential building space analyzed in the DEIR. The open space for the revised site plan would be approximately 28,400 square feet and would be publicly accessible. Currently, the project is occupied by paved areas with patches of vegetation. No parks or recreation facilities exist on the project site.

3.2 REVISIONS TO THE DEIR IN RESPONSE TO COMMENTS

The text on page 3-12, Chapter 3, Project Description, under the heading "Intended Uses of the DEIR," has been revised in response to Comment A-1 from Department of Toxic Substances Control, dated July 10, 2024.

3.4 INTENDED USES OF THE DEIR

This Draft EIR (EIR) is a project EIR that examines the environmental impacts of the proposed project. This DEIR also addresses various actions by the City and others to adopt and implement the proposed project. This DEIR intends to evaluate the environmental impacts of the proposed project, thereby enabling the City of Rancho Cordova, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for this project are:

Lead Agency	Action
City of Rancho Cordova City Council	Development Agreement Specific Plan Zoning Amendment Zoning Amendment Tentative Subdivision Map Site Plan Approval Development Agreement Major Design Review Building Permit Certify EIR and Adopt Mitigation Monitoring and Reporting Program
Responsible Agencies	**Action**
Central Valley Regional Water Quality Control Board	Issuance of National Pollutant Discharge Elimination System (NPDES) Permit Issuance of Construction Permit

The text on page 5.12-3, Section 5.12, Recreation, under the heading "Existing Conditions," has been revised in response to Comment C-3 from Cordova Recreation and Park District, dated July 29, 2024.

5.12.1.2 EXISTING CONDITIONS

The CRPD has the primary responsibility for providing and maintaining recreation facilities and services. Table 5.12-1, CRPD's Parks and Recreation Facilities, shows the locations, acreages, and amenities of these facilities. As shown in Table 5.12-1, there are a total of 33~~2~~ park and recreational facilities with a total of 358.5~~ 295.5~~ acres (CRPD 2012, 2023b). CRPD also anticipates future park development of Exploration Park, Goldrush Park, Gantline 208/Arista Del Sol Community Park, Hummingbird Park, W. H. Williamson Park, Federspiel Park Walkway Improvement, and Rosemont Community Park Sports Courts (CRPD 2023c). CRPD is currently working on a districtwide Optimized Parks, Facilities and Recreation Plan that provides guidance over the next 10 years and began public review in fall of 2022 (CRPD 2023a). CRPD's standard for dedication of Quimby parkland is 5 acres per 1,000 residents within the city to be devoted to neighborhood and community parks. Table 5.12-1 shows there are currently 358.5 ~~295.5~~ acres of available recreation facilities. According to the Department of Finance's estimates, the current population in Rancho Cordova is 80,359 (DOF 2023). Based

on existing population and parkland, the City needs approximately 401.8 acres of parkland to accommodate its current population.

Table 5.12-2 CRPD's Parks and Recreation Facilities

	Facility Name	Acres	Location	Amenities
31	White Rock Community Park	14	10488 White Rock Rd. Rancho Cordova, CA 95670	2 basketball courts, 2 BBQs, multiuse fields, open grass area, pavilion, 4 picnic areas, playground, rental available, restrooms, soccer field, tennis court
32	White Rock Splash Park	0.53	10488 White Rock Rd. Rancho Cordova, CA 95670	drinking fountain, open grass area, parking lot, 2 picnic areas, restrooms, showers, spray park, 2 water slides
33	Linear park corridors Villages of Zinfandel development	63	Villages Of Zinfandel Rancho Cordova, CA 95670	linear park corridors
Total		~~295.5~~ 358.5		

Sources: CRPD 2012, 2023b.

The text on page 5.14-5, Section 5.14, Utilities and Service System, under Impact 5.14-1, has been revised in response to Comment D-2 from Sacramento Area Sewer District, dated July 19, 2024.

The wastewater generated by the project would be less than 0.01 percent of a 10 mgd flow capacity. This flow represents an even smaller fraction of the 181 mgd capacity of the SRWTP. Therefore, existing utility infrastructure, including the interceptor sewer line on Folsom Boulevard and the SRWTP would have sufficient capacity to accommodate the wastewater flows that the project is estimated to generate.

The proposed project would need to comply with Section 15.04.070, Permits, of the City's Municipal Code, which states that public sewers cannot be used without obtaining the permits required by this section; therefore, the proposed project would need to go through the City's Municipal Code before connection to a public sewer such as SacSewer.

Level of Significance Before Mitigation: Impact 5.14-1 would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation: Impact 5.14-1 would be less than significant.

The text on page 5.14-2, Section 5.14, Utilities and Service System, under the heading "Local Regulations," has been revised in response to Comment D-3 from Sacramento Area Sewer District, dated July 19, 2024.

Local Regulations

SacSewer Ordinances

Collection Ordinance

The Collection Ordinance defines uniform requirements for the design, construction, and use of the sewage collection system. It establishes provisions for the enforcement of these requirements and sets penalties for non-compliance. The ordinance clarifies the responsibilities for the maintenance of the sewer collection system. It also establishes the rates and fees for users of SacSewer's facilities to cover the costs of system operation and maintenance.

Treatment and Resource Recovery Ordinance

The Treatment and Resource Recovery Ordinance establishes requirements for the use of SacSewer's sewage treatment and resource recovery system, ensuring compliance with environmental and health standards. It outlines enforcement provisions, including penalties for violations, and sets rates and fees for users to cover the costs of treatment, resource recovery, and system maintenance.

Sacramento Regional Wastewater Treatment Plant 2020 Master Plan

SRWTP's 2020 Master Plan provides a phased program of recommended wastewater treatment facilities and management programs to accommodate planned growth and to meet existing and anticipated regulatory requirements through the year 2020. The master plan addresses both public health and environmental protection issues while providing reliable service at affordable rates for Regional San customers. The key goals of the master plan are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, comply with applicable water quality standards, and provide for the most cost-effective facilities and programs from a watershed perspective, as described in Chapter 2, Master Planning Goals, Objectives, Planning Assumptions, and Regulatory Requirements, of the 2020 Master Plan (Regional San 2008).

3.3 REVISIONS TO THE PROJECT DESCRIPTION

The following text and figures have been revised to reflect the updated entitlement package received on September 13, 2024. Only Chapter 3, *Project Description*, of the DEIR is being updated to align with the new entitlement; the rest of the DEIR should reference this revised project description for accurate information on the Mills Crossing project, such as the project site boundary, project size, project features, and proposed project land uses.

3.1.1 Project Location

The ~~9.85~~ 10.34-acre project site encompasses the following Assessor's Parcel Numbers (APNs): 076-0020-019, -20, -21, -22, 076-0213-013. The project site is located at the corner of Folsom Boulevard and La Loma Drive in the City of Rancho Cordova, Sacramento County. The City of Rancho Cordova is surrounded by unincorporated Sacramento County to the north, south, east, and west (see Figure 3-1, *Regional Location*).

3.1.2 Project Site History

The project site includes a former dry-cleaning site that operated from 1971 through 2003 located on the northwest portion of the project site (See Figure 5.6-1, Project Remediation Map in Chapter 5.6, *Hazards and Hazardous Materials*). The project site was found to have elevated levels of tetrachloroethylene (also known as perchloroethylene or "PCE") found in groundwater. The project site was previously remediated via a soil vapor extraction system from 2010 to 2016 and one groundwater extraction well from 2014 to 2017 (Appendix 5.6-1). The City of Rancho Cordova bought the property in 2018 and is working on addressing residual PCE in soil vapor that still exceeds screening levels (SWRCB 2024). The 2021 soil vapor data show that PCE concentrations in soil vapor exceed the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs) for vapor concentrations in the former dry cleaner area located on the northwest portion of the project site. The PCE concentrations exceeded the residential ESL for vapor intrusion consideration, which corresponds to a carcinogenic risk of 10-6. The City plans to perform additional site remediation including soil and sewer line excavation in the former dry cleaner area and contingency in-situ soil treatment at a deeper depth in the former parking lot area.[1] Section 5.6 provides additional details about potential hazards and hazardous materials at the project site.

3.1.3 Existing and Surrounding Uses

The project site is currently vacant. The project site was previously developed as a commercial shopping center, but all the previous buildings have since been demolished, leaving only the parking lot remaining. A few scattered trees are found in weedy patches within and around the perimeter of the project site. The project site also has a sloping incline located on the northwest portion of the project site on La Loma Drive. The project site is surrounded by residential uses to the north, residential uses and Folsom Lake College/Rancho Cordova to the east, light industrial uses to the south, and commercial and residential uses to the west. Figure 3-2, *Aerial*

[1] The proposed remediation activities have been exempt under State CEQA Guidelines Section 15304(f). This remediation work is not part of the proposed project because it needs to be completed whether or not the proposed project goes forward. Also, the remediation work and should be completed before any approval of the proposed project and prior to construction from the proposed project.

Photograph (NEW), shows the project site in its local context. Section 4.0, Environmental Setting, includes a more detailed description of the existing environmental setting.

3.1.4 Existing Zoning and Land Use Designations

The project site is zoned Residential Mixed-Use – Folsom Boulevard Specific Plan (RMU [FBSP]). The RMU (FBSP) Zoning District is intended to designate property for the development of medium and high-density housing (between 6.1 and 40 dwelling units per acre) that may incorporate office and/or commercial services. While the predominant use of the development is residential, the City encourages the vertical and/or horizontal integration of commercial and/or office uses that are compatible with the residential development.

The project site has a land use designation of Residential Mixed-Use (FB-RMU).

3.2 STATEMENT OF OBJECTIVES

Objectives for the Mills Crossing Project will aid decision makers in their review of the project and associated environmental impacts:

1. Provide for a mix of uses onsite by developing residential, commercial, and recreational uses on infill and underutilized parcels near the Mather Field/Mills Station.
2. Increase the City's housing stock by providing a range of housing density types, including affordable housing.
3. Increase employment opportunities in the City.
4. Improve the jobs-housing balance in the City of Rancho Cordova and provide new housing close to jobs and services.
5. Promote healthy living and physical activity by providing open space areas and opportunities to utilize alternative transportation options available proximate to the site, including the Mather Field/Mills Station.

3.3 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means:

> ... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)…enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])

Figure 3-2 Aerial Photograph (NEW)



~~Figure 3-2 Aerial Photograph~~

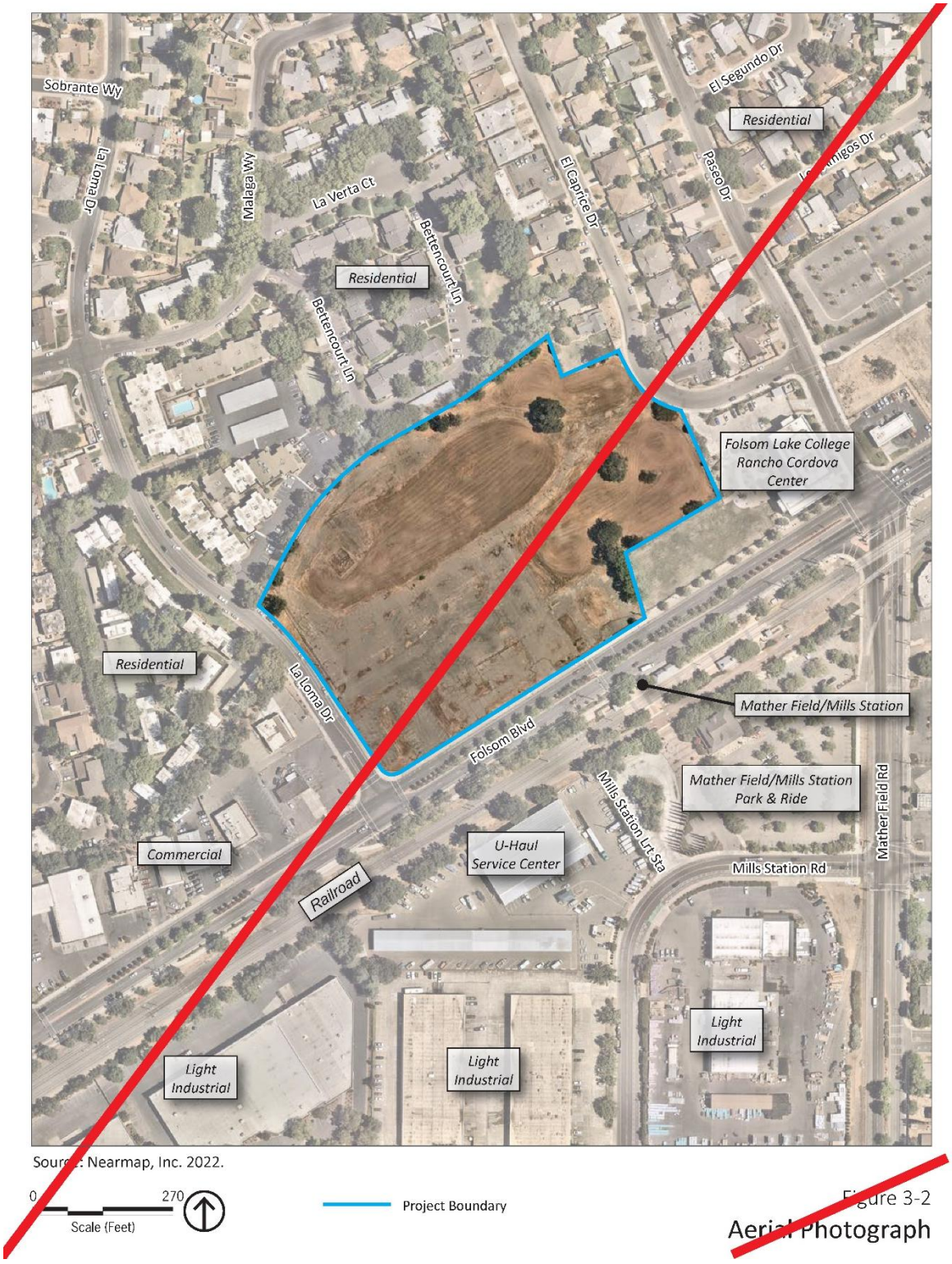


Figure 3-2
Aerial Photograph

3.3.1 Description of the City's General Plan Environmental Impact Report

The Environmental Impact Report for the City of Rancho Cordova General Plan ("2006 EIR") was approved by the Rancho Cordova City Council on June 26, 2006. The 2006 EIR was proposed to replace the General Plan which the City adopted from Sacramento County upon incorporation in July 2003. As indicated in the 2006 EIR, the project site is located in the Folsom Boulevard Planning Area, and a Specific Plan was prepared for this Planning Area after the adoption of the 2006 General Plan.

As indicated above, the project site is zoned RMU (FBSP) which allows between 6.1 and 40 dwelling units per acre. As such, the project site could allow between 24~~61~~ units and 161 ~~394~~units. As the project site is within the Mather Mills Opportunity Site, additional development standards are provided, which indicate that there is no minimum or maximum floor area ratio (FAR) for the project site.

3.3.2 Description of the Proposed Project

The proposed project would include community-commercial buildings, housing, public open space, and parking lots ~~structure~~. The project would be constructed in phases. Phase 1 would include the construction of non-residential development (buildings 1, 2, and 3); surface parking lots 1, 2, and 3; open space; and other site improvements. The proposed housing would be constructed in future phases as funding becomes available. In addition, future phases could include revisions to on-site parking (up to a maximum of 325 spaces) and additional non-residential building space on Parcel 5. Figure 3-3, *Proposed Parcel Plan (NEW)*, shows the proposed parcel plan, and Figure 3-4~~3~~, *Conceptual Site Plan (NEW)*, shows the layout of the proposed uses on the project site. In order to accommodate the proposed uses listed below, the necessary entitlements include:

- A Specific Plan Amendment to rezone portions of the Mills Crossing project site area from a Residential Mixed-Use (RMU) zone to a Commercial Mixed-Use (CMU), Medium Density Residential (MDR), and High-Density Residential (HDR) zone. ~~As shown in~~ Figure 3-5~~4~~, Zoning Option 1, ~~and 3-5, Zoning Option 2, to view~~ shows the ~~potential new~~ updated configuration for the Mills Crossing Project site. Figure 3-5~~4~~ shows 2.96 acres MDR, 4.79 acres CMU, and 1.09 acres HDR~~, and Figure 3-5 shows 3.05 acres MDR, 4.79 acres CMU, and 1.0 acres HDR~~. The remaining RMU areas will be dedicated as a public right of way. (See Section 3.3.3, Project Site Rezone Designation, for more information on the individual zones)
- A Tentative Subdivision Map to create ~~between five and nine~~ seven new parcels for the proposed uses. (See Figure 3-3.)
- Major Design Review for new construction

Phase 1

Parcel 1

~~**Community-Commercial Buildings**~~

- Building 1: Community Commercial Health and Wellness
  - ~~Community Health Clinic—up to 30,000 square feet~~

- ~~The community-commercial buildings would include~~ Up to 60,000 square feet of uses~~, and would include the following~~
- Medical and office building
- Located on 0.7 acres

Parcel 4

- Parking Lot 1
  - Area: 0.9 acres
  - Total parking spaces: 98
  - 5 ADA-compliant spaces
  - 5 electric vehicle charging stalls

Parcel 2

- Located on 1.12 acres
- Landscape features: Mix of turf and general planting mix
- Building 2: Community Arts Center ~~(Subtotal—~~
  - Up to 45,000 ~~35,000~~ square feet~~)~~
  - ~~Flex~~ Theater and Arts Building ~~(black/white/green box)—up to 18,000 square feet~~
- Plaza
  - Approximately 20,000 square feet
  - 11 short-term bike racks (22 bicycle capacity)
  - 9 long-term bike storage
  - 1 bike repair work stand
  - 19 plaza seating
  - 35 modular tables and 4 chairs per table
  - 2 waste and recycling receptacles
  - 3 electrical power outlets
  - Drinking fountain

Parcel 3

- Located on 0.65 acres
- Building 3: Flex Community Commercial Retail ~~Classrooms and Rehearsal Space—up to 6,000 square feet~~
  - Up to 20,000 square feet
  - Events and Meetings Space
  - Space for meetings, community and cultural events, banquet, and weddings~~—up to 15,000square feet~~

- ~~Production/Artist's Studios—up to 4,000 square feet~~
- ~~Gallery/Exhibits—up to 4,000 square feet~~
- ~~Administrative Space—up to 3,000 square feet~~

- ~~Commercial Office-Anchor—up to 25,000 square feet~~
- ~~Commercial Office-Shared—up to 10,000 square feet~~
- ~~Flexible Studios 1—up to 5,000 square feet~~
- ~~Flexible Studios 2—up to 7,500 square feet~~
- ~~Commercial Kitchen—up to 5,000 square feet~~
- Commercial-Retail ~~(Subtotal—up to 7,500 square feet)~~
  - Fresh Market, Food and Beverage, Café, Retail~~—up to 5,000~~
  - ~~Café—up to 2,500 square feet~~

Parcel 5

- Located on 1.4 acres
- Landscape Features: Mix of turf, bio-retention mix, and general planting mix
- Parking Lot 2
  - Area: 0.9 acres
  - Total parking spaces: 38
    - 2 ADA-compliant
    - 2 electric vehicle stalls
- Project Green
  - Area: 8,400 square feet
  - 10 project green seating
  - 2 waste and recycling receptacles
  - 2 electrical power outlets
  - Bioretention basins

Public Open Space

The proposed project would include ~~up to 2.5 acres of~~ public open space as follows:

- ~~Between 1.3 and 1.5 acres of Neighborhood and Community Greens~~
- ~~Between 0.75 and 1.0 acre~~ Approximately 20,000 square feet of Plaza and approximately 8,400 square feet of Project Green ~~Space~~

Parking Lots ~~Structure~~

The proposed project would include ~~a~~ three surface parking lots ~~structure~~ with a maximum of ~~between 275 and~~ 325 parking spaces. As noted above, parking lots 1 and 2 are on parcels 4 and 5, respectively. Parking lot 3 is on 0.49 acres in the southeast corner of the project site, as shown on Figure 3-4, *Conceptual Site Plan (NEW)*. Parking lot 3 would consist of 41 stalls, including 7 compact stalls, 3 ADA stalls, and 2 EV-only stalls. The area proposed to be parking lot 3 is owned by Folsom Lake College and would be leased to the City of Rancho Cordova for the proposed project.

Internal Circulation and Access

Figure 3-~~43~~, *Conceptual Site Plan (NEW)*, shows the conceptual internal roadways and access points into and out of the project site. The project site would be accessible via Folsom Boulevard to the south, La Loma Drive to the west, and El Caprice east of the project site.

Future Phases

Parcel 4

Future phases on Parcel 4 could include enhancements to the on-site parking configuration to add additional spaces (maximum of 325 parking spaces) as the need and funding becomes available.

Parcel 5

Future phases could include the construction of a non-residential building on Parcel 5 (up to 15,000 square feet). Funding, planning, and design details are not yet available for this building, but it is anticipated to be within the total building square footage analyzed in the DEIR.

Parcel 6 and Parcel 7

Future Housing

Future housing would be located on parcel 6, which is 2.94 acres, and parcel 7, which is 1.09 acres. The proposed project would provide up to 120 dwelling units, as follows:

- Parcel 6 would provide between 40 and 60 dwelling units
- Parcel 7 would provide between 55 and 60 dwelling units
- Between 55 and 60 Multifamily Affordable Apartments
- Between 50 and 60 Zero Lot Line Townhouse-Style Homes for Sale

Figure 3-3 Proposed Parcel Plan (NEW)



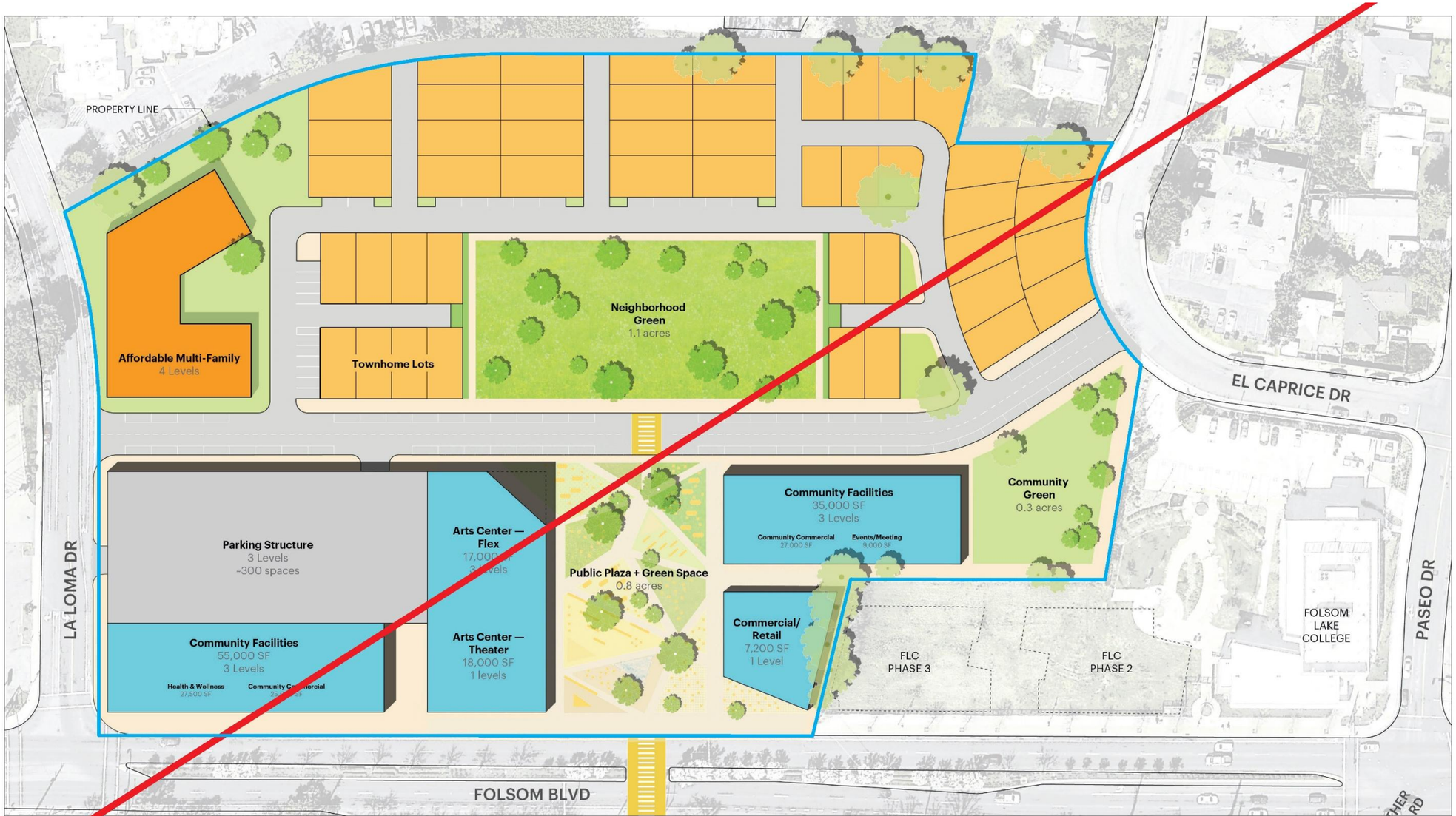
Source: LPA 2024.

0 90
Scale (Feet)

PLACEWORKS

Figure 3-3
Proposed Parcel Plan (NEW)

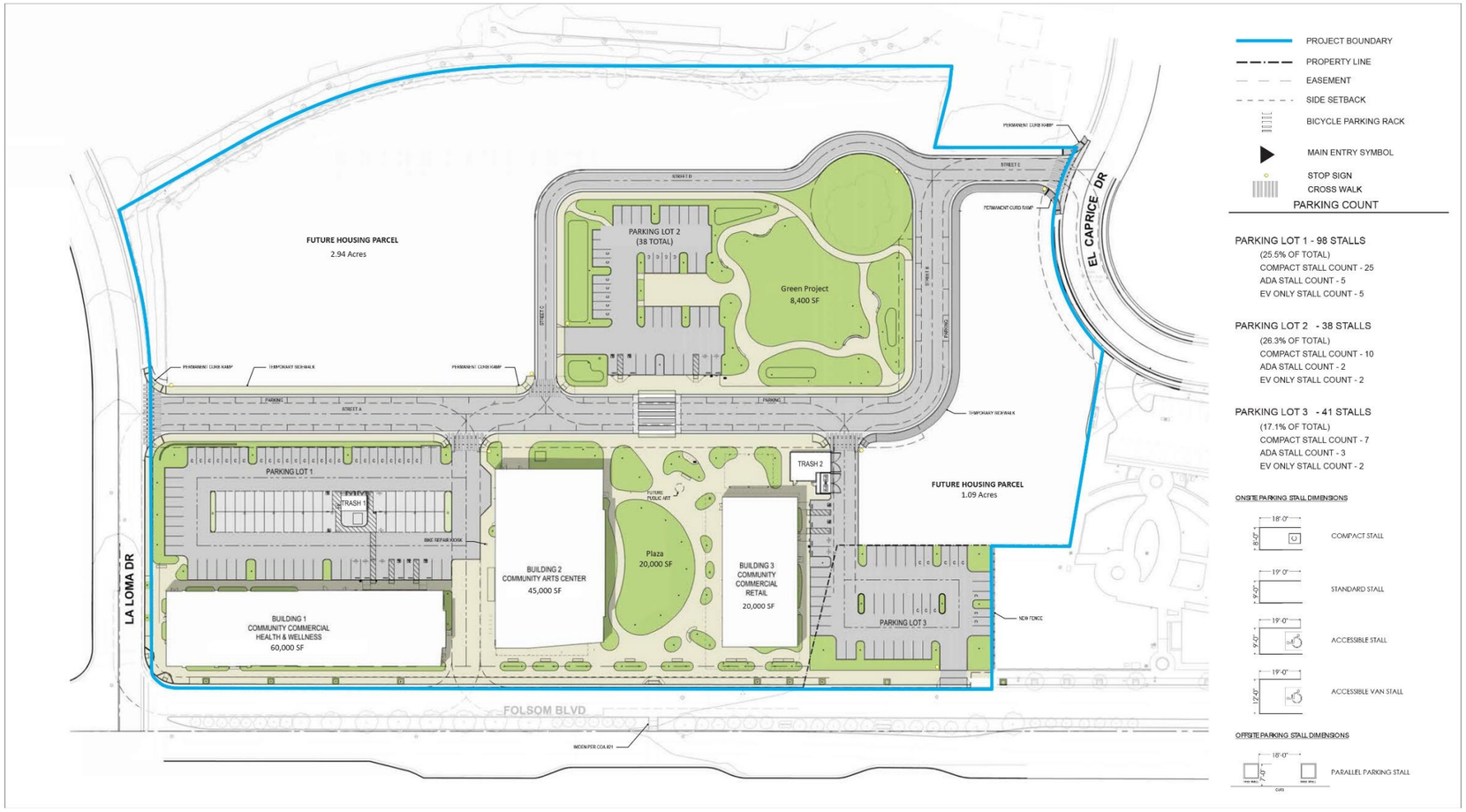
~~Figure 3-4 Conceptual Site Plan~~



Source: City of Rancho Cordova 2022.

Figure 3-3
Conceptual Site Plan

Figure 3-4 Conceptual Site Plan (NEW)



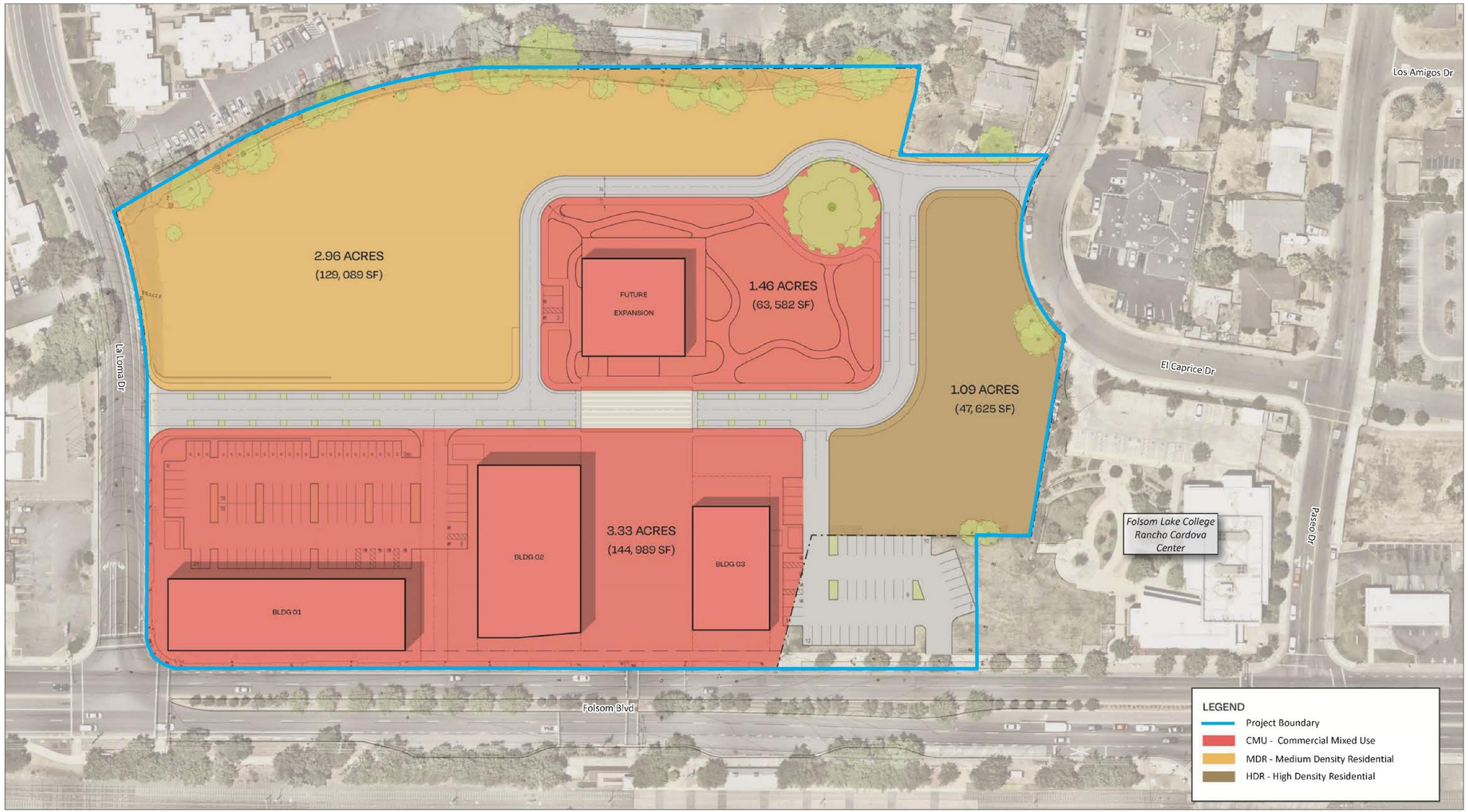
Source: LPA 2024.

0 90
Scale (Feet)

PLACEWORKS

Figure 3-4
Conceptual Site Plan (NEW)

Figure 3-~~5~~4 Zoning Option 1



Source: City of Rancho Cordova 2024.

0 90
Scale (Feet)

Figure ~~3-4~~ 3-5
Zoning Option 1

~~**Figure 3-5 Zoning Option 2**~~



Source: City of Rancho Cordova 2024.

0 90
Scale (Feet)

~~Figure 3-5~~
~~Zoning Option 2~~

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3.3.4 Construction and Operation

Construction

Construction activities would involve the removal of vegetation and paved areas; grading to finished design elevations; excavation to allow construction of building foundations, utilities, roadways, parking areas, sidewalks, and landscaping. Equipment used during construction may include, but is not limited to, crawler tractors, tractors, loaders, backhoes, excavators, graders, scrapers, cranes, forklifts, generator sets, welders, pavers, paving equipment, rollers, and air compressors. It is anticipated that construction of the project would occur from 2024 through 2029.

Operation

The proposed project would result in up to 120 dwelling units which, assuming 2.68 persons per household as included in the General Plan EIR, would result in approximately 322 residents. The project would include up to 140,000 square feet of non-residential ~~community-commercial~~ uses. The open space proposed for the project site (up to 28,400 square feet ~~2.5 acres~~) would be publicly accessible

3.4 PROPOSED PROJECT VS. REVISED SITE PLAN

Since the public circulation of the DEIR on June 7, 2024, and because of the subsequent planning and entitlement process, site refinements were made as the project team completed full financial projections, focused on final project elements, and incorporated value engineering adjustments. As detailed in Section 3.3, *Revisions to the Project Description*, the new Figure 3-3, *Proposed Parcel Plan (NEW)*, and revised Figure 3-4, *Conceptual Site Plan (NEW)*, of this FEIR reflect the updated entitlement package received on December 19, 2024. These refinements are reflected in the revised project description (see Section 3.3).

Figure 3-4 of this FEIR includes Building 1, Community Commercial Health and Wellness; Building 2, Community Arts Center; Building 3, Flex Community; three surface parking lots; public open space; and two parcels dedicated to future housing. Figure 3-3, *Conceptual Site Plan*, in the DEIR, shows four nonresidential buildings, a parking structure, and a residential area in the northern portion of the project site. The project contemplates the immediate development of the nonresidential portion, with residential development to occur later. The EIR has fully analyzed the impacts of both the near-term nonresidential development and the long-term residential development. Figure 3-4 of the FEIR also extends the project boundary to include the proposed parking lot 3 on the southeast corner of the project site and adjacent to Folsom Lake College. The revised site plan would extend the project size by 0.49 acres, from 9.85 acres to 10.34 acres. The addition of parking lot 3 would also create a new driveway south of the project site along Folsom Boulevard.

The updated December 2024 entitlement alters the project originally described in the DEIR. However, the analysis in the DEIR, supplemented by the analysis added in this FEIR, account for the full buildout of the original project (multiple phases), which is for a larger and more intensive development than the revised project. For example, the revised project removes a parking structure and decreases the total non-residential square footage. While the revised project would extend the project boundaries to include parking lot 3, which was not part of the original site plan, this does not result in significant impacts that were not already addressed in the DEIR. Therefore, the original environmental analysis in the DEIR is still applicable to the revised project. As

such, the analysis in the DEIR, as supplemented by the analysis herein, will serve as the environmental analysis for future phases of development, as described in Section 3.3.2 of this FEIR. No additional project-level environmental review would be required for future phases if the subsequent development is consistent with the analysis in the DEIR and this FEIR.

The differences between the revised site plan and the proposed project are detailed in Table 3-1.

The changes identified do not alter the substantive conclusions of the DEIR concerning any of the significant impacts of the project and do not necessitate a recirculation of the DEIR, as analyzed in Section 3.5, *Recirculation*.

Table 3-1 Differences between the Proposed Project vs. Revised Site Plan

Proposed Project	Revised Site Plan	Analysis
Figure 3-3, *Conceptual Site Plan*, of the DEIR shows a proposed road from El Caprice Drive crossing to the west of the project site connecting to La Loma Drive.	Figure 3-4, *Conceptual Site Plan (NEW)*, of the FEIR, the proposed road would shift north, closer to the existing residential area	See Section 3.5.2 of this FEIR, *Noise Analysis*, and Section 3.5.3, *Air Quality/Greenhouse Gas/Energy Analysis*, for a discussion and analysis of noise and air quality impacts discussed below with the shift of the road closer to an existing residential area.
Figure 3-3, *Conceptual Site Plan*, of the DEIR shows a parking structure of three levels located in the southwest portion of the site. The project description, on page 3-6 of the DEIR, states that the parking structure would include between 275 and 325 parking spaces.	Figure 3-4, *Conceptual Site Plan (NEW)*, of the FEIR shows three surface parking lots within the project boundary. Parking lot 1 would provide a total of 98 parking spaces with 41 spaces under solar shade canopies. Parking lot 2 would provide 38 parking spaces and Parking lot 3 would provide 41 parking spaces.	See Section 3.5.3 of this FEIR, *Air Quality/Greenhouse Gas/Energy Analysis*,, for a discussion and analysis of the parking structure change to parking lots.
Figure 3-2, *Aerial Photograph*, through Figure 3-4, *Zoning Option 1*, of the DEIR shows a smaller project boundary.	Figure 3-2, *Aerial Photograph (NEW)*, through Figure 3-5, *Zoning Option 1*, are revised to include an extended project boundary to include the proposed parking lot 3.	See Section 3.5.2, *Noise Analysis*, and Section 3.5.3, *Air Quality/Greenhouse Gas/Energy Analysis*, of this FEIR, for a discussion and analysis of the noise and air quality impacts related to the project boundary extension. Additionally, see the discussion in Section 3.5 for an explanation as to why recirculation is not required, despite the project boundary extension.
The project description, on page 3-6 of the DEIR, states that the Community-Commercial use would be 140,000 square feet, which included: - Health and Wellness - Events and Meeting Space - Arts Center - Community-Commercial Building - Commercial-Retail	Figure 3-4, *Conceptual Site Plan (NEW)*, provides 140,000 square feet of nonresidential use, including: - Building 1– Community Commercial Health and Wellness - Building 2 – Community Arts Center - Building 3 – Flex Community - Future phases could include constructing a nonresidential building on Parcel 5, approximately 15,00 square feet.	The square footage of nonresidential development would not change; therefore, no further analysis is necessary.
The project description on page 3-6 of the DEIR states that the project would provide up to 2.5 acres of public open space, including:	Figure 3-4, *Conceptual Site Plan (NEW)*, includes a 20,000-square-foot, or 0.46-acre, Plaza and 8,400 square feet, or 0.2-acre, Project Green.	As noted in Impact 5.12-1 of the DEIR, the proposed project would need to comply with the City's General Plan policies requiring compliance with the City's parkland and open space standards and the City's Municipal

Proposed Project	Revised Site Plan	Analysis
- Between 1.3 and 1.5 acres of Neighborhood and Community Green - Between 0.75 and 1.0 acre of Plaza and Green Space		Code, Chapter 22.40, Park and Recreation Dedication Fees. While the revised site plan eliminates between 1.3 and 1.5 acres of Neighborhood and Community Green, the revised plan still proposes a Plaza and Project Green. The project would still comply with the these regulations. Therefore, the analysis of impacts determined in the DEIR would also apply to the revised site plan.

3.5 RECIRCULATION CRITERIA

As discussed below, the proposed revisions to the project, including the project boundary extension, do not meet any of the criteria outlined in the CEQA recirculation standards, specified under CEQA Guidelines Section 15088.5, and therefore a recirculation of the DEIR is not warranted.

3.5.1 New Significant Environmental Impact or New Mitigation Measure

The recirculation standard requires that the DEIR be recirculated if significant new information is added in the form of a new significant environmental impact resulting from the project or from a new mitigation measure proposed to be implemented. The revisions to the site plan would not result in any new significant environmental impacts or require new mitigation measures.

The DEIR analyzed similar developments compared to the revised site plan (housing units and nonresidential buildings) and concluded that the project would result in less-than-significant impacts with the implementation of mitigation. The DEIR did not include the proposed parking lot 3 site, as identified in Figure 3-4, which extends the original project boundary from the DEIR. However, this site was previously developed and is not zoned for a unique land use. Moreover, the proposed usage (parking lot) does not represent an unusual development type in the city, and the application of both the mitigation measures in the DEIR and applicable City standards for construction and operation ensure that there would be no new significant environmental impacts beyond those analyzed in the DEIR and that no new mitigation measures would be required.

Parking lot 3 is supportive of the rest of the proposed project and does not include structures or uses beyond parking. As such, the environmental analysis is focused on the physical construction of the parking lot rather than the occupational uses evaluated in the DEIR for the rest of the project. The addition of the third parking lot would not lead to any new noise, air quality, greenhouse gas, or energy impacts beyond what was already addressed in the DEIR (refer to Section 3.5.6, Noise Analysis, and Section 3.5.7, Air Quality/Greenhouse Gas/Energy Analysis, of this FEIR). This is because the DEIR evaluated a project similar to the updated December 2024 entitlement proposal. In addition, no new significant environmental impacts to biological resources would result from the proposed changes, and no new mitigation measures would be required. Parking lot 3 is adjacent to the original project boundaries and has a similar topography and vegetation type as shown in Figure 3-2. Accordingly, the biological study from the DEIR (Appendix 5.2-1) remains applicable to the revised site, including the proposed parking lot 3, including the observations in Appendix 5.1-1 for the potential of trees adjacent to the project site to provide habitat for nesting birds. As such, the same biological mitigation

measures for bird nesting (mitigation measure BIO-1) and bat roosting (mitigation measure BIO-2) will apply because the City is the lead agency for the construction of parking 3 and will oversee compliance with the mitigation measures as part of the mitigation monitoring and reporting program (MMRP).

No new significant environmental impacts to tribal and cultural resources would result from the proposed changes, and no new mitigation measures would be required beyond those analyzed and applied in Section 5.3, *Cultural Resources*, and Section 5.13, *Tribal Cultural Resources*, of the DEIR. The tribal and cultural resources mitigation measures would also be applied to the new site regarding ground-disturbing activities and monitoring in the event tribal cultural resources are discovered during construction. The cultural study in the DEIR (Appendix 5.3-1) examined records within a 0.5-mile radius of the original project site to identify any previously documented precontact or historic archaeological sites, architectural resources, or traditional cultural properties. This study area includes the additional parking lot 3 site. The revised project boundaries would not include any of the sites listed in Table 5.13-1, *Previously Recorded Archaeological Resources within a 0.5 Mile Radius of the Project Site*, of the DEIR. The mitigation measures for the inadvertent discovery of cultural resources (CUL-1 and CUL-2) and tribal cultural resources (TCR-1 and TCR-2) will apply to parking lot 3 because the City is the lead agency for the construction of the parking lot and will ensure compliance through the implementation of the MMRP that covers the entire project, as revised in this FEIR. As a result, the findings of less-than-significant impacts after the application of mitigation measures to tribal and cultural resources identified in the DEIR are also applicable to the revised plan. No new mitigation measures are required.

No new significant environmental impacts are anticipated to result from the proposed parking lot 3 regarding hazards and hazardous materials, nor new mitigation measures needed, beyond those anticipated and applied in Section 5.6 of the DEIR. According to hazardous material databases (EviroStor and GeoTracker), and as shown in Figure 5.6-1, *Project Site Remediation Map*, in the DEIR, no hazardous materials are present in the proposed parking lot 3 sites. The only hazardous materials present are on the northwest portion of the site, and Section 5.6 of the DEIR already analyzed and applied mitigation measure HAZ-1 to the northwest area. The construction and operation of the proposed parking lot 3 would involve minimal, if any, transport, use, or disposal of hazardous materials, and are therefore not anticipated to create a significant hazard to the public or the environment, pursuant to Impact 5.6-1. No reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment exist on the proposed parking lot 3 site. Therefore, no such materials are present on that portion of the project site, and no emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school is anticipated beyond that already analyzed pursuant to Impacts 5.6-2, 5.6-3, or 5.6-4. Moreover, parking lot 3 would not cause new impacts pursuant to Impact 5.6-5 because it would be subject to the same zoning designation's height limit of 65 feet and would therefore not conflict with a land use compatibility plan. The proposed parking lot 3 would also not create new significant environmental impacts pursuant to Impacts 5.6-6 or 5.6-7 because it would not impair or physically interfere with the implementation of an adopted emergency response or evacuation plan and would not be sited within a Very High Fire Hazard Severity Zone, respectively. Accordingly, no new significant environmental impacts are anticipated, and no new mitigation measures are needed regarding hazards and hazardous materials.

No new significant environmental impacts to utilities and service system resources would result from the proposed changes, and no new mitigation measures would be required beyond those analyzed and applied in

Section 5.14 of the DEIR. The revised site plan introduces a new impervious surface in the proposed parking lot 3, potentially impacting stormwater runoff. However, as shown on Figure 5.14-1, *Storm Drainage Infrastructure*, of the DEIR, runoff from the site is directed into existing drop inlets on surrounding streets. From there, stormwater flows through drainage laterals on La Loma Drive and Folsom Boulevard, ultimately connecting to drainage mains along these roads. Runoff from the revised site would continue to be managed by this existing stormwater infrastructure. Any new stormwater infrastructure required would need to meet the standards set by the Stormwater Quality Design Manual for the Sacramento Region, ensuring that hydromodification control and low-impact development measures are implemented to manage runoff. Additionally, the project would adhere to local regulations outlined in the DEIR, including Chapter 15.12 of the Municipal Code, which governs discharges into the stormwater system, and Chapter 15.95, which requires new developments to contribute to funding improvements to the City's stormwater infrastructure. As such, no new significant impacts or mitigation measures pursuant to Impact 5.14-5 are necessary for the revised project.

The proposed parking lot 3 site would also result in a new driveway along Folsom Boulevard. This roadway would be constructed in compliance with the City's roadway design and improvement standards as stated in the City's Municipal Code, Chapter 22.110, Design and Improvement Standards. Since the revised project would have similar impacts to the originally proposed project and all mitigation measures would apply, there are no new environmental impacts or mitigation measures associated with the revised project.

Therefore, the revised project does not meet the standard for recirculation based on the introduction of a new significant impact resulting from the revised project or from new mitigation measures proposed to be implemented, pursuant to CEQA Guidelines Section 15088.5(a)(1).

3.5.2 Substantial Increase in the Severity of an Environmental Impact

Recirculation is required if the revised project results in a substantial increase in the severity of an environmental impact that cannot be mitigated to a less-than-significant level without new mitigation measures. The DEIR determined that the following impacts require mitigation measures to reduce impacts to less than significant: air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, and tribal cultural resources. While the project description has changed to include parking lot 3, the DEIR already analyzed the construction and operational impacts of similar elements in the original project description. Parking lot 3 will use conventional construction techniques and is similar to surface parking lots 1 and 2, as shown in the revised project. As such, no substantially more severe environmental impacts are anticipated. Moreover, mitigation measures that will address construction impacts such as dust and erosion (such as Mitigation Measure AQ-1) will continue to apply, as will all City regulations for surface parking, included in the municipal code and adopted engineering standards. The mitigation measures applied in the DEIR would apply to the revised project, including the proposed parking lot 3, and there are no substantially more severe environmental impacts that cannot be mitigated to a less-than-significant level without the adoption of new mitigation measures. Therefore, recirculation pursuant to CEQA Guidelines Section 15088.5(a)(2) is not required.

3.5.3 A Feasible Alternative or Mitigation Measure Not Adopted

If a feasible alternative or mitigation measure considerably different from those previously analyzed that would lessen the significant environmental impacts of the project is introduced and then declined, recirculation is required. However, the revisions to the project, as detailed in Section 3.3 of the FEIR, do not introduce any alternatives or mitigation measures that are substantially different from those previously considered in the DEIR. The revised site plan does not propose a new alternative to reduce impacts but reflects refinements to the layout, including changing parking structures to parking lots, extending the project boundary, proposing different building arrangements, and proposing different circulation layouts. These changes do not introduce a new or more feasible alternative that would lessen environmental impacts. Therefore, the recirculation standard pursuant to CEQA Guidelines Section 15088.5(a)(3) based on the rejection of a feasible alternative or mitigation measure is not applicable.

3.5.4 Inadequacy of the Draft EIR

Recirculation is also required if the DEIR is found to be so inadequate or conclusory that it precludes meaningful public review and comment. However, the DEIR was comprehensive and provided adequate opportunities for public review. The DEIR thoroughly addressed potential environmental impacts and provided a clear analysis of the project's effects. Furthermore, the DEIR's assessment included potential impacts from a more intensive project scenario with a large parking structure. Although the revised site plan extends the project boundary to include proposed parking lot 3, the impacts and mitigation measures determined in the DEIR would also apply to this new site. The revisions in the FEIR have not substantially altered the scope or nature of the project. Therefore, the DEIR was not inadequate, and meaningful public review and comment were not precluded. As a result, recirculation pursuant to CEQA Guidelines Section 15088.5(a)(4) is also not required.

In conclusion, the revisions to the project, as outlined in the FEIR and summarized in Section 3.3, do not trigger the need for recirculation of the DEIR under any of the four criteria outlined in CEQA Guidelines Section 15088.5(a). The revised site plan does not introduce new significant environmental impacts, does not substantially increase the severity of existing impacts, does not propose any new feasible alternatives or mitigation measures that would lessen impacts, and does not represent an inadequacy in the DEIR that would prevent meaningful public review. Therefore, the DEIR remains sufficient for evaluating the revised project, and no recirculation is required.

3.6 AESTHETIC/LIGHT ANALYSIS

As shown in Figure 3-4 in the FEIR, the revised site plan would include a photovoltaic canopy over parking spaces in parking lot 1. As indicated in Section 8.1 of the DEIR, development in the city would increase the amount of daytime glare and nighttime lighting due to intensification. However, with the implementation of lighting standards and General Plan policies, impacts would be less than significant. The proposed project would need to comply with the City's local regulations regarding light. As mentioned in Section 23.725.030, Permit Required, of the City's Municipal Code, outdoor lighting fixtures for new multifamily residential, commercial, industrial, mixed-use, and public/quasi-public uses require design review approval. This approval is granted alongside land use and development permits. Although the project site is vacant and the proposed

project would increase light and glare in the area, the DEIR accounted for this increase by referencing local regulations that would reduce impacts. Therefore, analysis in the DEIR would be adequate for the revised site plan. Therefore, the impacts would be less than significant, and the proposed project would not result in new or substantially more severe significant impacts.

3.7 NOISE ANALYSIS

Figure 5.9-1, *SoundPlan Noise Contour for Mills Crossing*, on page 5.9-19 of the DEIR, reflects project noise from a parking structure, two Flex Community Centers, a Flex Theater and Studios, a Wellness Center, and a café. Furthermore, Figure 5.9-1 places the Wellness Center on the southeast side of the project site, in an area designated for a road connection to the parking lot (Los Rios) via Street F. However, the site plan shows Street E connected between Street B and El Caprice Drive in the northeastern portion of the project site.

The revised site plan (Figure 3-4, *Conceptual Site Plan (NEW)*) would not result in noise impacts beyond those addressed in the DEIR. As shown in Figure 5.9-1, of the DEIR, the projected noise levels for the proposed project are significantly below the City's Exterior Noise Standard of 60 A-weighted decibels (dBA). The noise modeling prepared for the DEIR (Appendix 5.9-1, *Noise Impact Assessment*, in the DEIR), was done conservatively. The noise modeling took into account the planned parking garage at the southwest corner using reference measurements from an existing garage but did not factor in the noise attenuation typically provided by the garage structure. Noise attenuation refers to the reduction or dampening of sound as it travels through or is absorbed by materials or structures. Parking structures have greater noise attenuation than surface parking lots due to the walls and roof of the structure, which absorb and contain much of the noise. However, the noise modeling in the DEIR did not take this noise attenuation into account for the proposed project. As noted in Appendix 5.9-1 of the DEIR, no additional attenuation is assumed for hard surfaces such as a parking lot. Therefore, the noise modeling and analysis in the DEIR remain applicable to the revised site plan since the DEIR analysis did not include noise attenuation that a parking structure would provide.

In addition, the other four area noise sources in the model were based on reference measurements from various environments, including single-family and multifamily neighborhoods, playgrounds, and commercial parking lots. This approach ensures a conservative assessment incorporating a wide range of potential noise sources that may vary in intensity and impact. This approach accounts for the broadest possible spectrum of noise levels, including both lower and higher noise-producing scenarios. While the revised site plan may alter the noise dynamics from those modeled, the noise expert who prepared the analysis for the DEIR concluded that these four noise sources would not extend significantly into the northwest area where residential areas currently exist (see Appendix A, *Mills Crossing Parking Update: Noise*, of this FEIR). Therefore, it can be assumed that the minor adjustments to building locations proposed under the revised site plan would be unlikely to alter the noise level projections substantially or exceed the City's noise standards.

As shown on Figure 5.9-1 of the DEIR, for the residential area on El Caprice Drive, operational noise levels would be between 32.6 to 44.1 dBA. The standard for residential receptors is under 60 dBA. Therefore, the proposed project as analyzed in the DEIR would not exceed the City's noise standard. The revised site plan, as depicted on Figure 3-4 of this FEIR, relocates Road E to connect with El Caprice Drive, moving the proposed road closer to a corner lot adjacent to existing residential areas. This adjustment would replace the housing

initially planned for the northeast area with a road, thereby moving the noise source closer to an existing home. Although the revised plan removes the residential buildings planned in the northeast that originally served as noise buffers (see Figure 3-4, *Conceptual Site Plan (NEW)*, in the FEIR), the revised site plan does not increase the amount of traffic associated with the proposed project, and the noise expert that prepared the noise analysis for the DEIR states that the relocated road would not increase the predicted noise level enough to exceed the City's threshold (see Appendix A of this FEIR). The revised site plan would also include the additional proposed parking lot 3, which would be south of future housing (see Figure 3-4, *Conceptual Site Plan (NEW)*, in this FEIR). The proposed, future residential buildings would serve as a buffer for the noise from the proposed parking lot 3 to the surrounding area. Therefore, no significant environmental effects would occur. This would not substantially increase the severity of the less-than-significant noise impact determined in Impact 5.9-2 of the DEIR. No new mitigation measures would be required.

3.8 AIR QUALITY/GREENHOUSE GAS/ENERGY ANALYSIS

The change from a parking structure in the proposed project to the three surface parking lots in the revised site plan would not introduce new greenhouse gas emissions impacts not already addressed in the DEIR. The change would result in lower criteria air pollutant and greenhouse gas emissions due to reduced construction material use, decreased maintenance needs, and lower electricity consumption.

The DEIR identified potentially significant impacts from a cumulative increase in criteria pollutants during construction and included Mitigation Measure AQ-1, which requires the implementation of Sacramento Metropolitan Air Quality Management District's basic and enhanced construction emission-control practices to reduce fugitive dust. This mitigation measure would also be applied to the revised site plan, including the proposed parking lot 3. Please refer to Appendix B, *Mills Crossing Parking Update: Impact on Emissions*, in this FEIR, for a detailed analysis and additional information provided by ECORP Consulting, Inc.

APPENDICES

Appendix A	**Mills Crossing Parking Update: Noise**
Appendix B	**Mills Crossing Parking Update: Impact on Emissions**

Appendix A Mills Crossing Parking Update: Noise

Jessica Mendoza

From: Jessica Mendoza
Sent: Wednesday, February 12, 2025 1:02 PM
To: Jessica Mendoza
Subject: FW: Mills Crossing Noise

JESSICA MENDOZA
Project Planner
she/her
PLACEWORKS
Sacramento
Work: 916.245.7500 | Cell: 909.643.9383
jmendoza@placeworks.com | placeworks.com

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From: Seth Myers <smyers@ecorpconsulting.com>
Sent: Thursday, August 1, 2024 8:52 AM
To: Mark Teague <mteague@placeworks.com>; Jessica Mendoza <jmendoza@placeworks.com>
Subject: RE: Mills Crossing Noise

Agreed. The original model accounts for a lot of 'busy-ness' up there. The new Site Plan appears to show that this would go away. An while those buildings, which create buffers in the original model, would also go away, that single roadway essentially accommodating internal circulation is not going to jump the predicted noise by 15 decibels, as would be needed to surpass the threshold.

Seth

From: Mark Teague <mteague@placeworks.com>
Sent: Wednesday, July 31, 2024 5:10 PM
To: Seth Myers <smyers@ecorpconsulting.com>; Jessica Mendoza <jmendoza@placeworks.com>
Subject: RE: Mills Crossing Noise

Thought on the relocation of road E? Can't see that it would affect noise all that much.

MARK TEAGUE, AICP
Managing Principal, Environmental Services
he/him

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mteague@placeworks.com | placeworks.com

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From: Seth Myers <smyers@ecorpconsulting.com>
Sent: Wednesday, July 31, 2024 4:05 PM
To: Mark Teague <mteague@placeworks.com>; Jessica Mendoza <jmendoza@placeworks.com>
Subject: RE: Mills Crossing Noise

Hi Mark,

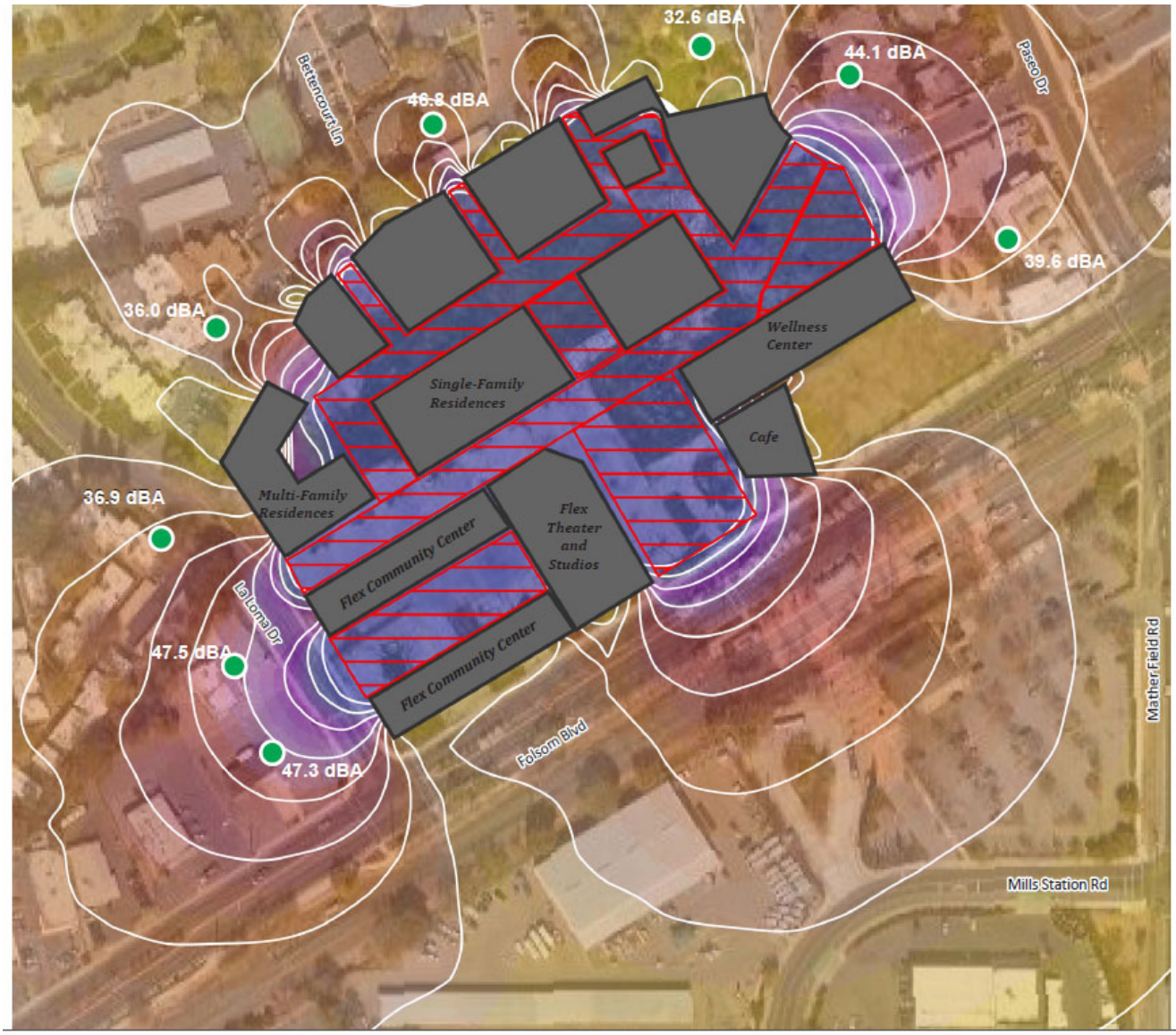
These site plan changes are exactly why we model these things so conservatively. For instance, we modeled the originally planned parking garage at the southwest corner using reference measurements taken inside an existing garage yet didn't account for any noise attenuation of an actual garage structure in the modeling (parking garages typically have huge gaps in the walls, but they still have walls). The other 4 area noise sources placed in the model are based on reference measurements from single family neighborhoods (which include internal traffic), multi-family neighborhoods (which include internal traffic), playgrounds, and commercial parking lots. Modeling all these sources can be considered a bit redundant, but conservative so that's why we do it. Lastly, while the changes in the site plan may change the noise dynamic from that modeled, the sources wouldn't extend so far up to the northwest. So while there aren't those buildings buffering the existing land uses there's also not the area sources flanking them.

I totally agree that there is no need to remodel.

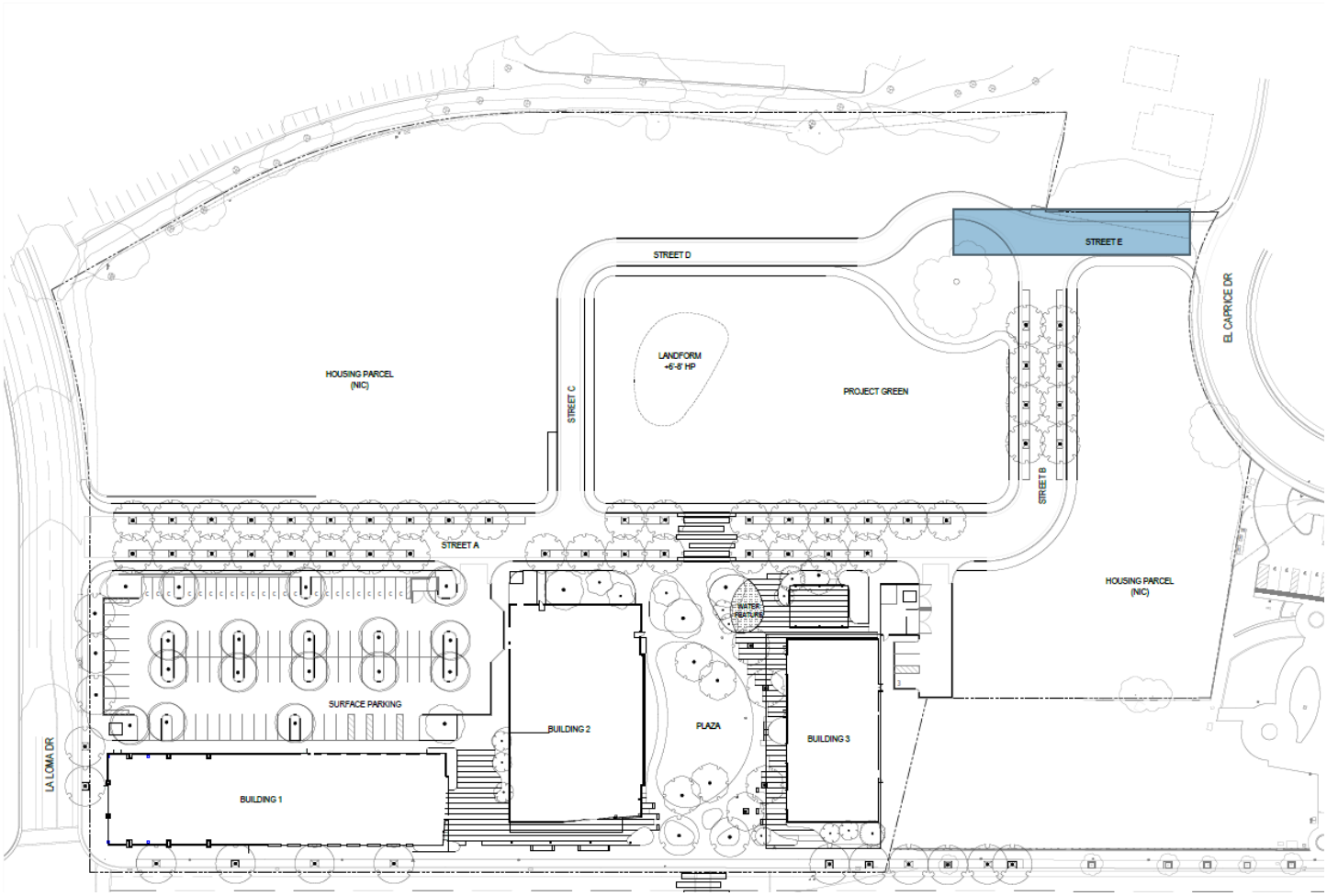
Seth Myers ♦ **Air Quality/Noise Task Manager ♦ ECORP Consulting, Inc.**
California Small Business for Public Works (SB-PW)
smyers@ecorpconsulting.com ♦ Direct 530.965.5925 ♦ Cell: 530.717.7600
Rocklin ♦ Redlands ♦ Santa Ana ♦ San Diego ♦ Chico ♦ Flagstaff, AZ ♦ Santa Fe, NM

From: Mark Teague <mteague@placeworks.com>
Sent: Wednesday, July 31, 2024 1:37 PM
To: Seth Myers <smyers@ecorpconsulting.com>; Jessica Mendoza <jmendoza@placeworks.com>
Subject: Mills Crossing Noise

The City has asked if the revised site plan would result in new noise impacts not evaluated in the EIR. We've looked at this and think the answer is no. The projected numbers are already well below the 60 dBA threshold and moving a few buildings around probably won't change them substantially. Further, buildings in the area to the north (single family housing) was 'assumed' in the EIR, but this revised site plan doesn't include buildings, so re-modeling probably wouldn't make any sense. The only piece that gives us pause is the relocation of Road E on the east connecting to El Caprice Drive. In the EIR it's a fair distance from the existing home that fronts El Caprice and the revised site plan would make it a corner lot. Even here though, perhaps the 44.1 dBA projection across El Caprice Drive would simply move north but still remain below the threshold. However, we thought it worth asking your opinion as THE expert. The first graphic is from the EIR…Figure 5.9-1. The second is from their revised site plan.


32.6 dBA
44.1 dBA
46.8 dBA
39.6 dBA
36.0 dBA
36.9 dBA
47.5 dBA
47.3 dBA
Bettencourt Ln
Paseo Dr
La Loma Dr
Folsom Blvd
Mather Field Rd
Mills Station Rd
Wellness Center
Single-Family Residences
Cafe
Multi-Family Residences
Flex Community Center
Flex Theater and Studios
Flex Community Center

3.



Hope you're having a great day.

MARK TEAGUE, AICP
Managing Principal, Environmental Services
he/him

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Appendix B Mills Crossing Parking Update: Impact on Emissions

July 2024

Mark Teague
Placeworks, Inc., Managing Principal, Environmental Services
101 Parkshore Drive, Suite 112
Folsom, California 95630

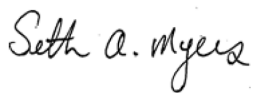
Subject: Mills Crossing Parking Configuration Update and its Effect on Project Emissions Generation

It is ECORP Consulting's (ECORP) understanding that the originally proposed parking structure associated with the Mills Crossing Project in Rancho Cordova, California is now being proposed as a surface parking lot. This change in land use will result in the generation of less criteria air pollutant and greenhouse gas (GHG) emissions.

It is noted that the construction of a surface parking lot will require the use of less building materials and the use of less construction equipment compared to construction of a parking structure, resulting in the generation of less criteria air pollutant and GHG emissions. Once constructed, a surface parking lot will require less maintenance in the form of architectural coatings/paint, a source of the criteria air pollutant, reactive organic gas (ROG). Additionally, a surface parking lot will consume less electricity, an indirect source of GHG emissions, compared with a parking structure as a parking structure would include elevators and more lighting. For these reasons, the development of a surface parking lot at the Mills Crossing Project Site will result in generation of less emissions than the development of a parking structure.

If you have any questions, please call me at (530) 717-7600 or email me at smyers@ecorpconsulting.com.

Sincerely,
ECORP Consulting, Inc.



Seth Myers
Air Quality/Noise Task Manager

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CITY OF RANCHO CORDOVA

RESOLUTION NO. XX-2025

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, APPROVING A TENTATIVE SUBDIVISION MAP AND A MAJOR DESIGN REVIEW FOR THE MILLS CROSSING PROJECT – PROJECT NO. PLND-0524-0098

WHEREAS, the City of Rancho Cordova filed an application for a Tentative Subdivision Map and Major Design Review approval for Mills Crossing ("Project"); and

WHEREAS, the Project includes the subdivision of 9.85 acres to develop community-commercial buildings, public open space, and surface parking. The project includes three buildings designed for multiple uses, including office space, community flex space, health services, event space, and a flexible theater. The Project is located at 10153 Folsom Boulevard, between La Loma Drive and Paseo Drive/Mather Field Road. The project site is within the Mather Mills Opportunity Area, which is identified in the Folsom Boulevard Specific Plan (FBSP) as a priority location for compact, urban, and pedestrian-oriented development.

WHEREAS, the City Council is the appropriate authority to hear and take action on this project; and

WHEREAS, on April 21, 2025, the City Council held a properly noticed public hearing at which it received a report from City Staff regarding the Mills Crossing project and oral and written testimony from the public, and deliberated on the item; and

WHEREAS, the public hearing was noticed in accordance with the requirements set forth in Government Code section 65090 and 65091

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA HEREBY RESOLVES AS FOLLOWS:

1. In accordance with Government Code section 66473.5, the proposed Tentative Subdivision Map (Exhibit A) with attached Conditions of Approval (Exhibit B) attached hereto is consistent with the applicable General and Specific Plan objectives, policies, land uses and programs. Section 66474 of the Government Code requires a City to deny approval of a tentative map if any of the findings are found to be true. In the case of the proposed map, none of the required findings were found to be true. The following evidence supports the map request:

    A. **Finding:** That the proposed map is not consistent with applicable general and specific plans as specified in Section 65451.

    Evidence: The proposed Tentative Subdivision Map aligns with the Mills Crossing Specific Plan Amendment and the Rancho Cordova General Plan by supporting a mixed-use, high-density, and medium-density residential development along Folsom Boulevard. The subdivision layout, consisting of seven parcels, promotes connectivity, walkability, and transit access, consistent with the City's vision for a vibrant, pedestrian-friendly corridor. The lot configuration, infrastructure improvements, and density conform to the Commercial Mixed-Use (CMU), High-Density Residential (HDR), and Medium-

Density Residential (MDR) designations, ensuring compatibility with surrounding development.

B. **Finding:** That the design or improvement of the proposed subdivision is not consistent with applicable general and specific plans.

Evidence: The proposed Tentative Subdivision Map is consistent with the Mills Crossing Specific Plan Amendment and the General Plan. The subdivision layout supports a mix of uses by integrating residential and commercial components, aligning with the City's vision for a walkable, mixed-use development. The map ensures appropriate access, circulation, and infrastructure improvements while maintaining connectivity to surrounding roadways and adjacent properties. The proposed density and land use distribution remain consistent with the goals of the General Plan, facilitating efficient land use and supporting economic and housing objectives.

C. **Finding:** That the site is not physically suitable for the type of development.

Evidence: The site is physically suitable for the proposed subdivision within the Mills Crossing project. The subdivision will create a mix of residential and commercial parcels designed to support a walkable, mixed-use environment. The site is accessible from existing roadways, and the proposed infrastructure improvements will ensure adequate utility service, drainage, and circulation. The project also incorporates landscaping and open space features to enhance the site’s functionality and integration with the surrounding area.

D. **Finding:** That the site is not physically suitable for the proposed density of development.

Evidence: The site is physically suitable for the proposed density within the Mills Crossing project. The subdivision aligns with the proposed General Plan and Specific Plan designations, supporting a mix of commercial and residential uses. The proposed density is appropriate given the site's location along Folsom Boulevard, access to transit, and existing infrastructure. Improvements, as shown on the Tentative Subdivision Map, will ensure adequate circulation, utilities, and site functionality.

E. **Finding:** That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

Evidence: An Environmental Impact Report (EIR) was prepared for the Mills Crossing project where the construction of commercial buildings, residential uses, and the protection of natural resources were addressed in accordance with the requirements of the California Environmental Quality Act (CEQA). The EIR contains a description of the Project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be potentially significant, as well as an analysis of project alternatives, growth-inducing impacts, and cumulative impacts. According to the EIR and Biological Resources Assessment prepared for the project, the project site is a previously disturbed/developed site and there are no sensitive natural communities or

riparian habitats within the project site. The EIR identifies issues determined to have no impacts or less-than-significant impacts, provides analysis of potentially significant impacts, and identifies mitigation to reduce potentially significant impacts, including measures to conduct surveys for nesting birds and bats prior to construction. The EIR concluded that all potential impacts can be reduced to less-than-significant levels with implementation of mitigation. Consequently, there would be no significant and unavoidable environmental impacts as a result of the project, and no Statement of Overriding Considerations is required. The proposed project is consistent with the project analyzed in the Environmental Impact Report, and would not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

F. **Finding:** That the design of the subdivision or the type of improvements is not likely to cause serious public health problems.

Evidence: The proposed subdivision has been designed to comply with all applicable health and safety standards. The project includes necessary infrastructure improvements to support safe circulation, utilities, and stormwater management. Environmental review has been conducted to address potential hazards, and mitigation measures have been incorporated to minimize impacts. No serious public health problems are anticipated as a result of the subdivision's approval.

G. **Finding:** That the design of the subdivision or the type of improvements will conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision. In this connection, the legislative body may approve a map if it finds that alternate easements, for access or for use, will be provided, and that these will be substantially equivalent to ones previously acquired by the public.

Evidence: The proposed subdivision design complies with City of Rancho Cordova ordinances and standards and does not conflict with existing public easements or necessary access through the project site. All required easements have been accounted for, and the proposed street network includes public streets to maintain appropriate access.

2. Approval of the Major Design Review, subject to the Design Review Package (Exhibit A) and the Conditions of Approval (Exhibit B) must provide sufficient evidence for the Findings required by Zoning Code Section 23.141.070 and Chapter 3, Section D of the Folsom Boulevard Specific Plan for "Exceptions". Findings and supportive evidence are shown below:

A. **Finding:** The proposed project is consistent with the objectives of the General Plan, complies with applicable zoning regulations, Specific Plan provisions, and special planning area provisions, and is consistent with the applicable Rancho Cordova Design Guidelines.

Evidence: The Mills Crossing project is designated as Commercial Mixed Use (CMU), High-Density Residential (HDR), and Medium-Density Residential (MDR) under the Folsom Boulevard Specific Plan. These designations support a mix of residential and commercial uses, aligning with the project's intent to create a

vibrant, multi-use development. The project's design incorporates a blend of commercial spaces, high-density residential, and medium-density residential units, ensuring compatibility with the surrounding area and consistency with the City's zoning and design guidelines. The layout, building orientation, and architectural style adhere to the City's and the Folsom Boulevard Specific Plan's Design Guidelines, promoting pedestrian connectivity, high-quality building materials, and cohesive site planning

B. **Finding:** The proposed architecture, site design, and landscape are suitable for the purposes of the building and the site and will enhance the character of the neighborhood and community.

Evidence: The proposed design for the Mills Crossing project focuses on the three commercial buildings, plaza areas, and project green space. The design incorporates modern architecture that aligns with the City's vision for mixed-use development, with the commercial buildings designed to serve both the functional and aesthetic needs of the site. The plaza areas are intended to provide accessible spaces for community interaction, while the green spaces are designed to enhance the overall environment with sustainable landscaping, including shade trees and pedestrian walkways. The project aims to promote connectivity, complementing future residential development. The integration of these elements will create a cohesive environment that enhances the character of the neighborhood and supports the surrounding community

C. **Finding:** The architecture, including the character, scale, and quality of the design, relationship with the site and other buildings, building materials, screening of exterior appurtenances, exterior lighting and signing, and similar elements establishes a clear design concept and is compatible with the character of existing or anticipated buildings on adjoining and nearby properties.

Evidence: The architecture of the Mills Crossing project incorporates a cohesive design with consistent materials, such as cement plaster and metal panels, across the three community commercial buildings. These buildings feature large windows, varying massing, and public art murals that enhance the site's visual appeal and align with the Folsom Boulevard Specific Plan. The design promotes connectivity through plazas and pedestrian-friendly spaces, ensuring compatibility with surrounding developments, including single-family homes and future uses. The project's scale, massing, and architectural features are designed to blend with the surrounding area while supporting the intended community-focused use

D. **Finding:** The proposed project will not create conflicts with vehicular, bicycle, or pedestrian transportation modes of circulation.

Evidence: The project is designed to provide clear access for all transportation modes, with vehicular, bicycle, and pedestrian connections throughout the site. The circulation plan aligns with the Folsom Boulevard Specific Plan and the City's transportation infrastructure. Traffic impacts were reviewed as part of the environmental analysis and are consistent with existing plans.

E. **Finding:** The proposed project qualifies for an Exception by meeting at least four of the six conditions required for granting of an Exception as defined in Chapter 3, Section D of the Folsom Boulevard Specific Plan.

Evidence: The Mills Crossing project qualifies for an Exception by meeting conditions 1 through 4 required for granting of an Exception as defined in Chapter 3, Section D of the Folsom Boulevard Specific Plan.

F. **Finding:** The City Council has determined that the proposed project has adhered to the vision of the Folsom Boulevard Specific Plan to the fullest extent practicable.

Evidence: The project has been designed in alignment with the goals and principles of the Folsom Boulevard Specific Plan, including mixed-use development, community engagement, and the integration of commercial, residential, and recreational spaces. The proposed buildings and layout reflect the intent of the plan, promoting connectivity, community vibrancy, and compatibility with surrounding areas. Adjustments were made to ensure compliance with the specific plan while balancing site constraints and the needs of the project.

G. **Finding:** The applicant has provided substantial evidence that the conditions for the Exception will be met following construction and operation of the project. Further, the applicant has agreed to conditions of approval guaranteeing these requirements will be met or exceeded throughout the life of the project.

Evidence: The project is city-sponsored and includes provisions for regular maintenance, monitoring, and adjustments as needed to ensure compliance with applicable standards. Conditions of approval have been incorporated into the project to ensure that these requirements are met throughout the life of the development. These conditions will be enforced through ongoing project review and oversight.

H. **Finding:** Granting the Exception will not adversely affect the interests of the public or the interests of the residents and property owners in the vicinity of the premises in question, and shall not establish a precedent for other project requests.

Evidence: The proposed exceptions have been thoroughly reviewed to ensure that they will not negatively impact surrounding properties or the broader community. The requested exceptions are specific to the unique conditions of the Mills Crossing project and do not undermine the goals of the General Plan or other applicable regulations. Additionally, the exceptions are not expected to set a precedent for future projects, as they address specific site conditions that do not apply broadly across other developments. The project has been designed to be compatible with neighboring properties and will not result in adverse effects on public or private interests.

I. **Finding:** Granting the Exception will not endanger the public health and safety.

Evidence: The exception has been reviewed to ensure it will not pose any risks to public health or safety. The project complies with all relevant safety standards and regulations, and necessary measures are in place to mitigate potential impacts.

The City Council approves the attached Tentative Subdivision Map and Major Design Review (Exhibit A) for the Mills Crossing project with attached conditions of approval (Exhibit B) as attached.

This Resolution shall become effective upon the effective date of City Council Ordinance No. XX-2025 adopting the Mills Crossing Specific Plan Amendment.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova this 21st day of April 2025, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Siri Pulipati, Mayor

ATTEST:

_____
Stacy Leitner, CMC
City Clerk

GRIFFIN SWINERTON

LPA
ARCHITECTURE ENGINEERING INTERIORS
LANDSCAPE ARCHITECTURE PLANNING
949-261-1001 Office
LPADesignStudios.com
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Irvine, California 92617

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

MILLS CROSSING
ENTITLEMENT SUBMITTAL

12/19/24

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670



ZONING PACKAGE



Existing Zoning Plan

ATTACHMENT 6
Exhibit A to the Resolution

GRIFFIN SWINERTON

LPA

ARCHITECTURE ENGINEERING INTERIOR DESIGN
LANDSCAPE ARCHITECTURE PLANNING

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MILLS CROSSING

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RANCHO CORDOVA, CA 95670

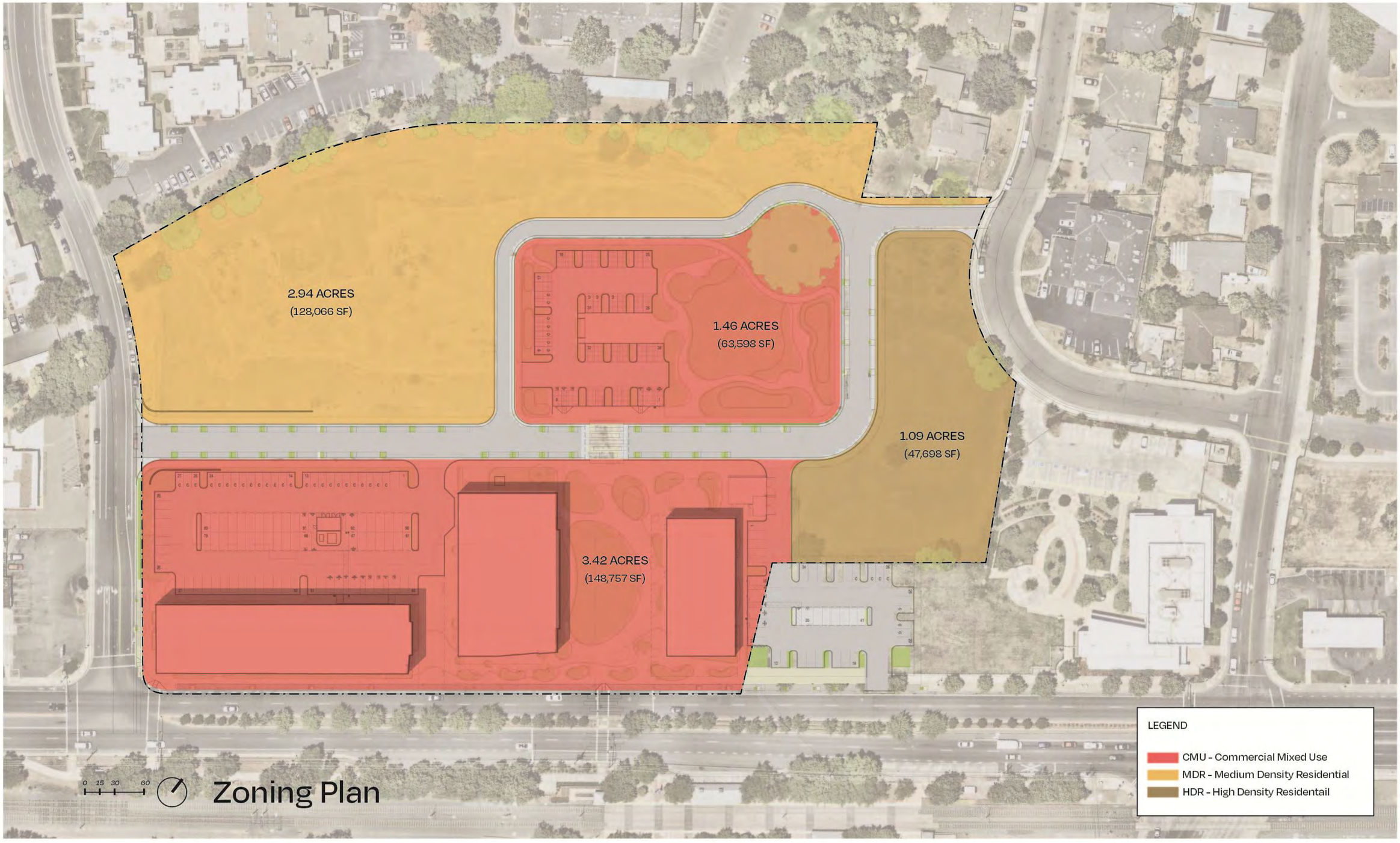
Developed for
GRIFFIN | SWINERTON

Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	11/27/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	

EXISTING
ZONING PLAN



ATTACHMENT 6
Exhibit A to the Resolution

GRIFFIN SWINERTON

LPA

ARCHITECTURE ENGINEERING INTERIOR DESIGN
LANDSCAPE ARCHITECTURE PLANNING

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Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/20/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	

PROPOSED
ZONING PLAN

GRIFFIN SWINERTON

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ARCHITECTURE ENGINEERING INTERIORS
LANDSCAPE ARCHITECTURE PLANNING
949-261-1001 Office
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12/19/24

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PARCEL PACKAGE

COVER SHEET

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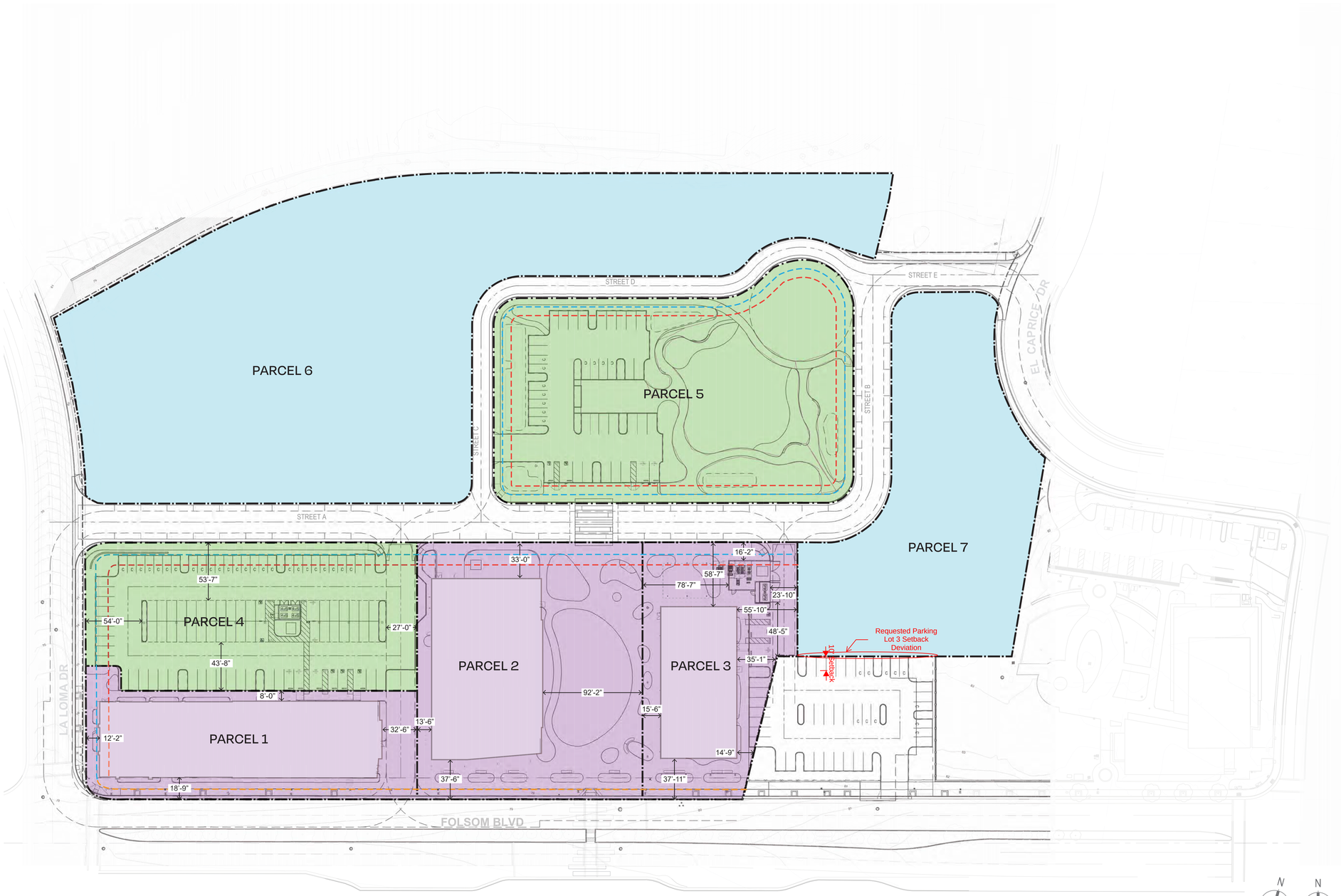

PROPOSED PARCEL PLAN 01

LEGEND

- MAX. 20'-0" BUILDING SETBACK
- MAX. 10'-0" BUILDING SETBACK
- MIN. 10'-0" BUILDING SETBACK
- PROPOSED PARCEL LINE

ZONING ANALYSIS

PARCEL 1
ZONING: COMMERCIAL MIXED USE

ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: 42'-0"

PROPOSED PARCEL AREA: 30,690 SF
PROPOSED BUILDING AREA: 36,000 SF
PROPOSED BUILDING FOOTPRINT: 17,984 SF

MINIMUM FAR: 0.3
MAXIMUM FAR: NONE
PROPOSED FAR: 1.17

WEST BUILDING SETBACK: 10'-0" > X < 20'-0"
WEST PROPOSED BUILDING SETBACK: 12'-2"

SOUTH BUILDING SETBACK: MAX 10'-0" W/ EXCEPTIONS
SOUTH PROPOSED BUILDING SETBACK: 18'-9" - 20'-0"

EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: ~33'-2"

NORTH BUILDING SETBACK: NONE
NORTH PROPOSED BUILDING SETBACK: ~9'-2"

PARCEL 2
ZONING: COMMERCIAL MIXED USE

ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: 42'-0"

PROPOSED PARCEL AREA: 49,021 SF
PROPOSED BUILDING AREA: 25,000 SF
PROPOSED BUILDING FOOTPRINT: 16,624 SF

MINIMUM FAR: 0.3
MAXIMUM FAR: NONE
PROPOSED FAR: 0.51

WEST BUILDING SETBACK: NONE
WEST PROPOSED BUILDING SETBACK: ~15'-0"

SOUTH BUILDING SETBACK: MAX 10'-0" W/ EXCEPTIONS
SOUTH PROPOSED BUILDING SETBACK: 37'-6"

EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: 93'-6"

NORTH BUILDING SETBACK: 10'-0" > X < 20'-0"
NORTH PROPOSED BUILDING SETBACK: 33'-0"

PARCEL 3
ZONING: COMMERCIAL MIXED USE

ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: 30'-0"

PROPOSED PARCEL AREA: 23,774 SF
PROPOSED BUILDING AREA: 9,000 SF
PROPOSED BUILDING FOOTPRINT: 9,663 SF

MINIMUM FAR: 0.3
MAXIMUM FAR: NONE
PROPOSED FAR: 0.38

WEST BUILDING SETBACK: NONE
WEST PROPOSED BUILDING SETBACK: 0'-0"

SOUTH BUILDING SETBACK: MAX 10'-0" W/ EXCEPTIONS
SOUTH PROPOSED BUILDING SETBACK: 37'-11"

EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: 7'-7" - 54'-4"

NORTH BUILDING SETBACK: 10'-0" > X < 20'-0"
NORTH PROPOSED BUILDING SETBACK: 58'-7"

PARCEL 4
ZONING: COMMERCIAL MIXED USE

ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: N/A

PROPOSED PARCEL AREA: 40,220 SF
PROPOSED BUILDING AREA: N/A

MINIMUM FAR: 0.3
MAXIMUM FAR: NONE
PROPOSED FAR: N/A

WEST BUILDING SETBACK: 10'-0" > X < 20'-0"
WEST PROPOSED BUILDING SETBACK: N/A

SOUTH BUILDING SETBACK: NONE
SOUTH PROPOSED BUILDING SETBACK: N/A

EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: N/A

NORTH BUILDING SETBACK: 10'-0" > X < 20'-0"
NORTH PROPOSED BUILDING SETBACK: N/A

PARCEL 5
ZONING: COMMERCIAL MIXED USE

ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: N/A

PROPOSED PARCEL AREA: 63,658 SF
PROPOSED BUILDING AREA: N/A

MINIMUM FAR: 0.3
MAXIMUM FAR: NONE
PROPOSED FAR: N/A

WEST BUILDING SETBACK: 10'-0" > X < 20'-0"
WEST PROPOSED BUILDING SETBACK: N/A

SOUTH BUILDING SETBACK: 10'-0" > X < 20'-0"
SOUTH PROPOSED BUILDING SETBACK: N/A

EAST BUILDING SETBACK: 10'-0" > X < 20'-0"
EAST PROPOSED BUILDING SETBACK: N/A

NORTH BUILDING SETBACK: 10'-0" > X < 20'-0"
NORTH PROPOSED BUILDING SETBACK: N/A

PARCEL 6
ZONING: MEDIUM DENSITY RESIDENTIAL

PARCEL 7
ZONING: HIGH DENSITY RESIDENTIAL

GRIFFIN SWINERTON

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MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670

Developed for
GRIFFIN | SWINERTON

Revision	Date

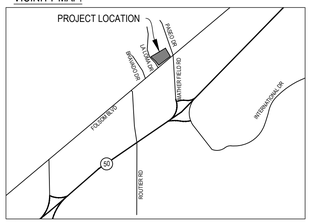
Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	01/10/2025
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	

PROPOSED PARCEL PLAN

TENTATIVE PARCEL MAP
MILLS CROSSING
City of Rancho Cordova County of Sacramento
California

VICINITY MAP:



ABBREVIATIONS

BK	BOOK
CL	CENTERLINE
O.R.	OFFICIAL RECORDS
PG	PAGE
P.O.B.	POINT OF BEGINNING
PL	PROPERTY LINE
P.U.E.	PUBLIC UTILITY EASEMENT
R.O.W.	RIGHT OF WAY
TYP	TYPICAL

LINE TYPES

EXISTING BOUDARY LINE
RIGHT-OF-WAY
CENTERLINE
PARCEL LINE (TO BE REMOVED)
PROPOSED PARCEL LINE
EASEMENT

0 20 40 80
1" = 40'

LAND USE SUMMARY:

LOT SIZE:
PARCEL 1 – 0.709 ACRES±
PARCEL 2 – 1.122 ACRES±
PARCEL 3 – 0.656 ACRES±
PARCEL 4 – 0.928 ACRES±
PARCEL 5 – 1.325 ACRES±
PARCEL 6 – 2.929 ACRES±
PARCEL 7 – 1.097 ACRES±

EXISTING USE:
PARCEL 1 – VACANT
PARCEL 2 – VACANT
PARCEL 3 – VACANT
PARCEL 4 – VACANT
PARCEL 5 – VACANT
PARCEL 6 – VACANT
PARCEL 7 – VACANT

PROPOSED USE:
PARCEL 1 – OFFICE & HEALTH CLINIC
PARCEL 2 – COMMUNITY ARTS CENTER & PLAZA/OPEN SPACE
PARCEL 3 – COMMUNITY CENTER/OFFICE
PARCEL 4 – SURFACE PARKING LOT
PARCEL 5 – SURFACE PARKING LOT & OPEN SPACE
PARCEL 6 – FUTURE HOUSING
PARCEL 7 – FUTURE HOUSING

EXISTING ZONING:
PARCEL 1 – RMU (RURAL MIXED USE)
PARCEL 2 – RMU (RURAL MIXED USE)
PARCEL 3 – RMU (RURAL MIXED USE)
PARCEL 4 – RMU (RURAL MIXED USE)
PARCEL 5 – RMU (RURAL MIXED USE)
PARCEL 6 – RMU (RURAL MIXED USE)
PARCEL 7 – RMU (RURAL MIXED USE)

PROPOSED ZONING:
PARCEL 1 – CMU (COMMERCIAL MIXED USE)
PARCEL 2 – CMU (COMMERCIAL MIXED USE)
PARCEL 3 – CMU (COMMERCIAL MIXED USE)
PARCEL 4 – CMU (COMMERCIAL MIXED USE)
PARCEL 5 – CMU (COMMERCIAL MIXED USE)
PARCEL 6 – MDR (MEDIUM DENSITY RESIDENTIAL)
PARCEL 7 – HDR (HIGH DENSITY RESIDENTIAL)

NUMBER OF LOTS:
7 LOTS TOTAL

PROJECT NOTES:

ENGINEER & SURVEYOR:
LPA DESIGN STUDIOS
431 I ST #107
SACRAMENTO, CA 95814

MORROW SURVEYING, INC.
PO BOX 185
LOOMIS, CA 95650

OWNER/APPLICANT:
CITY OF RANCHO CORDOVA

SET BACKS:
SEE SHEET 3

PROPOSED IMPROVEMENTS:
AS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS

FLOOD ZONE DESIGNATION:
ZONE: X (AREA OF MINIMAL FLOOD HAZARD & AREA WITH REDUCED FLOOD RISK DUE TO LEVEE).
MAP NO. 06067C0205H
EFFECTIVE DATE: 08/16/2012

ASSESSOR'S PARCEL NUMBER:
076–0020–005, 076–0020–006, 076–0020–001 AND 076–0213–009

BENCHMARK:
ELEVATION BENCHMARK IS METAL SURVEY DISK SET IN ALUMINUM MONUMENT WELL AT THE EASTBOUND HIGHWAY 50 ZINFANDEL EXIT STAMPED "ZINFANDEL 2004"
EL. = 99.70 FEET (NAVD88)

BASIS OF BEARINGS:
THIS SURVEY WAS PREPARED WITH FIELD COORDINATES IN CA STATE PLANE ZONE 2, NAD83, THE PARCELS AND LOT LINES WERE CALCULATED ASSHOWN ON THE PARCEL MAP "PORTION OF "CARL HALVERSEN AND GUNDER KUNSTER 186.5 ACRE TRACT"...". RECORDED WITH THE SACRAMENTO COUNTY RECORDER – BK. 1 PG. 24, DATED MARCH 1966.
SURVEY MONUMENTS WERE FOUND ALONG EL CAPRICE DRIVE, AND FOUND TO BE AS SHOWN ON THE "PLAT OF CORDOVA MEADOWS UNIT NO. 14", RECORDED WITH THE SACRAMENTO COUNTY RECORDER – BK. 74 PG. 17, DATED APRIL 1964.

UNDERGROUND UTILITY NOTE:
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

WATER SUPPLY:
CAL–AM

SEWER:
SACRAMENTO AREA SEWER DISTRICT

DRAINAGE:
CITY OF RANCHO CORDOVA

FIRE PROTECTION:
SACRAMENTO METROPOLITAN FIRE DISTRICT

SCHOOL DISTRICT:
FOLSOM–CORDOVA UNIFIED

PARK DISTRICT:
CORDOVA RECREATION & PARK DISTRICT

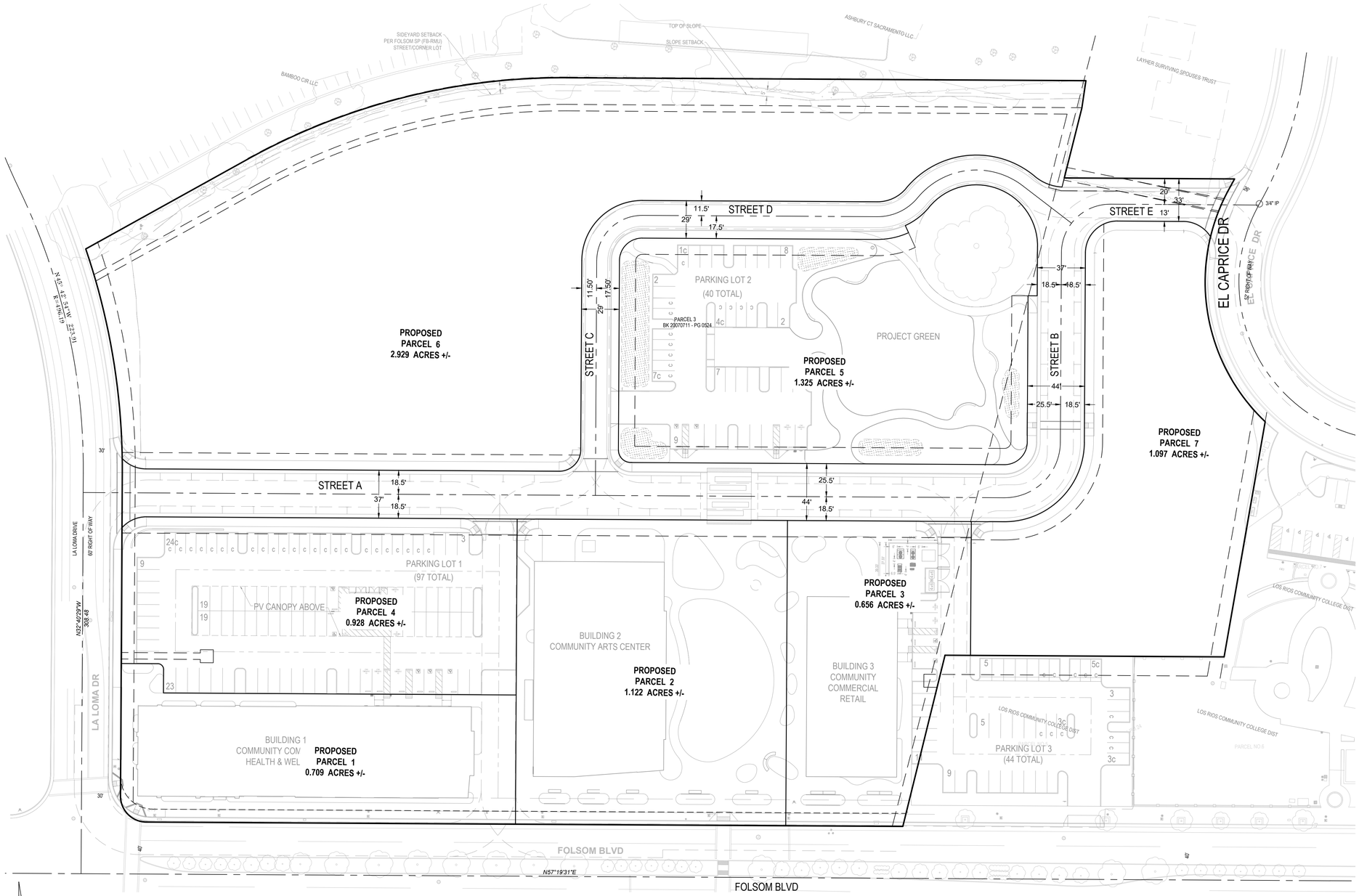
ELECTRICAL:
SACRAMENTO MUNICIPAL UTILITY DISTRICT

NATURAL GAS:
PACIFIC GAS & ELECTRIC

LICENSED LAND SURVEYOR
MATT D MORROW
No. 8501
STATE OF CALIFORNIA

Morrow Surveying
LAND SURVEYORS

PO Box 185
Loomis ~ CA ~ 95650
Phone: 916-372-8124
Email: matt@morrowsurveying.com
www.morrowsurveying.com



ABBREVIATIONS

BK	BOOK
CL	CENTERLINE
O.R.	OFFICIAL RECORDS
PG	PAGE
P.O.B.	POINT OF BEGINNING
PL	PROPERTY LINE
P.U.E.	PUBLIC UTILITY EASEMENT
R.O.W.	RIGHT OF WAY
TYP	TYPICAL

LINE TYPES

- EXISTING BOUDARY LINE
- RIGHT-OF-WAY
- CENTERLINE
- PARCEL LINE (TO BE REMOVED)
- PROPOSED PARCEL LINE
- EASEMENT

0 20 40 80

1" = 40'

PROJECT INFORMATION:

SETBACKS AND BUILDING HEIGHT INFORMATION:

PARCEL 1
ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: 42'–0"
PROPOSED PARCEL AREA: 30,690 SF
PROPOSED BUILDING AREA: 36,000 SF
PROPOSED BUILDING FOOTPRINT: 18,000
WEST BUILDING SETBACK: 10'–0" > X < 20'–0"
WEST PROPOSED BUILDING SETBACK: 12'–2"
SOUTH BUILDING SETBACK: MAX 10'–0" W/ EXCEPTIONS
SOUTH PROPOSED BUILDING SETBACK: 18'–9" – 20'–0"
EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: ~33'–2"
NORTH BUILDING SETBACK: NONE
NORTH PROPOSED BUILDING SETBACK: ~9'–2"

PARCEL 2
ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: 42'–0"
PROPOSED PARCEL AREA: 49,021 SF
PROPOSED BUILDING AREA: 25,000 SF
PROPOSED BUILDING FOOTPRINT: 16,621
WEST BUILDING SETBACK: NONE
WEST PROPOSED BUILDING SETBACK: ~15'–0"
SOUTH BUILDING SETBACK: MAX 10'–0" W/ EXCEPTIONS
SOUTH PROPOSED BUILDING SETBACK: 37'–6"
EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: 93'–6"
NORTH BUILDING SETBACK: 10'–0" > X < 20'–0"
NORTH PROPOSED BUILDING SETBACK: 33'–0"

PARCEL 3
ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: 30'–0"
PROPOSED PARCEL AREA: 23,774 SF
PROPOSED BUILDING AREA: 9,661 SF
PROPOSED BUILDING FOOTPRINT: 9,661
WEST PROPOSED BUILDING SETBACK: 0'–0"
SOUTH BUILDING SETBACK: MAX 10'–0" W/ EXCEPTIONS
SOUTH PROPOSED BUILDING SETBACK: 37'–11"
EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: 7'–7" – 54'–4"
NORTH BUILDING SETBACK: 10'–0" > X < 20'–0"
NORTH PROPOSED BUILDING SETBACK: 58'–7"

PARCEL 4
ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: N/A
PROPOSED PARCEL AREA: 40,220 SF
PROPOSED BUILDING AREA: N/A
WEST BUILDING SETBACK: 10'–0" > X < 20'–0"
WEST PROPOSED BUILDING SETBACK: N/A
SOUTH BUILDING SETBACK: NONE
SOUTH PROPOSED BUILDING SETBACK: N/A
EAST BUILDING SETBACK: NONE
EAST PROPOSED BUILDING SETBACK: N/A
NORTH BUILDING SETBACK: 10'–0" > X < 20'–0"
NORTH PROPOSED BUILDING SETBACK: N/A

PARCEL 5
ALLOWED BUILDING HEIGHT: NO MAXIMUM
PROPOSED BUILDING HEIGHT: N/A
PROPOSED PARCEL AREA: 63,658 SF
PROPOSED BUILDING AREA: N/A
WEST BUILDING SETBACK: 10'–0" > X < 20'–0"
WEST PROPOSED BUILDING SETBACK: N/A
SOUTH BUILDING SETBACK: 10'–0" > X < 20'–0"
SOUTH PROPOSED BUILDING SETBACK: N/A
EAST BUILDING SETBACK: 10'–0" > X < 20'–0"
EAST PROPOSED BUILDING SETBACK: N/A
NORTH BUILDING SETBACK: 10'–0" > X < 20'–0"
NORTH PROPOSED BUILDING SETBACK: N/A

PARCEL 6
ZONING: MEDIUM DENSITY RESIDENTIAL

PARCEL 7
ZONING: HIGH DENSITY RESIDENTIAL

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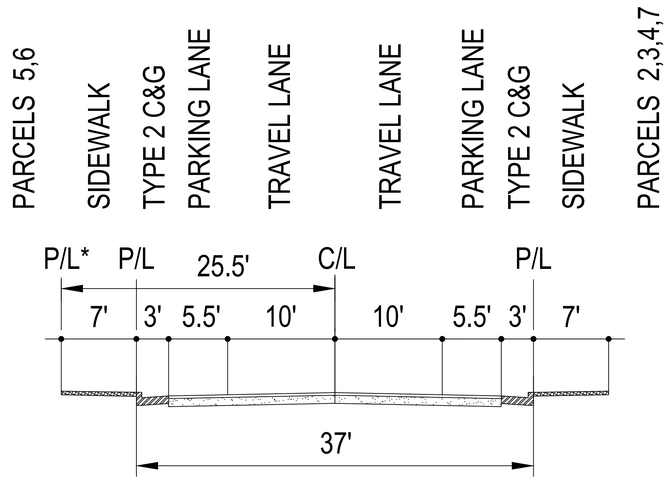
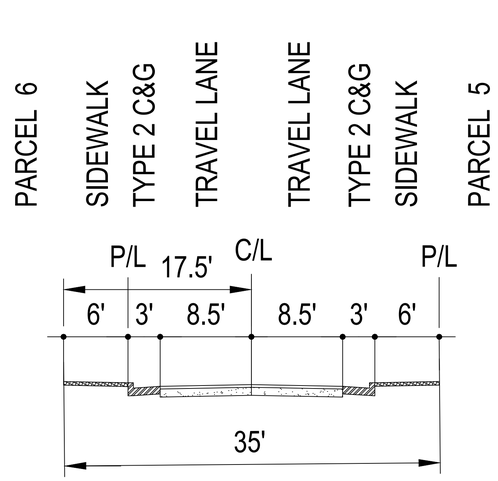


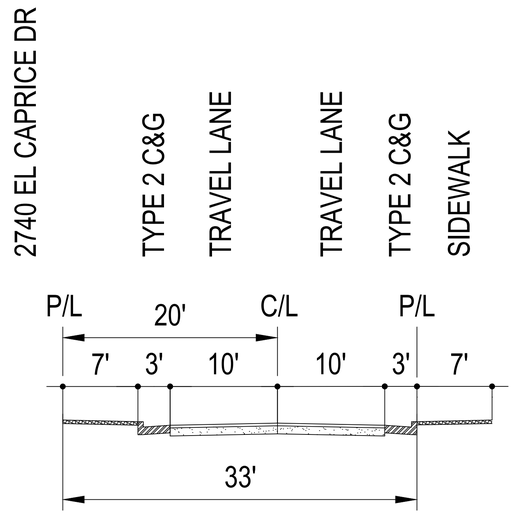
STREETS A, B

Modified Non-Residential
Local Street
* - At Parcel 5 Only



STREETS C, D

Modified Minor
Residential Street



STREET E

Modified Residential
Collector Street

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MILLS CROSSING
ENTITLEMENT SUBMITTAL

12/19/24

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670



ARCHITECTURAL PACKAGE

COVER SHEET

AD0.00

SYMBOLS

COLUMN LINES

SURFACE DRAINAGE ARROW INDICATES DIRECTION OF FLOW

NORTH ARROW

TRUE NORTH PROJECT NORTH

BUILDING SECTION
SECTION ID
SHEET NUMBER

WALL SECTION
SECTION ID
SHEET NUMBER

DETAIL CALLOUTS
DETAIL ID
SHEET NUMBER

DETAIL SECTION
DETAIL ID
SHEET NUMBER

DETAIL REFERENCE
DETAIL ID
SHEET NUMBER

INTERIOR ELEVATIONS
DETAIL ID
SHEET NUMBER

ROOM DESIGNATION
ROOM NUMBER
ROOM AREA

REVISION CLOUD & TAG (OPTIONAL)

SHADED PORTION POINTS TO SIDE REFERENCED

MATCH LINE
SEE SHEET A101

DATUM POINT

KEYNOTE

WALL TYPE

DOOR DESIGNATION

OPENING DESIGNATION

EQUIPMENT TAG

FINISH TAG

LEVEL LINE, CONTROL POINT
EL: 12'-8" = ELEVATION/SECTION

STAIR DIRECTION
DN
UP

CENTER LINES, LEVEL LINES

HIDDEN CONSTRUCTION FEATURE

BREAK LINE

EXTERIOR ASSEMBLY
REFER TO A8.11

ADA CONSTRUCTION SUPPORT FACILITIES

ACCESSIBLE CONSTRUCTION SUPPORT FACILITIES

11B-201.4 CONSTRUCTION SUPPORT FACILITIES. These requirements shall apply to temporary or permanent construction support facilities for uses and activities not directly associated with the actual processes of construction, including but not limited to offices, meeting rooms, plan rooms, other administrative or support functions. When provided, toilet and bathing facilities serving construction support facilities shall comply with 11B-213. When toilet and bathing facilities serving construction support facilities are provided by portable units, at least one of each type shall be accessible and connected to the construction support facilities it serves by an accessible route.

EXCEPTION: During construction an accessible route shall not be required between site arrival points or the boundary of the area of construction and the entrance to the construction support facilities if the only means of access between them is a vehicular way not providing pedestrian access.

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
∅	DIAMETER OR ROUND
#	POUND OR NUMBER
(E)	EXISTING
(P)	PAINT
(R)	REMOVE
+/-	DIM TOLERANCE
AC	ASPHALTIC CONCRETE
ACC	ACCESSIBLE
ACOUS	ACOUSTICAL
ACM	ALUM COMPOSITE MATERIAL
ACT	ACOUS CLG TILE
AD	AREA DRAIN
AED	AUTO EXT DEFIBRILLATOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
AHJ	AUTHORITY HAVING JURISDICTION
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASF	ASSIGNABLE SF
ASPH	ASPHALT
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLK'G	BLOCKING
BM	BEAM
BOC	BACK OF CURB
BOT	BOTTOM
BO	BOTTOM OF
BOC	BACK OF CURB
BOW	BOTTOM OF WALL
BS	BOTTOM OF SLOPE
CAB	CABINET
CB	CATCH BASIN
CEM	CEMENT
CER	CERAMIC
CI	CAST IRON
CIP	CAST IN PLACE
CIV ENG	CIVIL ENGINEER
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CLKG	CAULKING
CLO	CLOSET
CLR	CLEAR
CNTR	COUNTER
CO	CASED OPENING
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CT	CERAMIC TILE
CTR	CENTER
CTSK	COUNTERSUNK
DA	DISABLED ACCESS
DBL	DOUBLE
DEPT.	DEPARTMENT
DESC	DESCRIPTION
DF	DRINKING FOUNTAIN
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DO	DOOR OPENING
DR	DOOR
DWR	DRAWER
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DWG	DRAWING
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXPO	EXPOSED
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FB	FLAT BAR
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FLR	FLOOR
FLASH	FLASHING
FLUOR	FLUORESCENT
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOV	FACE OF VENEER (BRICK OR PRECAST)
FOW	FACE OF WALL
FR	FIRE RETARDANT
FPRF	FIREPROOF
FS	FINISH SURFACE
FT	FOOT OR FEET
FTG	FOOTING
FURR	FURRING
FUT	FUTURE
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GI	GALVANIZED IRON
GL	GLASS
GND	GROUND
GR	GRADE
GYP	GYPSUM
HB	HOSE BIB
HC	HOLLOW CORE
HDWD	HARDWOOD
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HGT/HT	HEIGHT
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATE
LAND ARCH	LANDSCAPE ARCHITECT
LAV	LAVATORY
LKR	LOCKER
LT	LIGHT
MATL	MATERIAL
MAX	MAXIMUM
MC	MEDICINE CABINET
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MUL	MULLION
N	NORTH
NIC	NOT IN CONTRACT
NO/#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OA	OUTSIDE AIR
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
OSA	OUTSIDE AIR
PA	PLANTING AREA
PRCST	PRECAST
PH	PANIC HARDWARE
PL	PLATE
P LAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
POT	PATH OF TRAVEL
PR	PAIR
PT	PAINT
PTD	PAPER TOWEL DISPENSER
PTD/R	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
QT	QUARRY TILE
R	RISER
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REGTR	REGISTER
REINF	REINFORCED
REQD	REQUIRED
RESIL	RESILIENT
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	SOUTH
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SD	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FEET
SH	SHELF
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION(S)
SQ	SQUARE
SS	STAINLESS STEEL
S SK	SERVICE SINK
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
T	TREAD
TB	TOWEL BAR
TC	TOP OF CURB
TEL	TELEPHONE
TER	TERRAZZO
T&G	TONGUE & GROOVE
THK	THICK
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOW	TOP OF WALL
TOP	TOP OF PARAPET
TPD	TOILET PAPER DISPENSER
TS	TOP OF SLOPE
TV	TELEVISION
TYP	TYPICAL
UNF	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
W	WEST
W/	WITH
WC	WATER CLOSET
WD	WOOD
W/O	WITHOUT
WP	WATERPROOF
WR	WATER RESISTANT
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

CONSTRUCTION NOTES

1. ALL CONSTRUCTION & MATERIALS SHALL BE AS SPECIFIED & IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, LAWS, PERMITS & THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL NEW CONSTRUCTION ON THE SITE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXG SURVEY MONUMENTS WHICH MAY BE DISTURBED THROUGH CONSTRUCTION ACTIVITIES DEEMED NECESSARY FOR PRESERVATION BY THE CIVIL ENGINEER. IF SUCH MONUMENTS WERE DISTURBED, THE APPLICANT SHALL HAVE A LICENSED LAND SURVEYOR QUALIFIED CIVIL ENGINEER REESTABLISH ANY SUCH MONUMENTATION DAMAGED OR DESTROYED DURING THE CONSTRUCTION OF THE PROJECT & SUBMIT "PRELIMINARY CORNER RECORDS" TO THE CIVIL ENGINEER AFTER REPLACEMENT. AFTER APPROVAL BY THE CIVIL ENGINEER, THE APPLICANT SHALL FILE THE CORNER RECORDS WITH THE COUNTY SURVEYOR. PRIOR TO THE EXONERATION OF ANY SECURITY, EVIDENCE OF SUCH FILING SHALL BE FURNISHED TO THE CIVIL ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT TRUCK ROUTES SHALL BE STEERED AWAY FROM RESIDENTIAL AREAS.
5. THE CONTRACTOR SHALL ENSURE THAT TRUCKS HAULING DIRT ON PUBLIC ROADS TO & FROM THE SITE SHALL BE COVERED OR WILL MAINTAIN A 6" DIFFERENTIAL BETWEEN THE MAX HGT OF ANY HAULED MATERIAL & THE TOP OF THE HAUL TRAILER. HAUL TRUCK DRIVERS SHALL WATER THE LOAD PRIOR TO LEAVING THE SITE TO PREVENT SOIL LOSS DURING TRANSPORT.
6. THE CONTRACTOR SHALL ENSURE THAT GRADED SURFACES USED FOR OFF ROAD PARKING, MATERIALS LAY-DOWN, OR AWAITING FUTURE CONSTRUCTION SHALL BE STABILIZED FOR DUST CONTROL AS NEEDED. FREQUENTLY ACCESSED UNPAVED AREAS SHALL BE PAVED AS EARLY AS POSSIBLE TO MINIMIZE DIRT TRACKOUT TO PUBLIC RIGHTS-OF-WAY.
7. THE CONSTRACTOR SHALL COORDINATE ANY LANE CLOSURES OR DETOURS WITH THE CITY/COUNTY, FLAG PERSONS & APPROPRIATE TRAFFIC CONTROL DEVICES SHALL BE USED AS NEEDED TO MINIMIZE CONSTRUCTION ACTIVITY INTERFERENCE WITH OFF-SITE-TRAFFIC.
8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & SITE CONDITIONS BEFORE STARTING WORK. SHOULD A DISCREPANCY APPEAR IN THE CONTRACT DOCUMENTS OR BETWEEN THE CONTRACT DOCUMENTS & EXISTING CONDITIONS, NOTIFY THE ARCHITECT AT ONCE FOR INSTRUCTION ON HOW TO PROCEED.
9. SHOULD A CONFLICT OCCUR BETWEEN DWGS & SPECIFICATIONS, THE MORE COSTLY CONDITION SHALL TAKE PRECEDENCE, UNLESS A WRITTEN DECISION FROM THE ARCHITECT HAS BEEN OBTAINED WHICH DESCRIBES A CLARIFICATION OR ALTERNATE METHOD AND/OR MATERIALS.
10. THE CONTRACTOR SHALL CONFINE HIS OPERATION ON THE SITE TO AREAS PERMITTED BY OWNER.
11. THE JOBSITE SHALL BE MAINTAINED IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS & LITTER & SHALL NOT BE UNREASONABLY ENCUMBERED WITH ANY MATERIALS OR EQUIPMENT. EACH SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OF EACH PHASE OF HIS WORK SHALL REMOVE ALL TRASH & DEBRIS AS A RESULT OF HIS OPERATION.
12. ALL MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED & PROTECTED TO PREVENT DAMAGE & DETERIORATION. FAILURE TO PROTECT MATERIALS MAY BE CAUSE FOR REJECTION OF WORK.
13. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, AND/OR PATCHING OF HIS WORK THAT MAY BE REQ TO MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY & SHALL NOT ENDANGER ANY OTHER WORK BY CUTTING, EXCAVATING, OR OTHERWISE ALTERING THE TOTAL WORK OR ANY PART OF IT. ALL PATCHING, REPAIRING AND REPLACING OF MATERIALS AND SURFACES, CUT OR DAMAGED IN EXECUTION OF WORK, SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR SURFACES.
14. STRUCTURAL OBSERVATION WILL BE PERFORMED BY THE STRUCTURAL ENGINEER. WHEN REQ, A STATEMENT IN WRITING SHALL BE GIVEN TO THE BUILDING OFFICIAL, STATING THAT THE SITE VISITS HAVE BEEN MADE & WHETHER OR NOT ANY OBSERVED DEFICIENCIES HAVE BEEN CORRECTED TO CONFORM TO THE APPROVED PLANS & SPECIFICATIONS.
15. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM & RETURN THEM TO THE CONTRACTOR (WITH A NOTIFICATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED & THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING) FOR PLAN CHECK APPROVAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN & SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE AUTHORITY HAVING JURISDICTION.
16. PROVIDE ALL ACCESS PANELS AS REQ BY GOVERNING CODES TO ALL CONCEALED SPACES, VOIDS, ATTICS, ETC. VERIFY TYPE REQ WITH ARCHITECT PRIOR TO INSTALLATION.
17. NO PORTION OF WORK REQ A SHOP DWG OR SAMPLE SUBMISSION SHALL BE COMMENCED UNTIL THE SUBMISSION HAS BEEN REVIEWED BY THE ARCHITECT. ALL SUCH PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH CORRECTED SHOP DWGS. AND SAMPLES.
18. DIMENSIONS:
    A. ALL DIMS SHALL TAKE PRECEDENCE OVER SCALE.
    B. ALL DIMS ARE TO FACE OF STUD / CONCRETE / MASONRY UNO
    C. CLG HGT DIMS ARE FROM FACE OF SLAB TO FACE OF FIN CLG MATERIAL UNO
19. DO NOT SCALE DRAWINGS
20. PROVIDE ALL NECESSARY BLOCKING, BACKING, & FRAMING FOR LIGHT FIXTURES, ELECTRIC UNITS, AC EQUIP, RECESSED ITEMS, AND ALL OTHER ITEMS AS REQ.
21. WHERE LARGER STUDS OR FURRING ARE REQ TO COVER PIPING AND CONDUITS, THE LARGER STUD SIZE OR FURRING SHALL EXTEND THE FULL SURFACE OF THE WALL WIDTH AND LENGTH WHERE THE FURRING OCCURS, UNO.
22. ALL DOORS SHALL BE OPERABLE FROM THE INSIDE W/O THE USE OF A KEY OR SPECIAL KNOWLEDGE OF EFFORT. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS AS REQ BY THE APPLICABLE CODES. ALL DOOR SWINGS SERVING AN OCCUPANT LOAD OF 50 OR GREATER SHALL SWING IN THE DIRECTION OF TRAVEL.
23. ALL GLASS AND GLAZING SHALL COMPLY WITH THE APPLICABLE CODES.
24. WALL AND CLG MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN THE APPLICABLE CODES.
25. SURVEYORS CERTIFICATE REQ PRIOR TO FINAL COMPLETION.
26. THE CONTRACTOR SHALL COMPLY WITH THE APPLICABLE CODES FOR FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

FIRE AND LIFE SAFETY NOTES

1. FIRE SPRINKLER SYSTEMS & INSTALLATION SHALL CONFORM W/ THE APPLICABLE STANDARDS AND CODES.
2. FIRE SPRINKLER SYSTEMS TO BE TIED INTO THE ALARM SYSTEM PER THE APPLICABLE CODES.
3. AUTOMATIC SPRINKLER SYSTEM(S) SHALL BE SUPERVISED BY AN APPROVED CENTRAL OR REMOTE STATION SERVICE, AND/OR SHALL BE PROVIDED W/ A LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL.
4. FIRE SPRINKLER SYSTEM(S) & ALL CONTROL VALVES SHALL BE SUPERVISED BY A U.L. LISTED CENTRAL ALARM STATION OR PER THE APPLICABLE CODES.
5. FIRE HYDRANT & FIRE SPRINKLER SYSTEM(S) SHALL BE FLUSHED THOROUGHLY BEFORE CONNECTION IS MADE TO EXISTING SYSTEM STUBOUTS & WITNESSED BY THE PROJECT INSPECTOR.
6. A HYDROSTATIC TEST (200 PSI PRESSURE FOR 2 HRS. OR @ 50 PSI IN EXCESS OF THE MIN. STATIC PRESSURE WHEN IT IS IN EXCESS OF 150 PSI) SHALL BE WITNESSED BY THE PROJECT INSPECTOR PRIOR TO COVERING PIPING JOINTS.
7. A 3' CLR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS EXCEPT AS OTHERWISE REQ OR APPROVED PER THE APPLICABLE CODES.
8. THRUST BLOCKS SHALL BE PROVIDED WHEREVER PIPE CHANGES DIRECTION.
9. ALL PIPE SHALL BE UL LISTED FOR FIRE SERVICE SYSTEMS, CLASS 200 MIN.
10. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED W/I 100' FROM A PUBLIC FIRE HYDRANT PER THE APPLICABLE STANDARDS AND CODES.
11. FIRE SPRINKLER RISER SHALL BE LOCATED WITHIN 5 FT OF THE EXT WALL (OR AS REQ BY THE AHJ) AND TERMINATE 6" ABV FF
12. AN ALL-WEATHER FIRE ACCESS ROAD SHALL BE IN PLACE BEFORE ANY COMBUSTIBLE MATERIALS ARE PLACED ON THE SITE OR AS REQ BY THE AHJ.
13. STORAGE, DISPENSING, OR USE OF ANY FLAMMABLE & COMBUSTIBLE LIQUIDS, FLAMMABLE & COMPRESSED GASES & OTHER HAZARDOUS MATERIALS SHALL COMPLY W/ THE APPLICABLE CODES.
14. EXIT SIGNS SHALL BE POSTED OVER EXIT DOORS & DIRECTIONAL EXIT SIGNS SHALL BE LOCATED TO DIRECT PERSONS TOWARD EXIT DOORS.
15. EXIT SIGNS SHALL BE SELF-LUMINOUS TYPE OR ELECTRONICALLY ILLUMINATED & ENERGIZED FROM SEPARATE CIRCUITS, ONE OF WHICH SHALL BE FROM STORAGE BATTERIES OR AN ON-SITE GENERATOR, FOR A DURATION OF 90 MINUTES PER THE APPLICABLE CODES.
16. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
17. ACCESS GATE(S) SHALL BE OPENABLE W/ FIRE DEPT MASTER KEY FROM THE EXTERIOR.
18. CURBS ALONG FIRE LANES SHALL BE PAINTED SAFETY RED & MARKED "FIRE LANE NO PARKING" W/ 3" WHITE LETTERS ON THE TOP OF CURBING EVERY 30' AS INDICATED ON THE APPROVED DRAWINGS.
19. APPROVED NUMBERS OR ADDRESSES SHALL BE PROVIDED FOR ALL NEW & EXG BLDGS IN SUCH A POSITION AS TO BE PLAINLY VISIBLE & LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY PER THE APPLICABLE CODES.
20. PROVIDE PERMANENT OR TEMPORARY STANDPIPES WHILE BUILDING IS UNDER CONSTRUCTION PER THE APPLICABLE CODES.
21. PROVIDE FIRE EXTINGUISHERS PER THE REQ THE APPLICABLE STANDARDS AND CODES.

VICINITY MAP



PROPOSED SITE
MILLS CROSSING

ADDRESS:
10179 Folsom Blvd, Rancho Cordova, CA 95670

500 FT RADIUS

TRUE NORTH PROJECT NORTH

PROJECT SCOPE

The scope of work includes construction of a new commercial core and shell building (35,450 SF), a new performing arts center (27,336 SF), a new community events center (13,077 SF) and associated site improvements.

LIMIT OF WORK

THE INTENT OF THE LIMIT OF WORK LINE IS TO DESCRIBE IN GENERAL THE AREAS AFFECTED BY PROJECT CONSTRUCTION. IT IS NOT INTENDED TO BE AN EXACT INDICATION OR EDGE OF THE CONSTRUCTION AREA. THE CONTRACTOR SHOULD VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND THEIR RELATIONSHIP TO THE WORK PROPOSED IN THE CONTRACT DOCUMENTS. ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK SHALL BE INCLUDED. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE BINDING AS IF REQUIRED BY ALL TO THE EXTENT THAT IT IS REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS.

DEFERRED APPROVALS

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED BY THE BUILDING OFFICIAL.

THE FOLLOWING WILL BE DEFERRED SUBMITTALS FOR THIS PROJECT:

*ELEVATOR GUIDE RAIL SUPPORTS
*ERRC SYSTEM
*STEEL STAIRS
*EXTERNAL VIBRATION ISOLATORS AT MECHANICAL EQUIPMENT
*PHOTOVOLTAIC SYSTEM, INCLUDING SUPPORT / MOUNTING
*MECHANICAL PIPING & SEISMIC BRACING
*MECHANICAL DUCTING SEISMIC BRACING
*HVAC EQUIPMENT SEISMIC & ANCHORAGE
*MECHANICAL DUCTS RISER SUPPORTS

PROJECT DIRECTORY

PROGRAM MANAGER

NAME: GRIFFIN STRUCTURES, INC.
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CONSTRUCTION MANAGER

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CONTACT: E-MAIL:

ARCHITECT

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LANDSCAPE ARCHITECT

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CIVIL ENGINEER

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STRUCTURAL ENGINEER

NAME: LPA, INC.
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MECHANICAL ENGINEER

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CONTACT: ERICK PULIDO E-MAIL: epulido@lpadesignstudios.com

ELECTRICAL ENGINEER

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CONTACT: KEN GREEN E-MAIL: kgreen@lpadesignstudios.com

PLUMBING ENGINEER

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CONTACT: JAY KIM E-MAIL: jhkim@lpadesignstudios.com

FOOD SERVICE

NAME: WEBB.
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TEL: 619.707.2614
CONTACT: SHIKIN AMAIN TURNER E-MAIL: shikin@webbfsd.com

THEATER

NAME: THEATER PROJECTS
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TEL: +1.203.295.3474
CONTACT: ROB YOUNG E-MAIL: ryoung@theatreprojects.com

SPECIFICATIONS

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TECHNOLOGY

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CONTACT: ADRIAN MARSH E-MAIL: adrian.marsh@wsp.com

AV

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ACOUSTICS

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CONTACT: MICHAEL BROWN E-MAIL: Michael@newsonacoustics.com

IRRIGATION

NAME: SWEENEY
ADDRESS:
CITY,STATE, ZIP:
TEL:
CONTACT: E-MAIL:

GRIFFIN SWINERTON

LPA
ARCHITECTURE ENGINEERING INTERIOR DESIGN
LANDSCAPE ARCHITECTURE PLANNING

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MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670
Developed for
GRIFFIN | SWINERTON

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	06/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Revision	Date

Job Number	30911
Checked By	Checker
Scale	As indicated

GENERAL PROJECT INFORMATION

AD0.01

PROPOSED USE SUMMARY

BUILDING 1:
OFFICE 17,000 SF
COMMUNITY CLINIC 17,000 SF

BUILDING 2:
THEATER 6,500 SF
FLEXIBLE STUDIO SPACE 3,300 SF

BUILDING 3:
FLEXIBLE COMMUNITY CENTER 6,500 SF
COMMUNITY SUPPORT SPACE 2,000 SF

CODE ANALYSIS - BLDG 3

BUILDING USES: FOOD PREP KITCHEN, MEETING SPACE

CONSTRUCTION CLASSIFICATION (CBC 602): TYPE II-B
OCCUPANCY CLASSIFICATION (CBC 302 & 508.3): A-2, A-3, B & S-2 (NON-SEPARATED OCCUPANCIES - MOST RESTRICTIVE OCCUPANCY USED)

FIRE PROTECTION: SPRINKLERED

ACCESSORY OCCUPANCY (CBC 508.2): NONE
INCIDENTAL USES (CBC 509):

ALLOWABLE BUILDING HEIGHT (CBC 504 & TABLE 504.3): 75' - 0" (WITH AREA INCREASE)
ALLOWABLE NUMBER OF STORIES (CBC 504 & TABLE 504.4): 3 STORIES (WITH AREA INCREASE)

ALLOWABLE AREA PER STORY (CBC 506.2.4 & TABLE 506.2): 26,500 SF (WITHOUT HEIGHT INCREASE)
ALLOWABLE BUILDING AREA (CBC 506.2.3 & TABLE 506.2): 93,000 SF

ACTUAL BUILDING HEIGHT: 47'-0" - OK
ACTUAL NUMBER OF STORIES: 1 STORIES - OK

FIRST FLOOR AREA*: 9,661 SF (CONDTIONED AREA) + 4446 SF (OVERHANGS) < 46,500 SF - OK**

OVERALL BUILDING AREA*: 14,107 SF < 25,500 SF - OK
OVERALL BUILDING AREA (SUM): 25,500 SF

** BUILDING AREAS INCLUDE HORIZONTAL PROJECTIONS OF THE ROOF OR FLOOR ABOVE BUT EXCLUDE VENT SHAFTS AND COURTS. (CBC 202)*

FIRE-RESISTANCE RATING REQ. FOR BLDG ELEMENTS (CBC TABLE 601):
STRUCTURAL FRAME: 1 HOUR
EXTERIOR BEARING WALLS: 1 HOUR
INTERIOR BEARING WALLS: 1 HOUR
EXTERIOR NONBEARING WALLS: REFER TO RATING REQ. BELOW
INTERIOR NONBEARING WALLS: 0 HOUR
FLOOR CONSTRUCTION: 1 HOUR
ROOF CONSTRUCTION: 1 HOUR **

***FIRE PROTECTION OF MEMBERS OTHER THAN THE PRIMARY STRUCTURAL FRAME SHALL NOT BE REQUIRED, INCLUDING PROTECTION OF THE ROOF FRAMING AND DECKING WHERE EVERY PART OF CONSTRUCTION IS 20 FEET OR MORE ABOVE ANY FLOOR IMMEDIATELY BELOW (CBC 601 EXCEPTION B)*

FIRE-RESISTANCE RATING REQ. FOR EXTERIOR WALLS (CBC TABLE 602)
1-HR PROTECTED: < 30'-0"
NO PROTECTION REQUIRED: ≥ 30'-0"

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT (CBC TABLE 1004.5):

1:5 NET = ASSEMBLY W/OUT FIXED SEATS (CONCENTRATED-STANDING)
1:7 NET = ASSEMBLY W/OUT FIXED SEATS (CONCENTRATED-CHAIRS)
1:15 NET = ASSEMBLY W/OUT FIXED SEATS (UNCONCENTRATED)
1:20 NET = EDUCATIONAL: CLASSROOM AREA
1:50 GROSS = EXERCISE ROOMS
1:50 GROSS = LOCKER ROOMS
1:150 GROSS = BUSINESS AREA
1:300 GROSS = STORAGE AREAS, MECHANICAL EQUIPMENT ROOM

OCCUPANT LOAD PER FLOOR:
LEVEL 1: 768 OCCUPANTS
OF EXITS REQUIRED = 3
OF EXITS PROVIDED = 7

MEANS OF EGRESS SIZING (CBC 1005):
STAIRWAYS: # OCCUPANTS X 0.2 = EGRESS WIDTH (CBC 1005.3.1, EXCEPTION 1)
DOOR EXITS & CORRIDORS: # OCCUPANTS X 0.15 = EGRESS WIDTH (CBC 1005.3.2, EXCEPTION 2)
PROVIDE 2 EXITS IN ALL ROOMS WITH OCCUPANT LOADS ABOVE 49 (A-3 & B)
PROVIDE 2 EXITS IN ALL ROOMS WITH OCCUPANT LOADS ABOVE 29 (S-1)

MAXIMUM COMMON PATH OF TRAVEL (CBC TABLE 1006.2.1):
A OCCUPANCY: 75'-0"
B OCCUPANCY: 100'-0"
S-1 OCCUPANCY: 100'-0"

MAXIMUM EXIT ACCESS TRAVEL DISTANCE (CBC TABLE1017.2):
A OCCUPANCY: 250'-0"
B OCCUPANCY: 300'-0"
S-1 OCCUPANCY: 250'-0"

MAXIMUM TRAVEL DISTANCE TO ELEVATOR (CBC 11B-206.2.3.2): 200'-0"

AREA OF REFUGE (CBC 1009):
NOT REQUIRED IN BLDGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM

CODE ANALYSIS - BLDG 2

BUILDING USES: THEATER AND ARTS BUILDING

CONSTRUCTION CLASSIFICATION (CBC 602): TYPE II-B
OCCUPANCY CLASSIFICATION (CBC 302 & 508.3): A-3, A-4, B & S-1 (NON-SEPARATED OCCUPANCIES - MOST RESTRICTIVE OCCUPANCY USED)

FIRE PROTECTION: SPRINKLERED

ACCESSORY OCCUPANCY (CBC 508.2): NONE
INCIDENTAL USES (CBC 509): LAUNDRY ROOMS OVER 100SF

ALLOWABLE BUILDING HEIGHT (CBC 504 & TABLE 504.3): 75' - 0" (WITHOUT AREA INCREASE)
ALLOWABLE NUMBER OF STORIES (CBC 504 & TABLE 504.4): 3 STORIES (WITHOUT AREA INCREASE)

ALLOWABLE AREA PER STORY (CBC 506.2.4 & TABLE 506.2): 25,500 SF (WITHOUT HEIGHT INCREASE)
ALLOWABLE BUILDING AREA (CBC 506.2.3 & TABLE 506.2): 93,000 SF

ACTUAL BUILDING HEIGHT: 47'-0" - OK
ACTUAL NUMBER OF STORIES: 2 STORIES - OK

FIRST FLOOR AREA*: 16,621 SF < 25,500 SF - OK**
SECOND FLOOR AREA*: 8,952 SF < 25,500 SF - OK
(EXCLUDES 1694 SF MEZZANINE AREA WITHIN THEATER)
THIRD FLOOR AREA*: 2,000 SF < 25,500 SF - OK
(ROOF DECK)
OVERALL BUILDING AREA*: 27,573 SF < 76,500 SF - OK
OVERALL BUILDING AREA (SUM): 74,740 SF

** BUILDING AREAS INCLUDE HORIZONTAL PROJECTIONS OF THE ROOF OR FLOOR ABOVE BUT EXCLUDE VENT SHAFTS AND COURTS. (CBC 202)*

FIRE-RESISTANCE RATING REQ. FOR BLDG ELEMENTS (CBC TABLE 601):
STRUCTURAL FRAME: 0 HOUR
EXTERIOR BEARING WALLS: 0 HOUR
INTERIOR BEARING WALLS: 0 HOUR
EXTERIOR NONBEARING WALLS: REFER TO RATING REQ. BELOW
INTERIOR NONBEARING WALLS: 0 HOUR
FLOOR CONSTRUCTION: 0 HOUR 5'-0" ≤ X ≤ 10'-0"
ROOF CONSTRUCTION: 0 HOUR ** 10'-0" ≤ X ≤ 30'-0"

***FIRE PROTECTION OF MEMBERS OTHER THAN THE PRIMARY STRUCTURAL FRAME SHALL NOT BE REQUIRED, INCLUDING PROTECTION OF THE ROOF FRAMING AND DECKING WHERE EVERY PART OF CONSTRUCTION IS 20 FEET OR MORE ABOVE ANY FLOOR IMMEDIATELY BELOW (CBC 601 EXCEPTION B)*

FIRE-RESISTANCE RATING REQ. FOR EXTERIOR WALLS (CBC TABLE 602)
1-HR PROTECTED:
NO PROTECTION REQUIRED:

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT (CBC TABLE 1004.5):
1:5 NET = ASSEMBLY W/OUT FIXED SEATS (CONCENTRATED-STANDING)
1:7 NET = ASSEMBLY W/OUT FIXED SEATS (CONCENTRATED-CHAIRS)
1:15 NET = ASSEMBLY W/OUT FIXED SEATS (UNCONCENTRATED)
1:20 NET = EDUCATIONAL: CLASSROOM AREA
1:50 GROSS = EXERCISE ROOMS
1:50 GROSS = LOCKER ROOMS
1:150 GROSS = BUSINESS AREA
1:300 GROSS = STORAGE AREAS, MECHANICAL EQUIPMENT ROOM

OCCUPANT LOAD PER FLOOR:
LEVEL 1: 797 OCCUPANTS
OF EXITS REQUIRED = 3
OF EXITS PROVIDED = 3
LEVEL 2: 395 OCCUPANTS
OF EXITS REQUIRED = 2
OF EXITS PROVIDED = 2
LEVEL 3: 133 OCCUPANTS
OF EXITS REQUIRED = 2
OF EXITS PROVIDED = 2

MEANS OF EGRESS SIZING (CBC 1005):
STAIRWAYS: # OCCUPANTS X 0.2 = EGRESS WIDTH (CBC 1005.3.1, EXCEPTION 1)
DOOR EXITS & CORRIDORS: # OCCUPANTS X 0.15 = EGRESS WIDTH (CBC 1005.3.2, EXCEPTION 2)
PROVIDE 2 EXITS IN ALL ROOMS WITH OCCUPANT LOADS ABOVE 49 (A-3 & B)
PROVIDE 2 EXITS IN ALL ROOMS WITH OCCUPANT LOADS ABOVE 29 (S-1)

MAXIMUM COMMON PATH OF TRAVEL (CBC TABLE 1006.2.1):
A OCCUPANCY: 75'-0"
B OCCUPANCY: 100'-0"
S-1 OCCUPANCY: 100'-0"

MAXIMUM EXIT ACCESS TRAVEL DISTANCE (CBC TABLE1017.2):
A OCCUPANCY: 250'-0"
B OCCUPANCY: 300'-0"
S-1 OCCUPANCY: 250'-0"

MAXIMUM TRAVEL DISTANCE TO ELEVATOR (CBC 11B-206.2.3.2): 200'-0"

AREA OF REFUGE (CBC 1009):
NOT REQUIRED IN BLDGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM

CODE ANALYSIS - BLDG 1

BUILDING USES: OFFICE BUILDING, MEDICAL OFFICE BUILDING

CONSTRUCTION CLASSIFICATION (CBC 602): TYPE II-B
OCCUPANCY CLASSIFICATION (CBC 302 & 508.3): B

FIRE PROTECTION: SPRINKLERED

ACCESSORY OCCUPANCY (CBC 508.2): S2
INCIDENTAL USES (CBC 509):

ALLOWABLE BUILDING HEIGHT (CBC 504 & TABLE 504.3): 75' - 0" (WITHOUT AREA INCREASE)
ALLOWABLE NUMBER OF STORIES (CBC 504 & TABLE 504.4): 3 STORIES (WITHOUT AREA INCREASE)

ALLOWABLE AREA PER STORY (CBC 506.2.4 & TABLE 506.2): 69,000 SF (WITHOUT HEIGHT INCREASE)
ALLOWABLE BUILDING AREA (CBC 506.2.3 & TABLE 506.2): 138,000 SF

ACTUAL BUILDING HEIGHT: 41'-6" - OK
ACTUAL NUMBER OF STORIES: 3 STORIES - OK

FIRST FLOOR AREA*: 18,000 SF < 69,000 SF - OK**
SECOND FLOOR AREA*: 18,000 SF < 46,500 SF - OK
ROOF DECK AREA*: 2,000 SF < 69,000 SF - OK
OVERALL BUILDING AREA*: 38,000 SF < 138,000 SF - OK
OVERALL BUILDING AREA (SUM): 38,000 SF

** BUILDING AREAS INCLUDE HORIZONTAL PROJECTIONS OF THE ROOF OR FLOOR ABOVE BUT EXCLUDE VENT SHAFTS AND COURTS. (CBC 202)*

FIRE-RESISTANCE RATING REQ. FOR BLDG ELEMENTS (CBC TABLE 601):
STRUCTURAL FRAME: 0 HOUR
EXTERIOR BEARING WALLS: 0 HOUR
INTERIOR BEARING WALLS: 0 HOUR
EXTERIOR NONBEARING WALLS: REFER TO RATING REQ. BELOW
INTERIOR NONBEARING WALLS: 0 HOUR
FLOOR CONSTRUCTION: 0 HOUR
ROOF CONSTRUCTION: 0 HOUR **

***FIRE PROTECTION OF MEMBERS OTHER THAN THE PRIMARY STRUCTURAL FRAME SHALL NOT BE REQUIRED, INCLUDING PROTECTION OF THE ROOF FRAMING AND DECKING WHERE EVERY PART OF CONSTRUCTION IS 20 FEET OR MORE ABOVE ANY FLOOR IMMEDIATELY BELOW (CBC 601 EXCEPTION B)*

FIRE-RESISTANCE RATING REQ. FOR EXTERIOR WALLS (CBC TABLE 602)
1-HR PROTECTED: < 30'-0"
NO PROTECTION REQUIRED: ≥ 30'-0"

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT (CBC TABLE 1004.5):

1:5 NET = ASSEMBLY W/OUT FIXED SEATS (CONCENTRATED-STANDING)
1:7 NET = ASSEMBLY W/OUT FIXED SEATS (CONCENTRATED-CHAIRS)
1:15 NET = ASSEMBLY W/OUT FIXED SEATS (UNCONCENTRATED)
1:20 NET = EDUCATIONAL: CLASSROOM AREA
1:50 GROSS = EXERCISE ROOMS
1:50 GROSS = LOCKER ROOMS
1:150 GROSS = BUSINESS AREA
1:300 GROSS = STORAGE AREAS, MECHANICAL EQUIPMENT ROOM

OCCUPANT LOAD PER FLOOR:
LEVEL 1: 98 OCCUPANTS
OF EXITS REQUIRED = 2
OF EXITS PROVIDED = 2
LEVEL 2: 107 OCCUPANTS
OF EXITS REQUIRED = 2
OF EXITS PROVIDED = 2
LEVEL 3: 135 OCCUPANTS
(ROOF DECK) # OF EXITS REQUIRED = 2
OF EXITS PROVIDED = 2

MEANS OF EGRESS SIZING (CBC 1005):
STAIRWAYS: # OCCUPANTS X 0.2 = EGRESS WIDTH (CBC 1005.3.1, EXCEPTION 1)
DOOR EXITS & CORRIDORS: # OCCUPANTS X 0.15 = EGRESS WIDTH (CBC 1005.3.2, EXCEPTION 2)
PROVIDE 2 EXITS IN ALL ROOMS WITH OCCUPANT LOADS ABOVE 49 (A-3 & B)
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MAXIMUM TRAVEL DISTANCE TO ELEVATOR (CBC 11B-206.2.3.2): 200'-0"

AREA OF REFUGE (CBC 1009):
NOT REQUIRED IN BLDGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM

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Developed for
GRIFFIN | SWINERTON

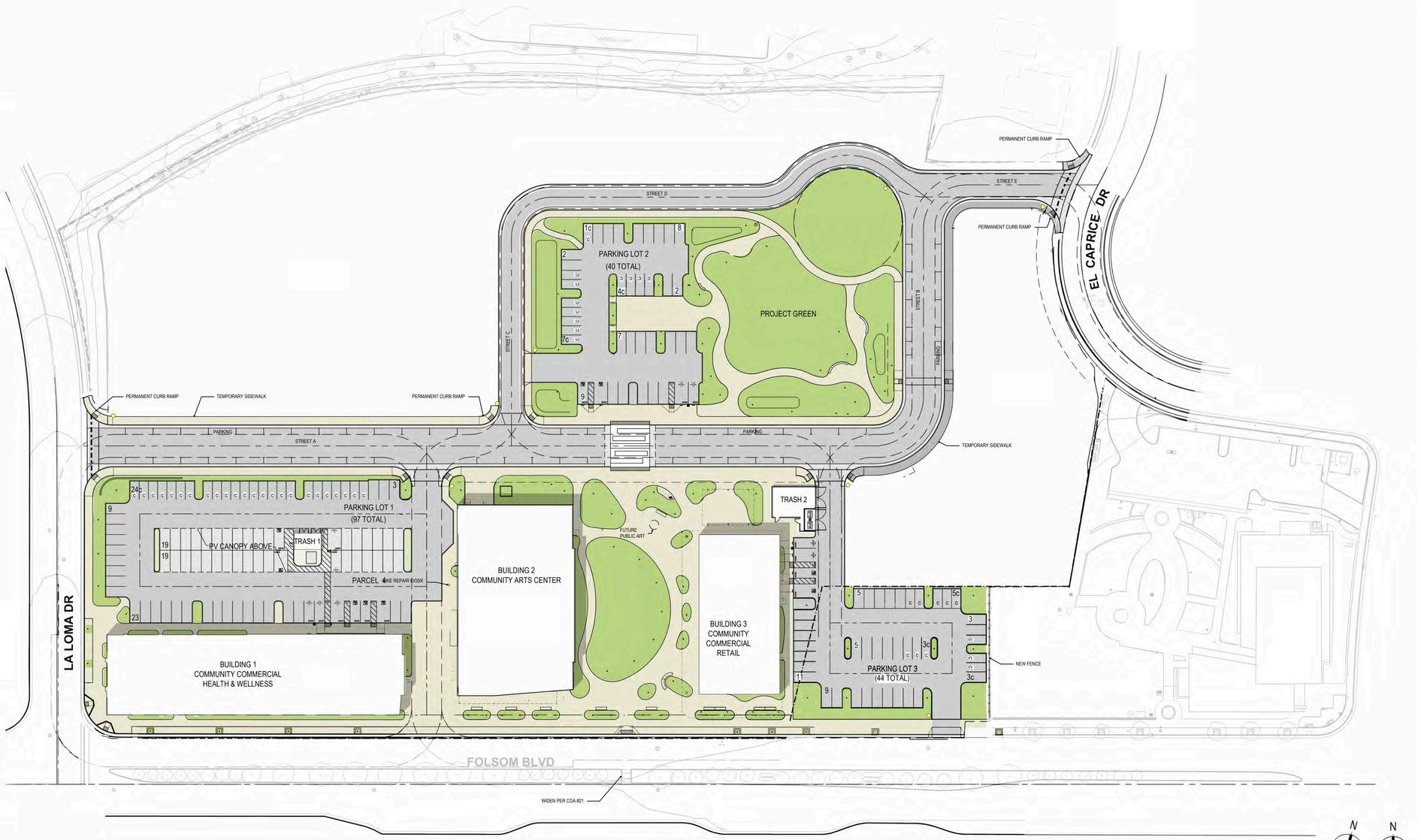
Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	1/8" = 1'-0"

CODE ANALYSIS

AD1.00



LEGEND

- PROPERTY LINE
- EASEMENT
- SIDE SETBACK
- BICYCLE PARKING RACK
- MAIN ENTRY SYMBOL
- STOP SIGN
- CROSS WALK

PARKING COUNT

PARKING LOT 1 - **97** STALLS

COMPACT STALL COUNT - 24
(24.7% OF TOTAL)

ADA STALL COUNT - 3

EV STALL COUNT - 3

PARKING LOT 2 - **40** STALLS

COMPACT STALL COUNT - 12
(30.0% OF TOTAL)

ADA STALL COUNT - 2

EV STALL COUNT - 2

PARKING LOT 2 - **44** STALLS

COMPACT STALL COUNT - 8
(18.1% OF TOTAL)

ADA STALL COUNT - 2

EV STALL COUNT - 2

ONSITE PARKING STALL DIMENSIONS



COMPACT STALL



STANDARD STALL

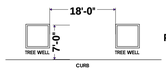


ACCESSIBLE STALL



ACCESSIBLE VAN STALL

OFFSITE PARKING STALL DIMENSIONS



PARALLEL PARKING STALL

ATTACHMENT 6
Exhibit A to the Resolution

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ENTITLEMENT SUBMITTAL #4	02/10/2025

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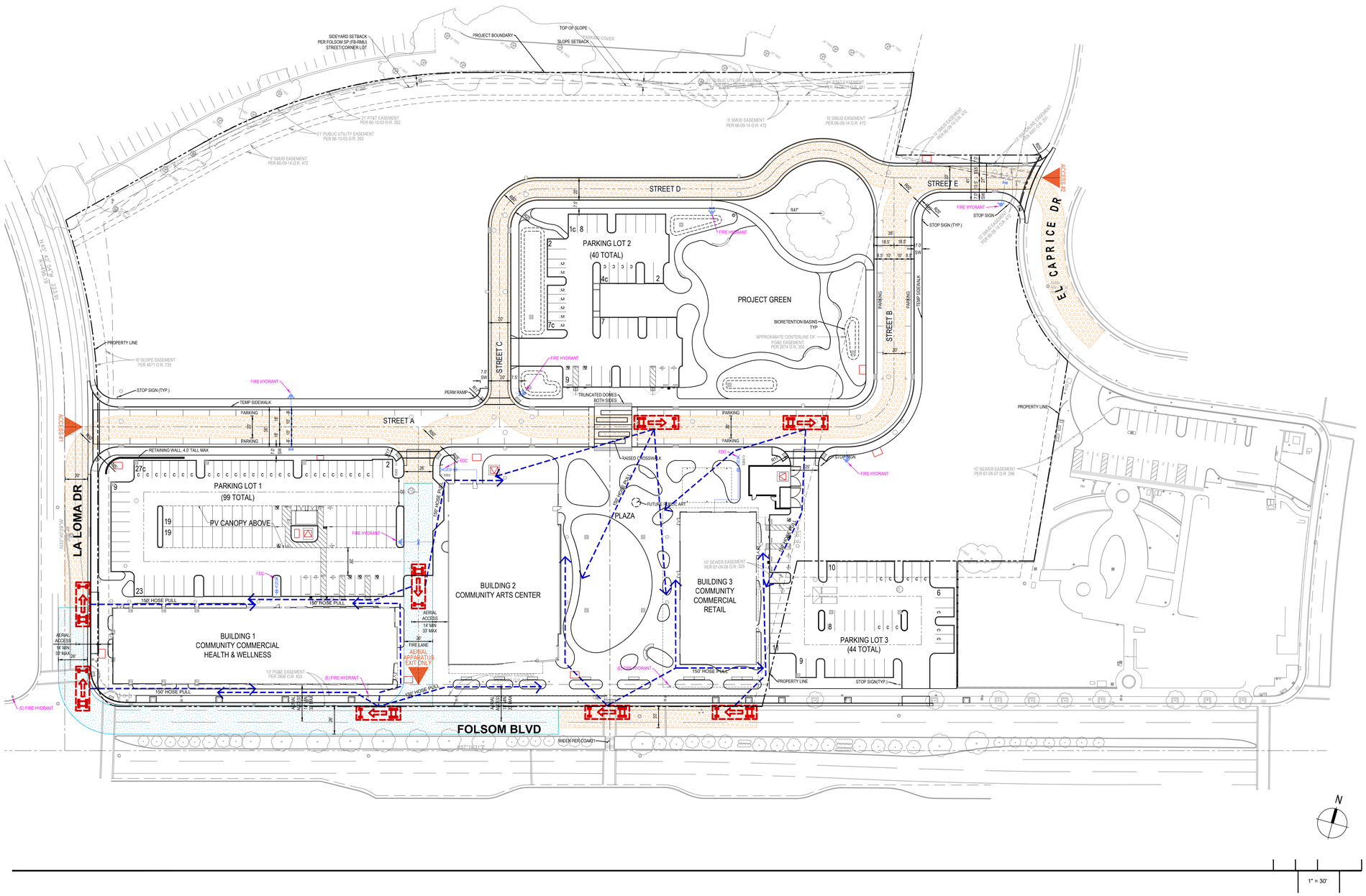
Scale	As indicated

SITE PLAN

AD2.00



LEGEND

- FIRE HOSE PULL
- FIRE HYDRANT
- FDC — FIRE DEPARTMENT CONNECTION
- FIRE TRUCK ACCESS ROUTE
- AERIAL APPARATUS ACCESS ROUTE

CALCULATIONS

BUILDING 1

REQUIRED FIRE FLOW [CFC TABLES B1.05.1(2) AND B105.2]
4,000 x 25% = 1,000 GPM (MIN) FOR CONSTRUCTION TYPE IIB, 36000 SF

ALLOWABLE DISTANCE TO FIRE HYDRANT [CFC TABLE C102.1]
500 / 2 = 250 FT MAX. FOR FIRE FLOWS UNDER 1,750 GPM

BUILDING 2

REQUIRED FIRE FLOW [CFC TABLES B1.05.1(2) AND B105.2]
3,250 x 25% = 1,000 GPM (MIN) FOR CONSTRUCTION TYPE IIB, 25000 SF

ALLOWABLE DISTANCE TO FIRE HYDRANT [CFC TABLE C102.1]
500 / 2 = 250 FT MAX. FOR FIRE FLOWS UNDER 1,750 GPM

BUILDING 3

REQUIRED FIRE FLOW [CFC TABLES B1.05.1(2) AND B105.2]
2,000 x 25% = 1,000 GPM (MIN) FOR CONSTRUCTION TYPE IIB, 9000 SF

ALLOWABLE DISTANCE TO FIRE HYDRANT [CFC TABLE C102.1]
500 / 2 = 250 FT MAX. FOR FIRE FLOWS UNDER 1,750 GPM

HOSE PULL (CFC 503.1.1)
150 FT MAX.

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SITE FIRE ACCESS PLAN

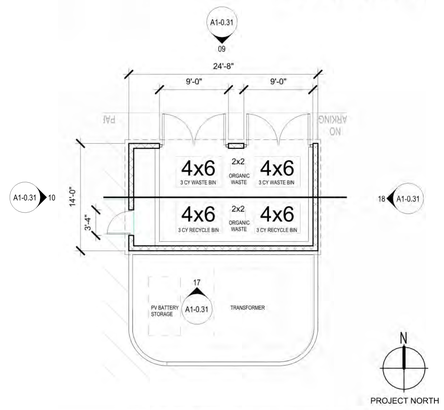
AD2.10



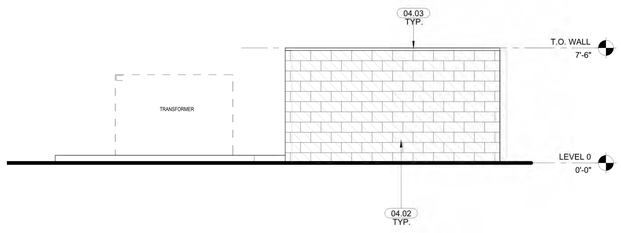
VIEW FROM STREET SIDE



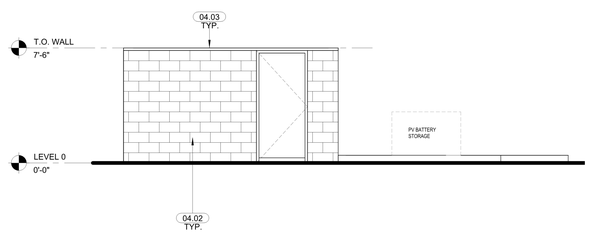
VIEW FROM BUILDING SIDE



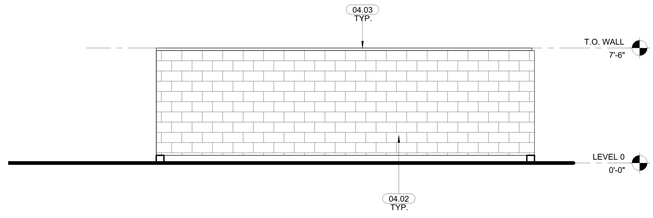
FLOOR PLAN - TRASH ENCLOSURE | 1/8" = 1'-0" | 02 / A1-3.01 | 05



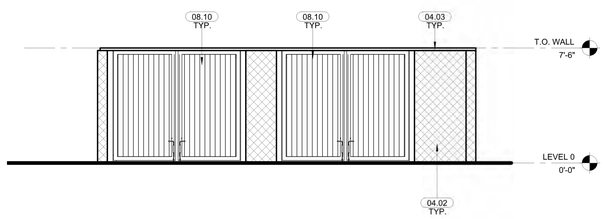
TRASH ENCLOSURE EAST FACADE | 1/4" = 1'-0" | A1-0.31 | 18



TRASH ENCLOSURE WEST FACADE | 1/4" = 1'-0" | A1-0.31 | 10



TRASH ENCLOSURE SOUTH FACADE | 1/4" = 1'-0" | A1-0.31 | 17



TRASH ENCLOSURE NORTH FACADE | 1/4" = 1'-0" | A1-0.31 | 09

KEYNOTES

04.02	CMU BLOCK WALL 8"
04.03	CMU WALL CAP
08.10	CORRUGATED METAL DECK GATE W/HSS FRAME AND POSTS. PAINTED TO MATCH CANOPY.

LEGEND

- T.O.R. — TOP OF ROOF ELEVATION
- T.O.C. — TOP OF CURB ELEVATION
- B.O.C. — BOTTOM OF CURB ELEVATION
- ? TYP. — KEYNOTE
- MASONRY WALL CONSTRUCTION
- ART WALL

GENERAL NOTES

1. GENERAL NOTES HERE...

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Job Number	30911
Checked By	Checker
Scale	As indicated

TRASH ENCLOSURE #1

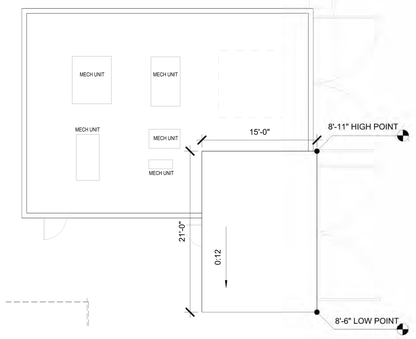
AD3.00



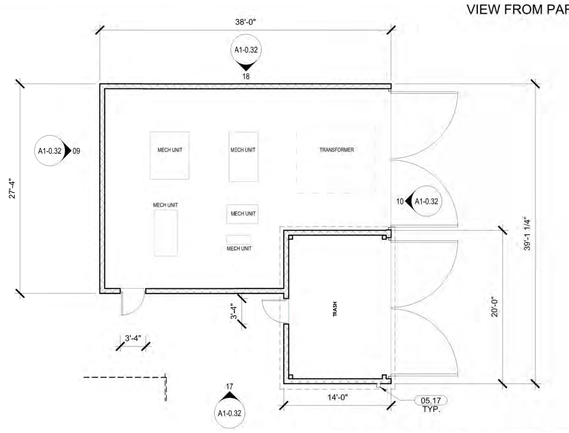
VIEW FROM PLAZA



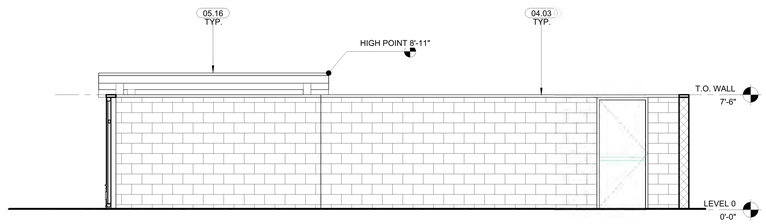
VIEW FROM PARKING LOT



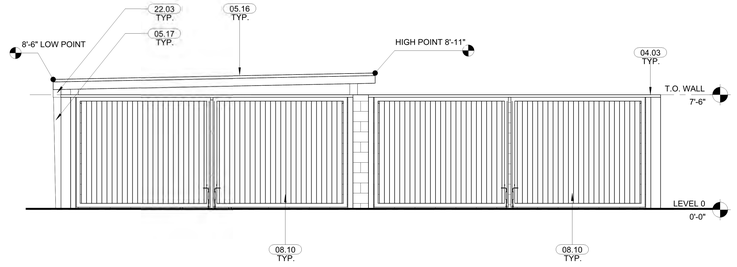
ROOF PLAN - TRASH ENCLOSURE 2 | 1/8" = 1'-0" | A1-0.32 | 06



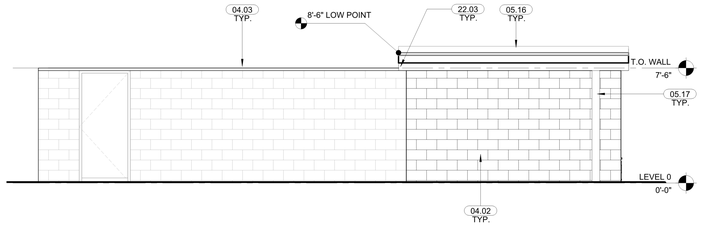
FLOOR PLAN - TRASH ENCLOSURE 2 | 1/8" = 1'-0" | A1-0.32 | 05



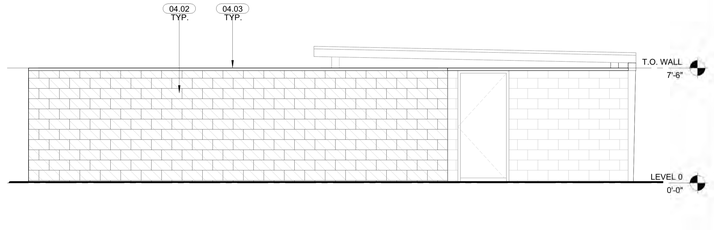
TRASH ENCLOSURE NORTH ELEVATION | 1/4" = 1'-0" | A1-0.32 | 18



TRASH ENCLOSURE EAST ELEVATION | 1/4" = 1'-0" | A1-0.32 | 10



TRASH ENCLOSURE SOUTH ELEVATION | 1/4" = 1'-0" | A1-0.32 | 17



TRASH ENCLOSURE WEST ELEVATION | 1/4" = 1'-0" | A1-0.32 | 09

KEYNOTES

04.02	CMU BLOCK WALL 8"
04.03	CMU WALL CAP
05.16	CORRUGATED METAL DECK ROOFING O/HSS STEEL CANOPY STRUCTURE W/HIGH PERFORMANCE COATING
05.17	SHEET METAL FABRICATED DOWNSPOUT, PAINT TO MATCH CANOPY COLOR AND FINISH
08.10	CORRUGATED METAL DECK GATE W/HSS FRAME AND POSTS. PAINTED TO MATCH CANOPY.
22.03	GUTTER, SLOPE 1/8" PER FT. MIN.

LEGEND

T.O.R	TOP OF ROOF ELEVATION
T.O.C.	TOP OF CURB ELEVATION
B.O.C.	BOTTOM OF CURB ELEVATION
? TYP.	KEYNOTE
	MASONRY WALL CONSTRUCTION
	ART WALL

GENERAL NOTES

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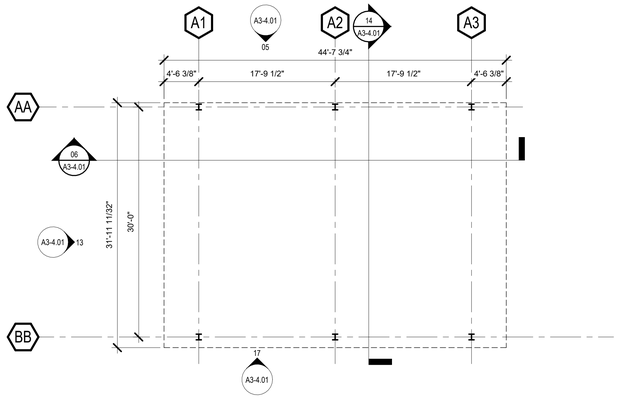
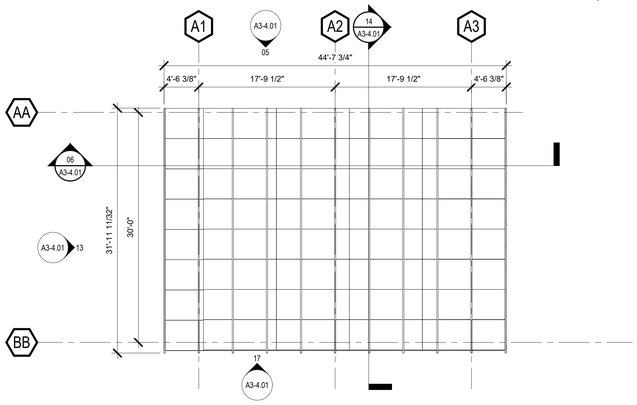
TRASH ENCLOSURE #2

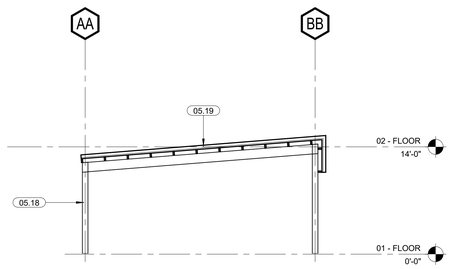
AD3.10



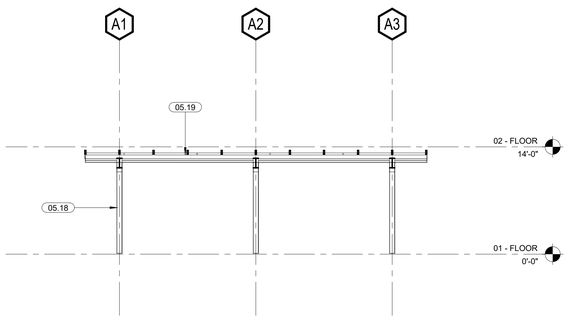
01 - FLOOR | 1/8" = 1'-0" | A3-4.01 | 1



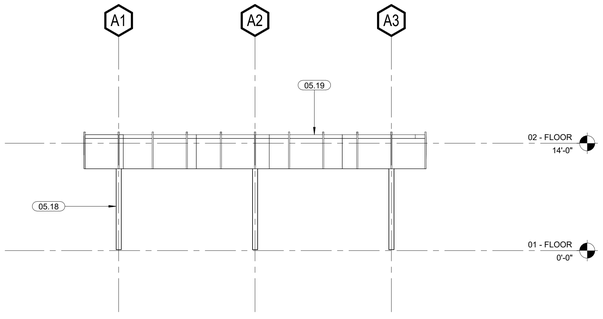
01 - TRELLIS ENLARGED ROOF PLAN | 1/8" = 1'-0" | A3-4.01 | 2



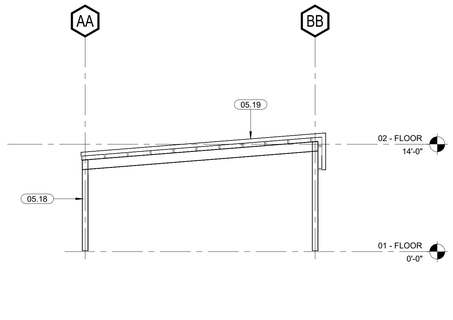
TRELLIS SECTION WEST | 1/8" = 1'-0" | A3-4.01 | 14



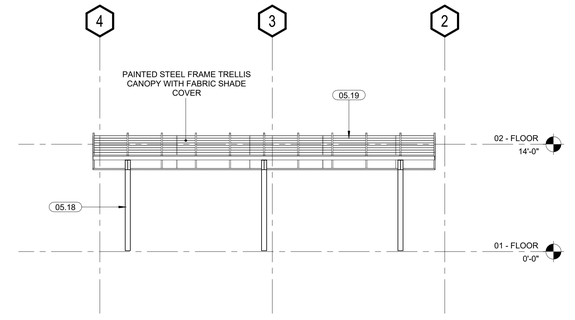
TRELLIS SECTION SOUTH | 1/8" = 1'-0" | A3-4.01 | 06



SOUTH TRELLIS ELEVATION | 1/8" = 1'-0" | A3-4.01 | 17



WEST TRELLIS ELEVATION | 1/8" = 1'-0" | A3-4.01 | 13



NORTH TRELLIS ELEVATION | 1/8" = 1'-0" | A3-4.01 | 05

KEYNOTES

05.18	PRE-ENGINEERED METAL TRELLIS STRUCTURE
05.19	STANDING SEAM METAL PANEL ROOF CANOPY

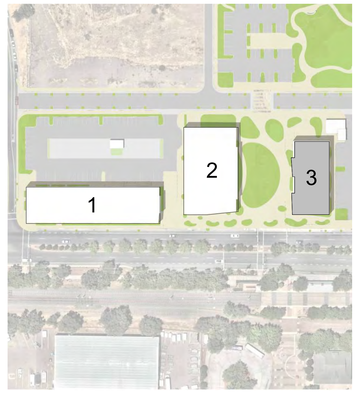
LEGEND

1. LEGEND CONTENT HERE...

GENERAL NOTES

1. GENERAL NOTES HERE...

KEY PLAN



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Revision	Date

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ENTITLEMENT SUBMITTAL #1	05/09/2024
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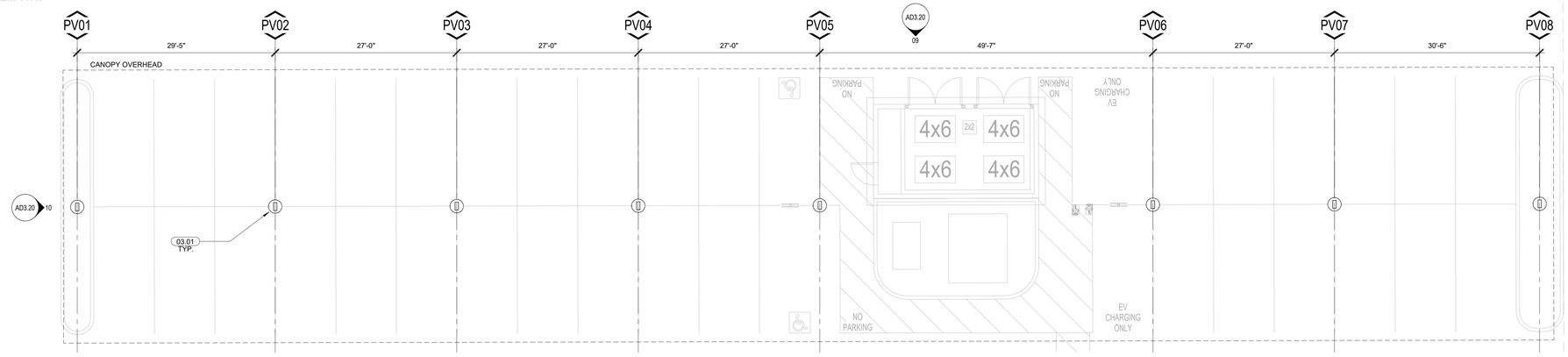
ENTITLEMENT SUBMITTAL #4	02/10/2025

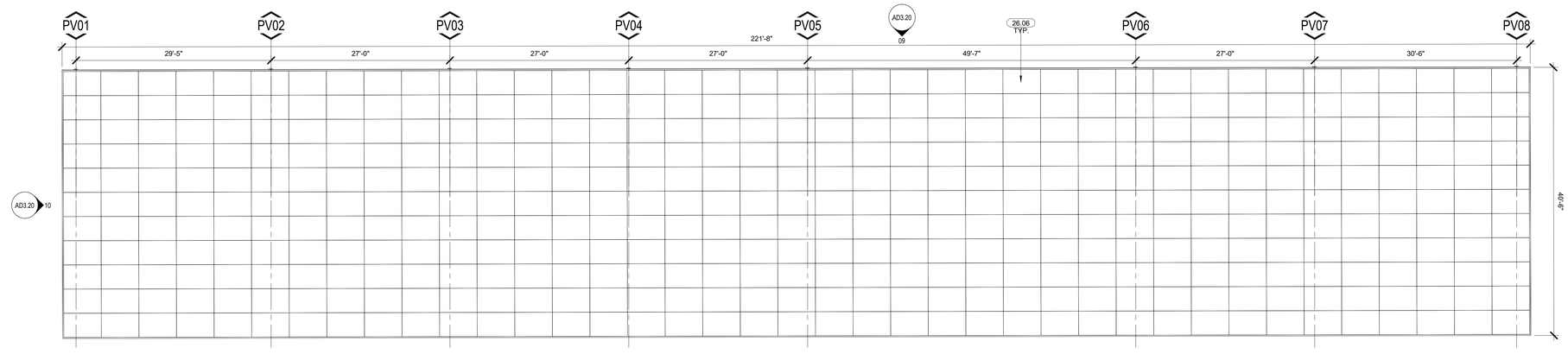
Job Number	30911
Checked By	Checker
Scale	1/8" = 1'-0"

ENLARGED TRELLIS PLANS, ELEVATIONS, SECTIONS

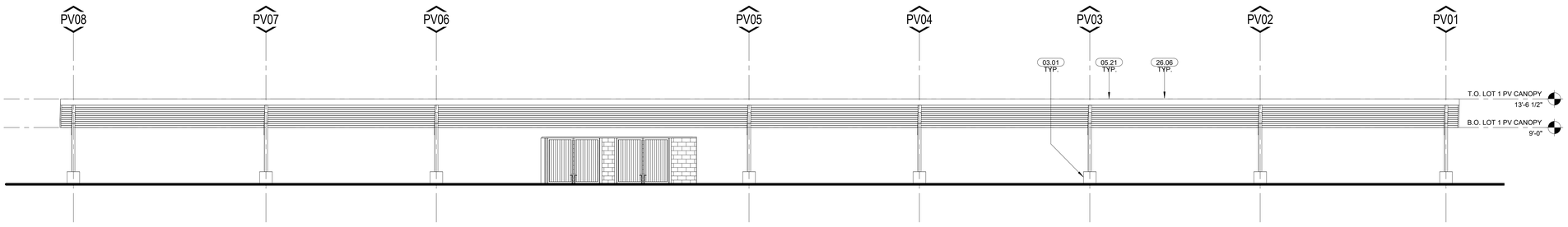
AD3.02



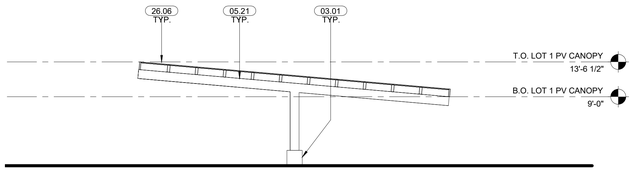
LOT 1 PV CANOPY FLOOR PLAN | 1/8" = 1'-0" | AD3.20 | 01



LOT 1 PV CANOPY ROOF PLAN | 1/8" = 1'-0" | AD3.20 | 02



LOT 1 PV CANOPY NORTH ELEVATION | 1/8" = 1'-0" | AD3.20 | 09



LOT 1 PV CANOPY WEST ELEVATION | 1/8" = 1'-0" | AD3.20 | 10

KEYNOTES

03.01	2' ROUND CONCRETE BASE
05.21	HSS TUBE STEEL PHOTO-VOLTAIC CANOPY W/ HIGH PERFORMANCE PVDF COATING
26.06	HIGH EFFICIENCY PHOTOVOLTAIC SOLAR PANELS

LEGEND

- T.O.R. — TOP OF ROOF ELEVATION
- T.O.C. — TOP OF CURB ELEVATION
- B.O.C. — BOTTOM OF CURB ELEVATION
- ? TYP. — KEYNOTE
- MASONRY WALL CONSTRUCTION
- ART WALL

GENERAL NOTES

ATTACHMENT 6
Exhibit A to the Resolution

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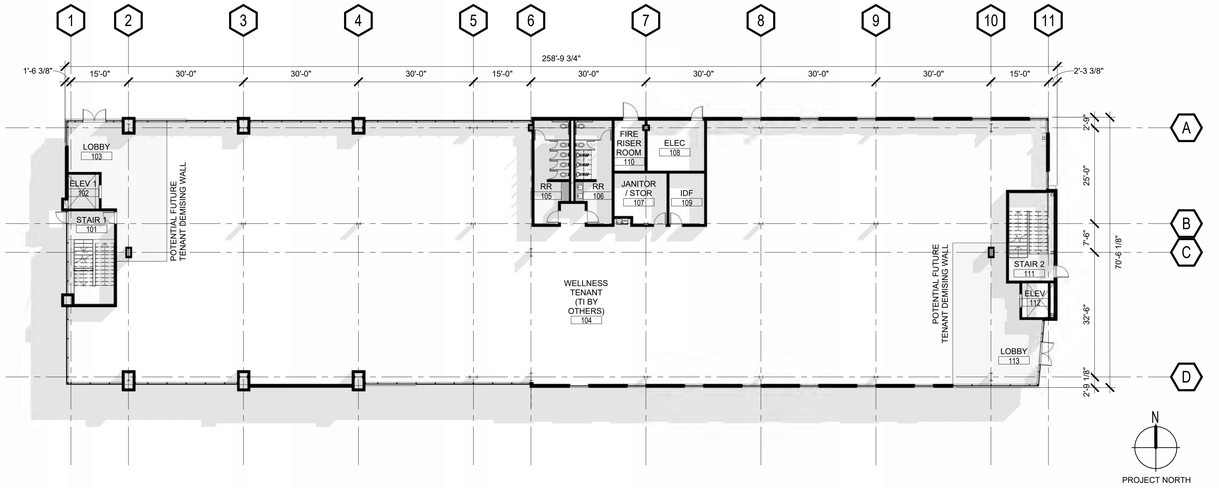
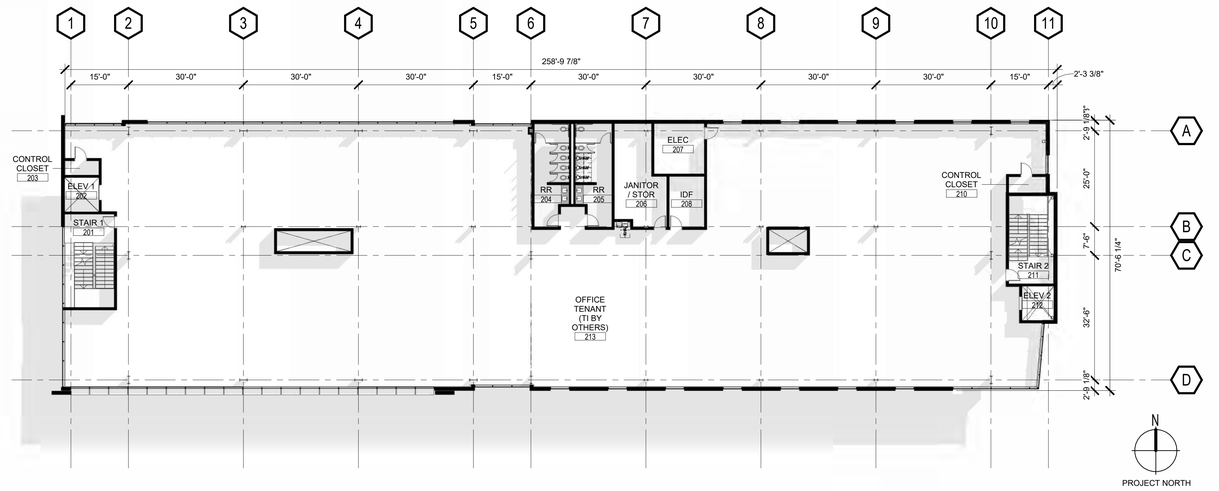
PARKING LOT 1 PV CANOPY

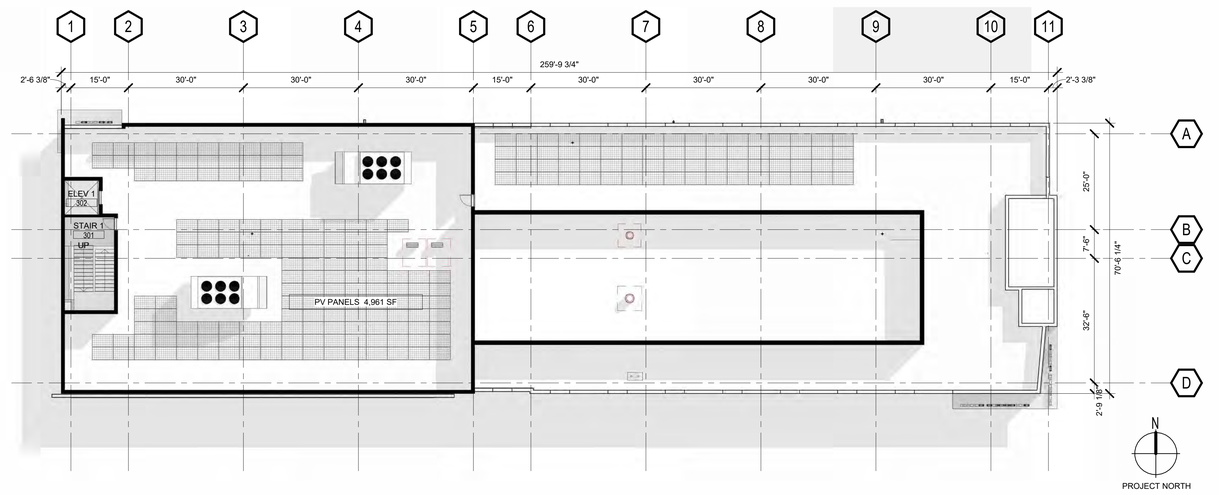
AD3.20



LEVEL 01 FLOOR PLAN | 1/16" = 1'-0" | 02 / A1-3.01 | 01



LEVEL 02 FLOOR PLAN | 1/16" = 1'-0" | 02 / A1-3.01 | 02



BUILDING ROOF PLAN | 1/16" = 1'-0" | 02 / A1-3.01 | 03

KEY PLAN



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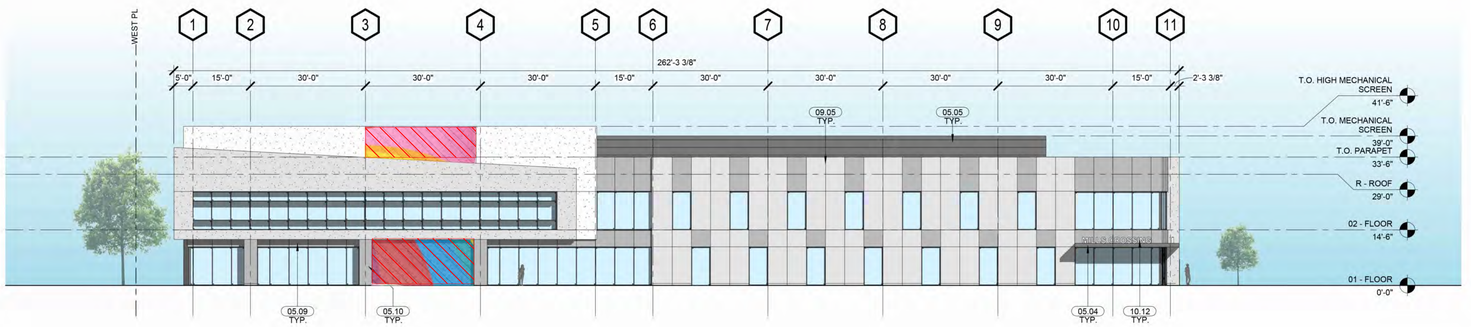
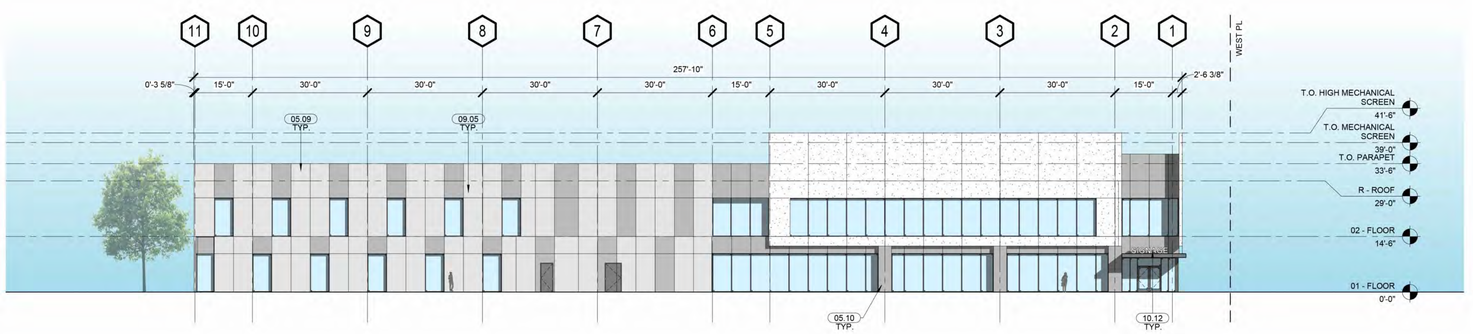
Job Number	30911
Checked By	Checker
Scale	1/16" = 1'-0"

BUILDING 01 FLOOR PLANS

AD4.00



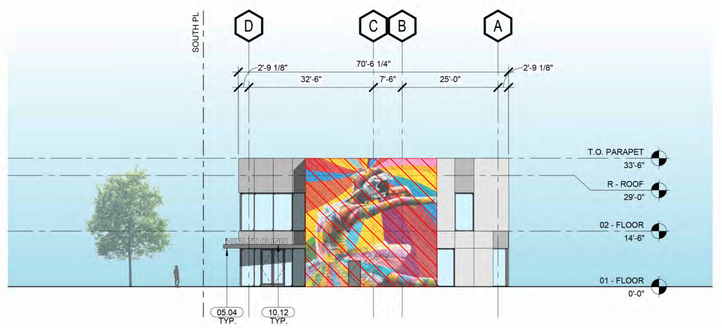
SOUTH ELEVATION | 1/16" = 1'-0" | 02 / A1-2.09 | 01



NORTH ELEVATION | 1/16" = 1'-0" | 02 / A1-2.09 | 02



WEST ELEVATION | 1/16" = 1'-0" | 02 / A1-2.09 | 04



EAST ELEVATION | 1/16" = 1'-0" | 02 / A1-2.09 | 03

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL; HIGH PERFORMANCE PVDF COATING ON STEEL.
05.05	MECHANICAL ROOF SCREEN. ALUMINUM LOUVER SCREEN SYSTEM. FINISH TO MATCH MULLIONS
05.09	ALUMINUM METAL COMPOSITE PANEL. FINISH: TBD GREY
05.10	ALUMINUM METAL COMPOSITE PANEL COLUMN ENCLOSURE
09.05	ALUMINUM METAL COMPOSITE PANEL. FINISH: TBD LIGHT GREY
09.11	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
09.13	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE. ART MURAL PAINTED BY OTHERS
10.12	PAINTED ALUMINUM CHANNEL CUT SIGNAGE; COLOR: TBD

LEGEND

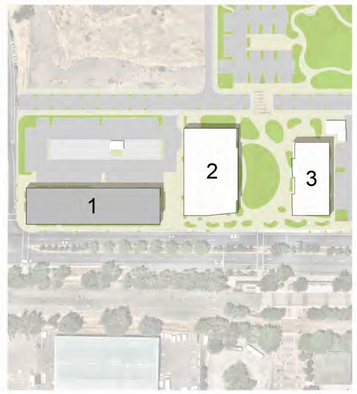
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE. ART MURAL PAINTED BY OTHERS
- METAL PANEL 01 - BASE
- METAL PANEL 02
- 1" INSULATED LOW-E HIGH PERFORMANCE VISION GLAZING (GL-1)
- DRIFT JOINT

ALL MURALS DEPICTED ARE CONCEPTUAL. FINAL MURAL CONTENT WILL BE DETERMINED BY CITY ART SELECTION PROCESS

GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. PROVIE BELOW GRADE WATERPROFFING AT ALL BUILDING AND SITE RETAINING WALLS.
3. GLAZING (1) WITHIN 24" OF EITHER SIDE OF ANY DOOR; (2) GREATER THAN 9 SQ.FT. IN AREA WITH BOTTOM EDGE LESS THAN 18" ABOVE (AND HORIZONTALLY WITHIN 36") OF A WALKING SURFACE SHALL BE SAFETY GLAZED (I.E. TEMPERED) CBC 2406).
4. SAFETY GLAZING LISED IN THE HAZARDOUS LOCATIONS INDICATED SHALL BE TESTED IN ACCORDANCE WITH CPSC CFR PART 1201 AND SHALL BE IDENTIFIED BY A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, THE MANUFACTURER'S OR INSTALLER AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES. (CBC 2406.2, CSC 2406.3).
5. FOR ROOF ELEVATIONS, SEE ROOF EDGE OF SLAB PLAN.
6. PROVIDE CONTINUOUS FIRESTOPPING AT ALL REATED WALL PENETRATIONS AND AT TOP AND BASE OF RATED WALLS. INSTALLATION SHALL CONFORM TO UL ASSEMBLIES.
7. WALL REATING SHALL CONTINUE AROUND BEAM PENETRATIONS.
8. PROVIDE FIRSTOPPING INSULATION BETWEEN EDGE OF DECK AND PERIMETER BUILDING ENVELOPE ASSEMBLY.
9. EXTERIOR WALL ASSEMBLY TO BE MIN R-21.
10. ROOF ASSEMBLY TO BE MIN R-30.

KEY PLAN



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Developed for
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Revision
Date

Job Number	30911
Checked By	Checker
Scale	

BUILDING 01 EXTERIOR ELEVATIONS

AD4.10



VIEW FROM FOLSOM CORNER

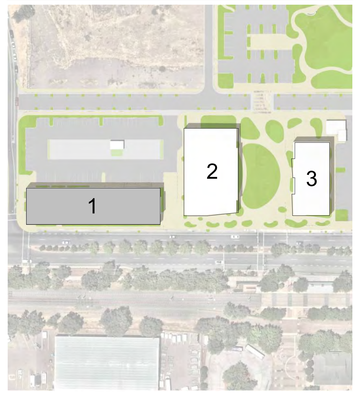


VIEW FROM PARKING LOT



VIEW FROM FOLSOM

KEY PLAN



ATTACHMENT 6
Exhibit A to the Resolution

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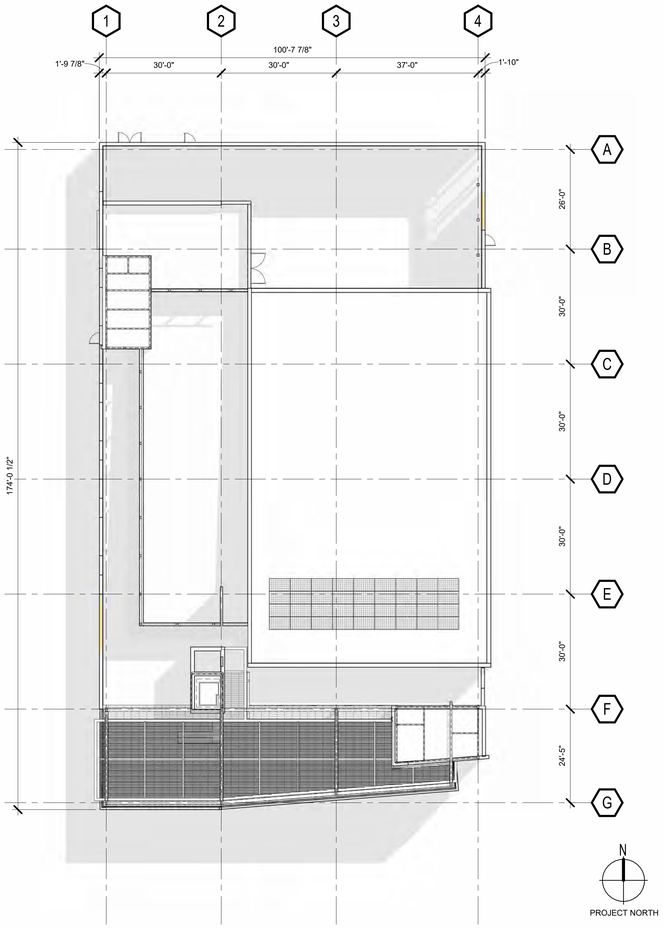
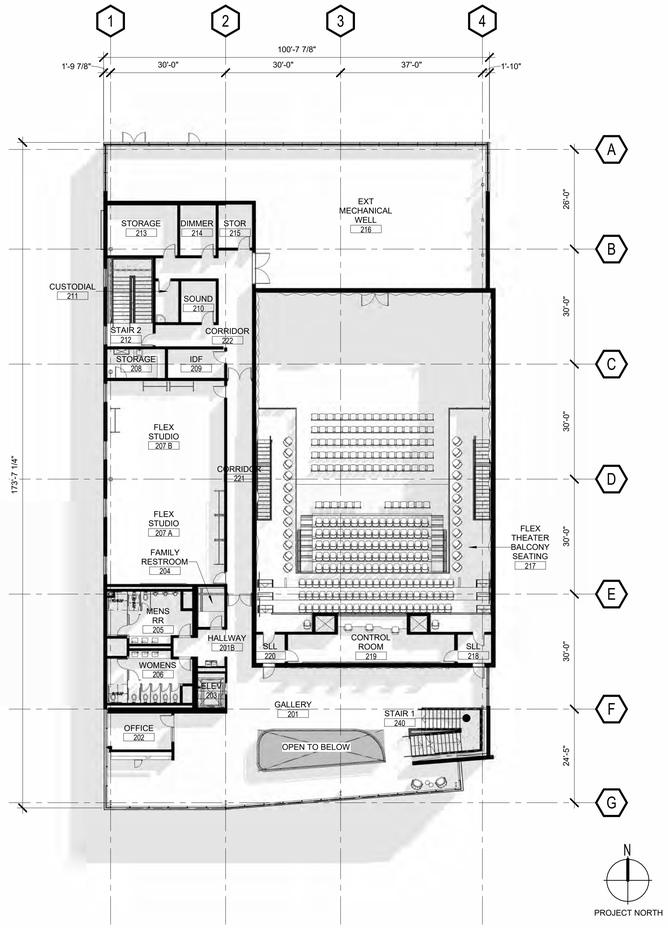
Scale	

BUILDING 01
RENDERINGS

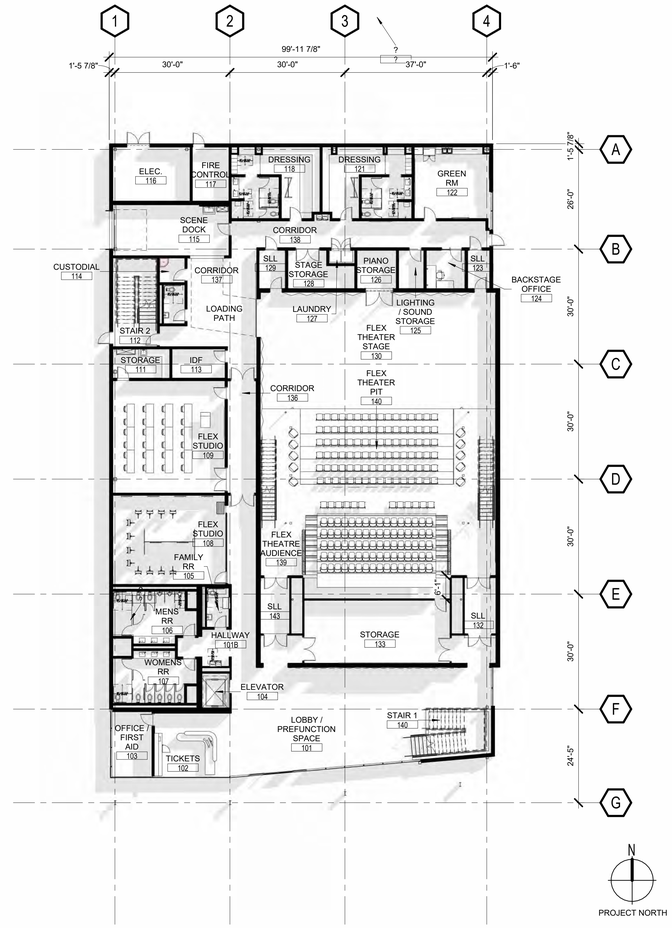
AD4.20



ROOF LEVEL PLAN | 1/16" = 1'-0" | AD5.00 | 03

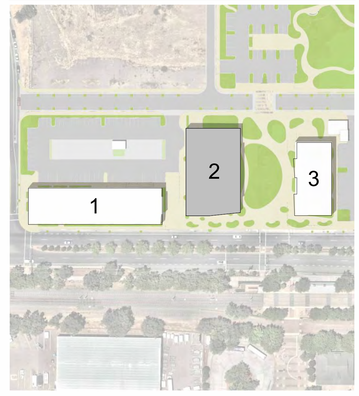


LEVEL 02 FLOOR PLAN | 1/16" = 1'-0" | AD5.00 | 02



LEVEL 01 FLOOR PLAN | 1/16" = 1'-0" | AD5.00 | 01

KEY PLAN



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Scale	

BUILDING 02 FLOOR PLANS

AD5.00



VIEW FROM FOLSOM



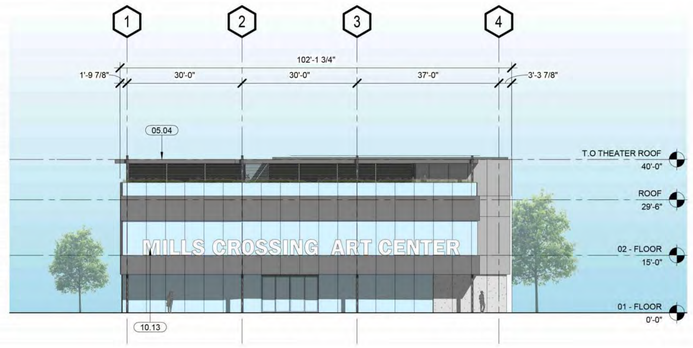
VIEW FROM FOLSOM



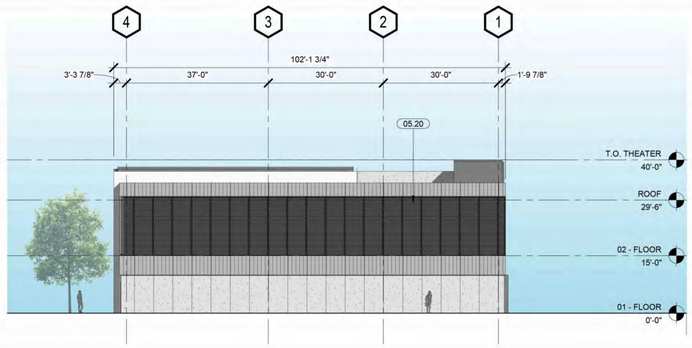
VIEW FROM FOLSOM



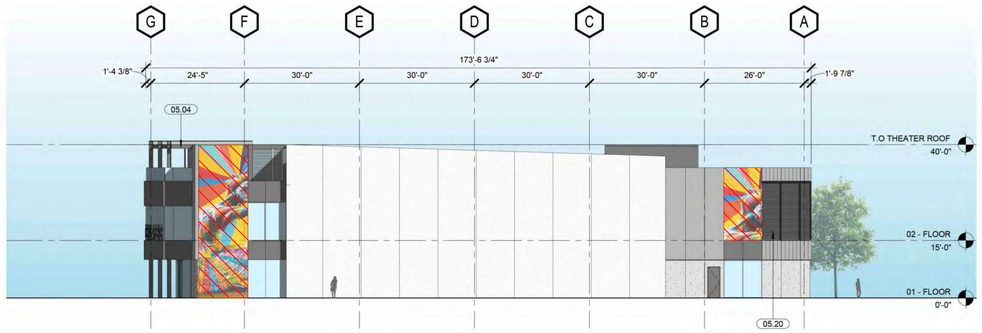
VIEW FROM PARKING LOT



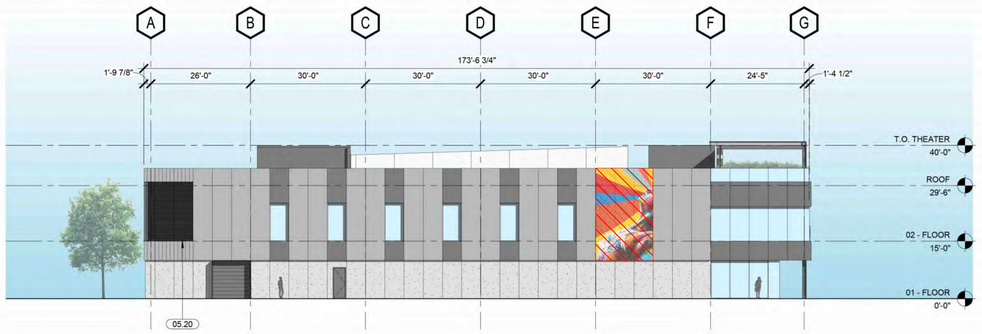
SOUTH ELEVATION 1/16" = 1'-0" AD5.10 01



NORTH ELEVATION 1/16" = 1'-0" AD5.10 02



EAST ELEVATION 1/16" = 1'-0" 05 / A2-2.21 03



WEST ELEVATION 1/16" = 1'-0" 05 / A2-2.21 04

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL, HIGH PERFORMANCE PVDF COATING ON STEEL
05.20	ACOUSTIC ALUMINUM LOUVER SCREEN
10.13	CERAMIC FRITT GRAPHIC SIGNAGE

LEGEND

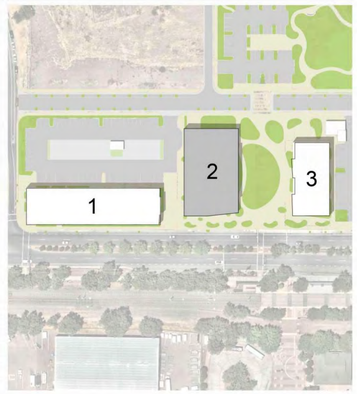
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS
- METAL PANEL 01 - BASE
- METAL PANEL 02
- 1" INSULATED HIGH PERFORMANCE LOW-E VISION GLAZING (GL-1)
- METAL WALL PANELS WITH RIBBED PROFILE, VERTICAL ORIENTATION,
- DRIFT JOINT

ALL MURALS DEPICTED ARE CONCEPTUAL. FINAL MURAL CONTENT WILL BE DETERMINED BY CITY ART SELECTION PROCESS

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-____.
2. ROOF ASSEMBLY TO BE MIN R-____.

KEY PLAN



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MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670
Developed for
GRIFFIN | SWINERTON

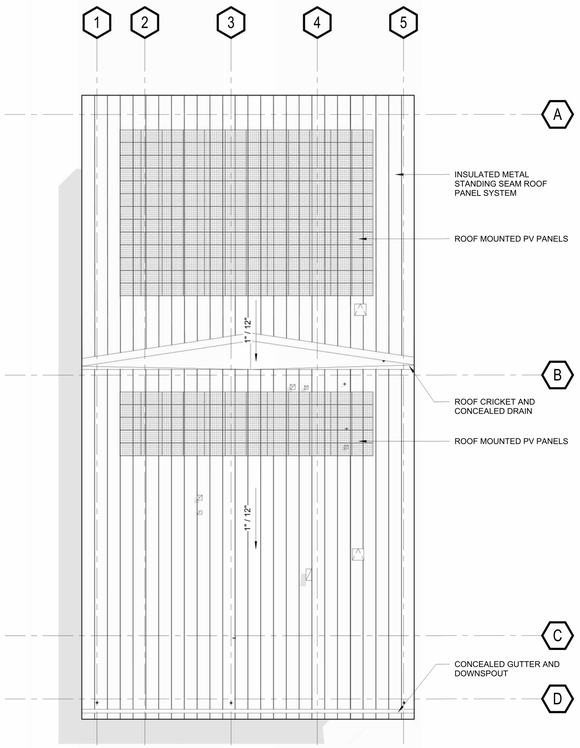
Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/13/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Revision / Date

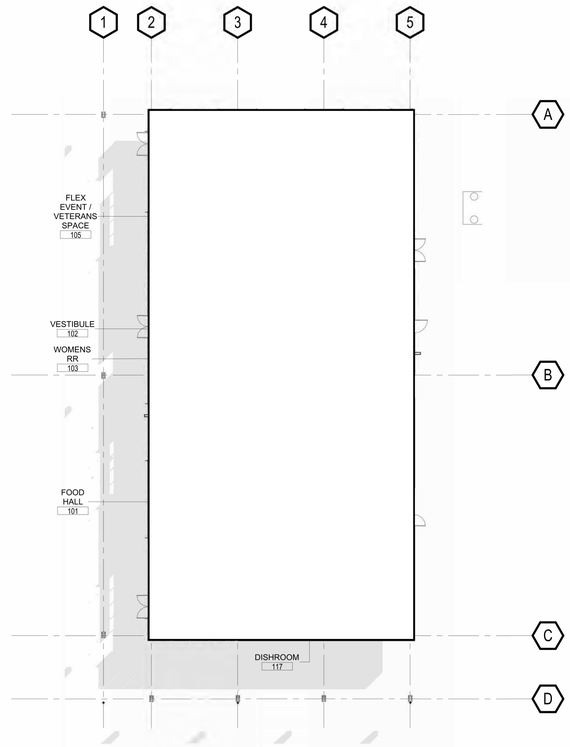
Job Number	30911
Checked By	Checker
Scale	As indicated

BUILDING 02 EXTERIOR ELEVATIONS + RENDERINGS

AD5.10



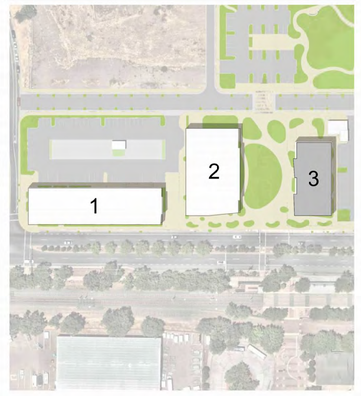
ROOF LEVEL PLAN | 1/16" = 1'-0" | AD6.00 | 02



FIRST LEVEL FLOOR PLAN | 1/16" = 1'-0" | AD6.00 | 01

PROJECT NORTH

KEY PLAN



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10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670

Developed for
GRIFFIN | SWINERTON

Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	1/16" = 1'-0"

BUILDING 03 FLOOR PLANS

AD6.00



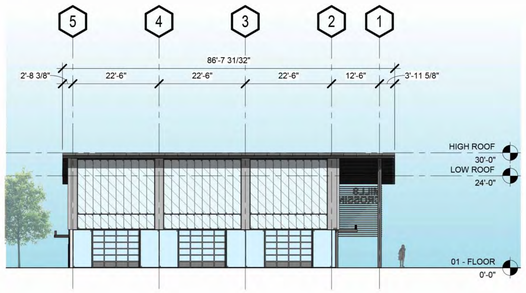
VIEW FROM PLAZA



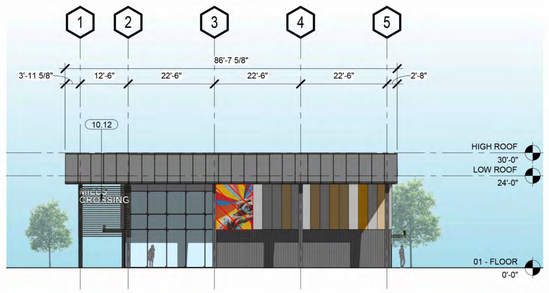
VIEW FROM FOLSOM



VIEW FROM FOLSOM



NORTH ELEVATION 1/16" = 1'-0" | 05 / A3-2.01 | 02



SOUTH ELEVATION 1/16" = 1'-0" | 05 / A3-2.01 | 01



WEST ELEVATION 1/16" = 1'-0" | AD6.10 | 03



EAST ELEVATION 1/16" = 1'-0" | AD6.10 | 04

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL, HIGH PERFORMANCE PVDF COATING ON STEEL
10.12	PAINTED ALUMINUM CHANNEL CUT SIGNAGE, COLOR: TBD

ALL MURALS DEPICTED ARE CONCEPTUAL. FINAL MURAL CONTENT WILL BE DETERMINED BY CITY ART SELECTION PROCESS

LEGEND

- METAL 01- BASE
  INSULATED METAL WALL PANELS, 30" WIDE, VERTICAL ORIENTATION
- METAL 02- ACCENT
  INSULATED METAL WALL PANELS WITH RIBBED PROFILE, 30" WIDE, VERTICAL ORIENTATION.
- TRANSLUCENT WALL PANELS, 24" WIDE KINGSPAN UNIQUAD
- STANDING SEAM INSULATED METAL ROOF PANELS, 48" WIDE
- INSULATED LOW-E VISION GLAZING (GL-1)
- DRIFT JOINT

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-_____.
2. ROOF ASSEMBLY TO BE MIN R-_____.

KEY PLAN



GRIFFIN SWINERTON

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Developed for
GRIFFIN | SWINERTON

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Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
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ENTITLEMENT SUBMITTAL #4	09/10/2025

Job Number	30911
Checked By	Checker
Scale	As indicated

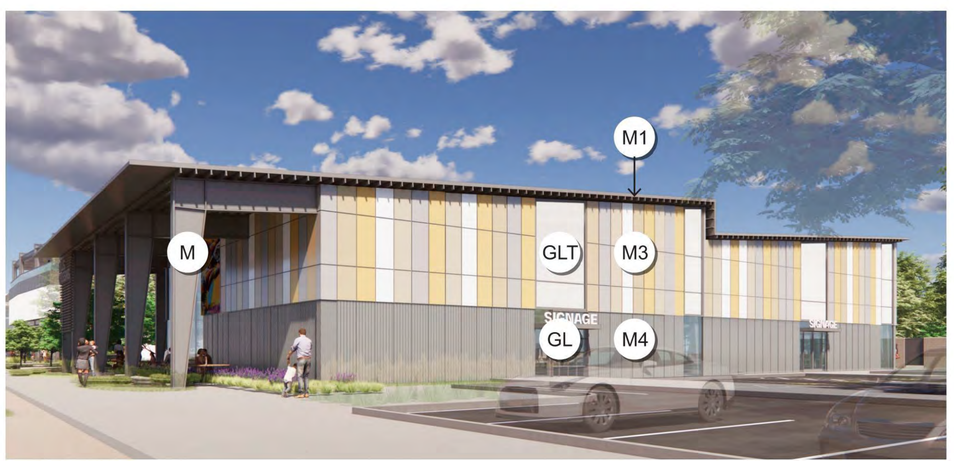
BUILDING 03 EXTERIOR ELEVATIONS + RENDERINGS

AD6.10









PLASTERS



PLASTER
BASE COLOR
SW 7005 'PURE WHITE'



PLASTER
ACCENT COLOR
SW 0055 'LIGHT FRENCH GRAY'



ART WALL - PLASTER BASE

ALL MURALS DEPICTED ARE CONCEPTUAL. FINAL MURAL CONTENT WILL BE DETERMINED BY CITY ART SELECTION PROCESS

METALS



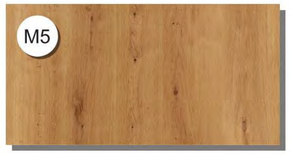
METAL PANEL
BASE COLOR
ALUCOBOND CHAMPAGNE
METALLIC / AWIP TUNDRA GREY



INSULATED METAL PANEL
COLOR ACCENTS
ALL WEATHER INSULATED PANELS



METALS
PPG BEACHSTONE GRAY METALLIC



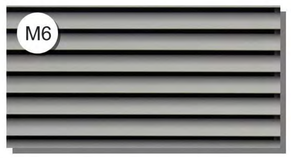
ALUMINUM LOUVERS w/
WOOD LOOK FINISH
FORTINA VENT WALNUT N



METAL PANEL
ACCENT COLOR
ALUCOBOND BEACHSTONE GRAY
METALLIC



INSULATED METAL PANEL
CORRUGATED METAL FINISH
COLOR TO MATCH AWIP TUNDRA
GREY



METAL LOUVER SCREEN
COLOR TO MATCH 'M'

GLAZING



GLASS - NEUTRAL TINT
HIGH PERFORMANCE LOW-E
VIRACON VE3-2M



KINGSPAN UNIQUAD WALL
SYSTEM

GRIFFIN SWINERTON

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10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670

Developed for
GRIFFIN | SWINERTON

Revision Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	As indicated

MATERIAL BOARD

AD7.00

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MILLS CROSSING
ENTITLEMENT SUBMITTAL

12/19/24

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670



LANDSCAPE PACKAGE

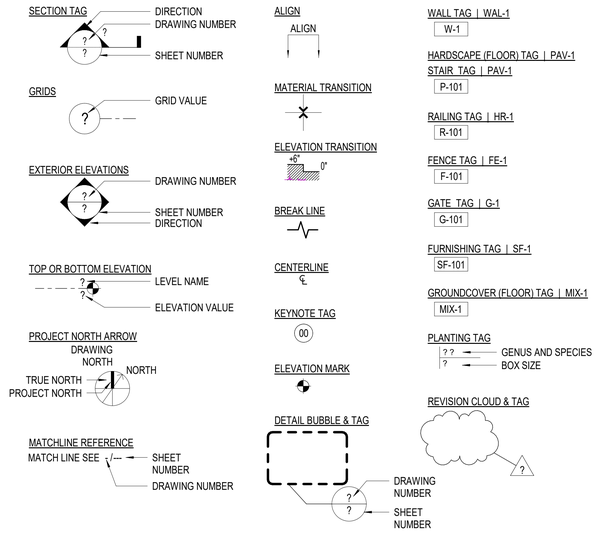
COVER SHEET

AD0.00

ABBREVIATIONS

KEY	TERM	KEY	TERM	KEY	TERM	KEY	TERM	KEY	TERM
#	NUMBER	CONC	CONCRETE	GA	GAUGE	N.T.S.	NOT TO SCALE	SHT	SHEET
&	AND	COND	CONDITION	GAL	GALLON	N/A	NOT APPLICABLE	SIM	SIMILAR
(E)	EXISTING	CONST	CONSTRUCTION	GALV	GALVANIZED	NO	NUMBER	SPAC	SPACE(SPACING)
(N)	NEW	CONT	CONTINUOUS	GL	GLASS	O.C.	ON CENTER	SPEC	SPECIFICATION
15G	GALLON SIZE - TREE	CTR	CENTER	GRD	GROUND	O.D.	OUTSIDE DIAMETER	SQ	SQUARE
24"	BOX SIZE - TREE	CTSK	COUNTERSINK	GYP	GYPSUM	O.F.D.	OVER FLOW DRAIN	ST.STL	STAINLESS STEEL
@	AT	D.D.	DECK DRAIN	H	HIGH	O.H.	OVER HEAD	STL	STEEL
A.	ACRE			H.B.	HOSE BIB	O/	OVER	STN	STAIN(ED)
A.C.	ASPHALTIC CONCRETE	DBL	DOUBKLE	H.P.	HIGH PERFORMANCE	OBS	OBSCURED	STOR	STORAGE
A.D.	AREA DRAIN	DIAM	DIAMETER	HDR	HEADER	OPER	OPER(ATION)(ABLE)	STRUCT	STURCTUR(E)(AL)
A.F.F.	ABOVE FINISH FLOOR	DIM	DIMENSION	HDWR	HARDWARE	OPNG	OPENING	SUSP	SUSPENDED
A/C	AIR CONDITIONING	DIVS	DIVISIONS	HORIZ	HORIZONTAL	OPP	OPPOSITE	SYM	SYMMETRICAL
ADJ.	ADJUSTABLE or ADJACENT	DN	DOWN	HR	HOUR	P-LAM	PLASTIC LAMINATE	T&G	TONGUE AND GROOVE
AGG.	AGGREGATE	DRWR	DRAWER	HT	HEIGHT	P.A.	PLANTING AREA	T	TREAD
ALT	ALTERNATE	DS	DOWNSPOUT	HVAC	HEATING VENTILATING & AIR CONDITIONING	P.C.C.	PRECAST CONCRETE	T.C.	TOP OF CURB
ALUM	ALUMINUM	DTL	DETAIL			P.I.P.	POURED IN PLACE	T.D.D.	TOP OF DECK DRAIN
APPROX	APPROXIMATE(LY)	DWG	DRAWING	I.D.	INSIDE DIAMETER	P.L.	PROPERTY LINE	T.O.	TOP OF
ARCH	ARCHITECT(URAL)	E	EAST	I.E.	INVERT ELEVATION	P.O.C.	POINT OF CONNECTION	T.P.	TOP OF PAVING
AUTO	AUTOMATIC	E.J.	EXPANSION JOINT	INT.	INTEGRAL	P.S.I.	POUNDS PER SQUARE INCH	T.S.	TOP OF STAIRS
B.S.	BOTTOM OF STEP	EA	EACH	INV	INVERT	PERF	PERFORATED	T.W.	TOP OF WALL
B.T.	BROWN TRUNK	EL	ELEVATION	J.BOX	JUNCTION BOX	PLAS	PLASTER	TBD	TO BE DETERMINED
B.W.	BOTTOM OF WALL	ELEC	ELECTRIC(AL)	JT		PLYWD	PLYWOOD	TEMP	TEMPERED
BD	BOARD	ENG.	ENGINEER	L	LENGTH	PROJ	PROJECT	TERM	TERMINATION
BLDG	BUILDING	EQ	EQUAL	L.A.	LANDSCAPE ARCHITECT	PT(D)	PAINT(ED)	THK	THICK
BLKG	BLOCKING	EQUIP	EQUIPMENT	L.P.	LOW POINT	PVC	POLYVINYL CHLORIDE	THRES	THRESHOLD
BM	BEAM	EXP	EXPANSION	LAM	LAMINATE(D)	R	RADIUS	TYP	TYPICAL
BTWN	BETWEEN	EXT	EXTERIOR	LAV	LAVATORY	R.O.	ROUGH OPENING	U.B.C.	UNIFORM BUILDING CODE
BYD	BEYOND	F.F.	FINISH FLOOR	M.B.	MACHINE BOLT	RCP	REFLECTED CEILING PLAN	U.N.O.	UNLESS OTHERWISE NOTED
C.A.B.	COMPOSITE AGGREGATE BASE	F.F.E.	FINISH FLOOR ELEVATION	M.E.	MECHANICAL ENGINEER	REBAR	REINFORCING BAR	V.I.F.	VERIFY IN FIELD
C.B.	CATCH BASING	F.G.	FINISH GRADE	M.H.	MAN HOLE	REF	REFER(ENCE)	VCT	VINYL COMPOSITE TILE
C.F.	CUBIC FOOT	F.H.	FIRE HYDRANT	MATL	MATERIAL	REQ(D)	REQUIRED	VEN	VENEER
C.I.P.	CAST IN PLACE	F.O.S.	FACE OF STUD	MAX	MAXIMUM	RM	ROOM	VERT	VERTICAL
C.J.	COLD JOINT	F.O.W.	FACE OF WALL	MECH	MECHANICAL	RWD	REDWOOD	W	WEST or WIDTH
C.L.	CENTER LINE	F.R.	FIRE RATED	MED.	MEDIUM	S	SOUTH	W.C.	WATER CLOSET
CAB	CABINET	F.S.	FINISH SURFACE	MFR	MANUFACTURER	S.E.R.	SOIL ENGINEER'S REPORT	W.H.	WATER HEATER
CEM	CEMENT(ITOUS)	FDN	FOUNDATION	MIN	MINIMUM	S.F.	SQUARE FEET or FOOT	W.P.	WATER PROOFING
CLG	CEILING	FIN	FINISH	MISC	MISCELLANEOUS	S.L.	SCORE LINE	W/	WITH
CLO	CLOSET	FLR	FLOOR	MTL	METAL	SCHED	SCHEDULE	W/O	WITHOUT
CLR	CLEAR(ANCE)	FR	FRAME	MULTI	MULTI-TRUNK	SCW	SOLID CORE WOOD	WD	WOOD
CMU	CONCRETE MASONRY UNIT	FT	FEET or FOOT	N	NORTH	SECT	SECTION		
COL	COLUMN	FTG	FOOTING	N.I.C.	NOT IN CONTRACT	SGL	SINGLE		

SYMBOLS



MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670

NOT FOR CONSTRUCTION

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CONTACTS: ERICK PULIDO
E-MAIL: epulido@lpadesignstudios.com

PROJECT DATA

PROJECT NAME: MILLS CROSSING

PROJECT DESCRIPTION: 10-ACRE MIXED-USE TRANSIT-ORIENTED DEVELOPMENT WITH APPROX. 2 ACRES OF OPEN SPACE / LANDSCAPE

SHEET INDEX

SHEET LIST LANDSCAPE

SHEET NO.	SHEET NAME	ENTITLEMENT RESUBMITTAL 08/23/2024	ENTITLEMENT RESUBMITTAL 12/19/2024	ENTITLEMENT RESUBMITTAL 02/10/2025
L0.00	COVER SHEET	•	•	•
L1.10	ILLUSTRATIVE PLAN	•	•	•
L1.11	OVERALL SITE PLAN	•	•	•
L2.10	OVERALL HARDSCAPE PLAN AND SCHEDULE	•	•	•
L3.00	SIDEWALK SECTIONS	•	•	•
L3.01	SIDEWALK SECTIONS	•	•	•
L4.20	SITE ELEVATIONS	•	•	•
L5.10	PAVING AND EDGE DETAILS	•	•	•
L6.00	IRRIGATION LEGEND AND NOTES		•	•
L6.10	IRRIGATION OVERALL PLAN		•	•
L7.00	PLANTING NOTES AND SCHEDULES	•	•	•
L7.01	HYDROZONE PLAN	•	•	•
L7.10	PLANTING PLAN	•	•	•
L8.10	PEDESTRIAN PLAN	•	•	•
L8.11	PEDESTRIAN PLAN SPECIFICATIONS	•	•	•

ATTACHMENT 6
Exhibit A to the Resolution

GRIFFIN SWINERTON

LPA
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7/31/25
Renewal Date
Date
STATE OF CALIFORNIA

MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670
Developed for
GRIFFIN | SWINERTON

Revision / Date

Submittal / Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
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COVER SHEET

L0.00



VIEW OF PROJECT GREEN FROM SOUTH ENTRANCE



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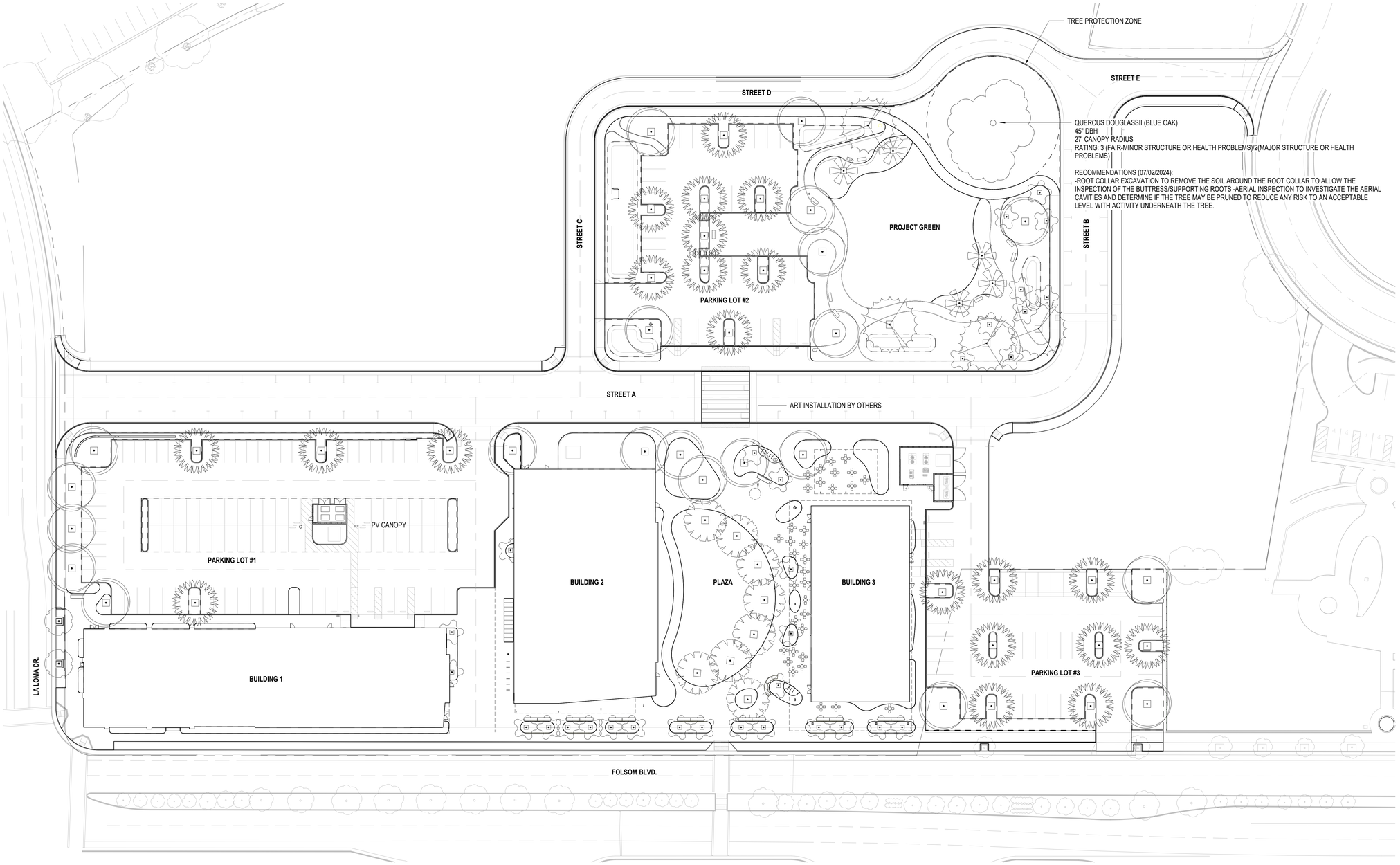
ILLUSTRATIVE PLAN

L1.10



OVERALL SITE PLAN 1
1" = 30'-0"

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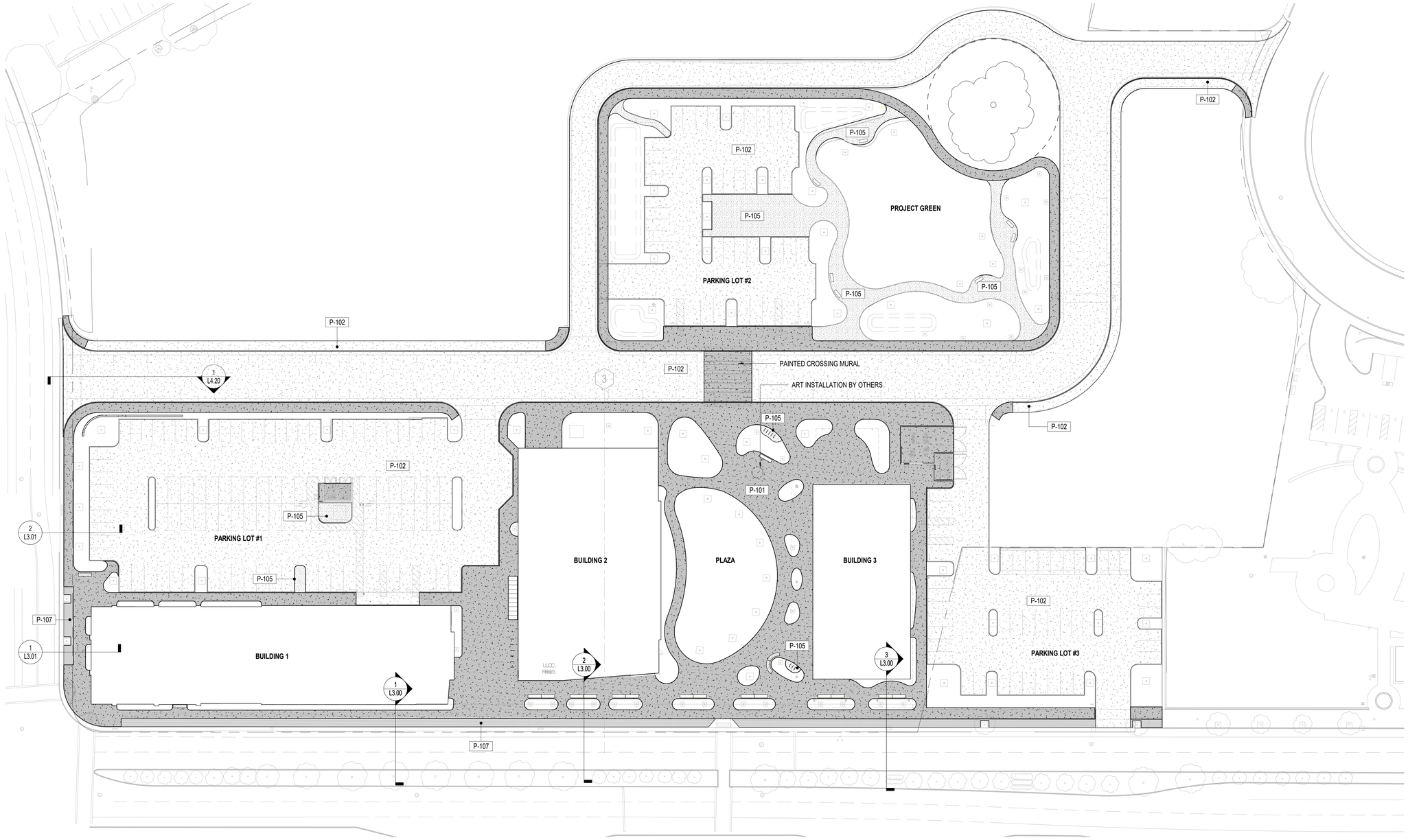
Scale	1" = 30'-0"

OVERALL SITE PLAN

PAVING SCHEDULE

KEY	DESCRIPTION	DETAIL	MANUFACTURER	NOTES	COLOR	FINISH
	P-101 CIP CONCRETE PAVING	1/L5.10		FINISH TO BE DETERMINED	TBD	TBD
	P-102 ASPHALT PAVING					
	P-105 COLORED CONCRETE	2/L5.10		LOCAL SOURCE	TBD	
	P-107 CONCRETE PAVERS	3/L5.10		MATCH EXISTING ON FOLSOM BLVD		



DRAWING NORTH
NORTH 1" = 30'-0"
0 30 60 FEET

OVERALL HARDSCAPE PLAN 1
1" = 30'-0"

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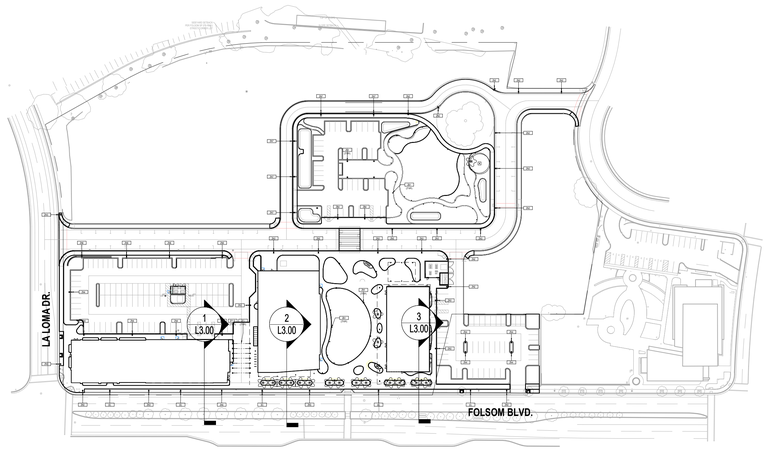
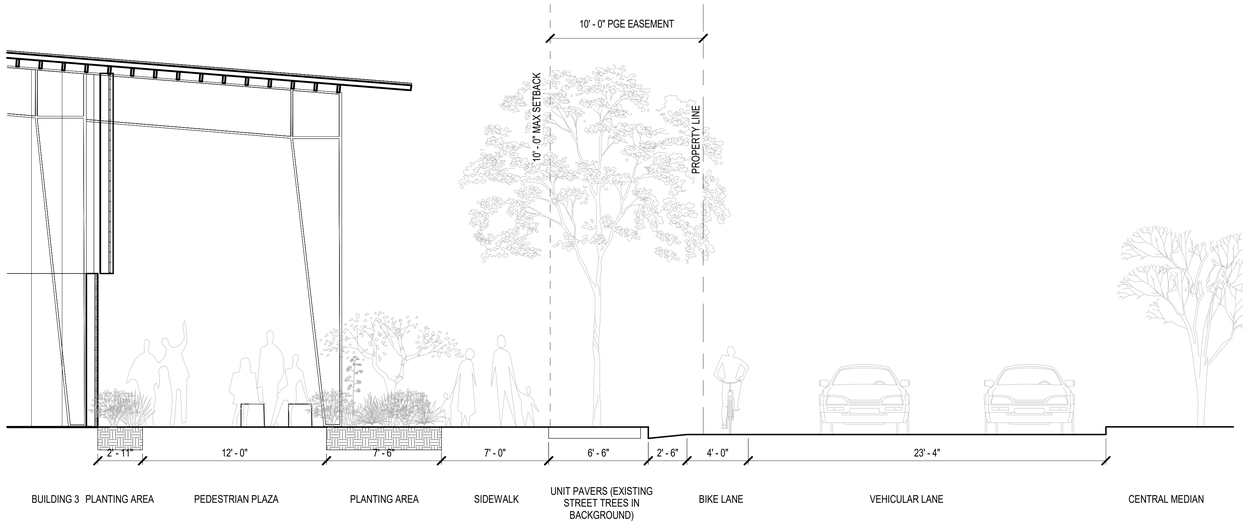
OVERALL HARDSCAPE PLAN AND SCHEDULE

L2.10



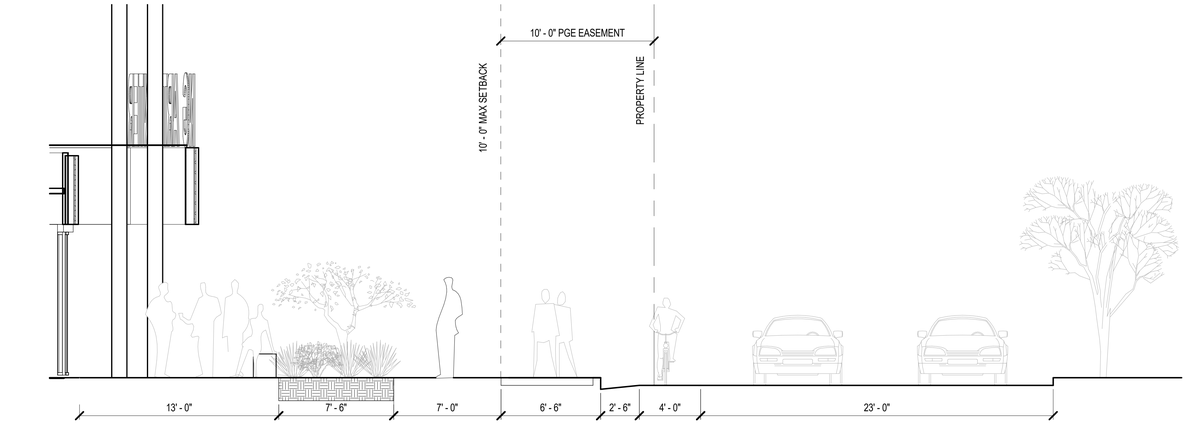
KEY PLAN 4

1" = 100'-0"



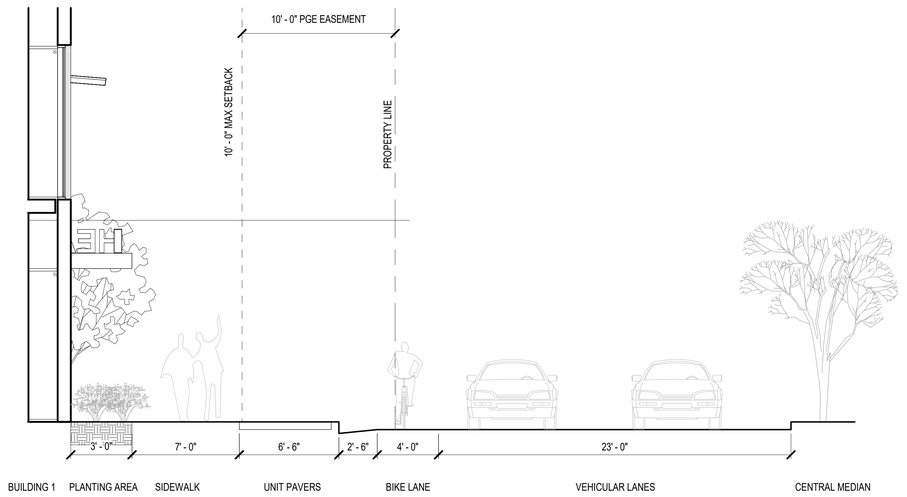
FOLSOM BOULEVARD SIDEWALK SECTION AT BUILDING 3 3

1/4" = 1'-0"



FOLSOM BOULEVARD SIDEWALK SECTION AT BUILDING 2 2

1/4" = 1'-0"



FOLSOM BOULEVARD SIDEWALK SECTION AT BUILDING 1 1

1/4" = 1'-0"

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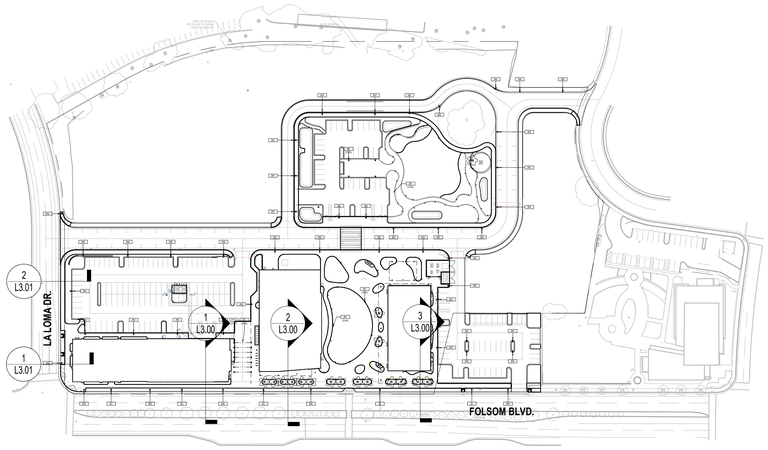
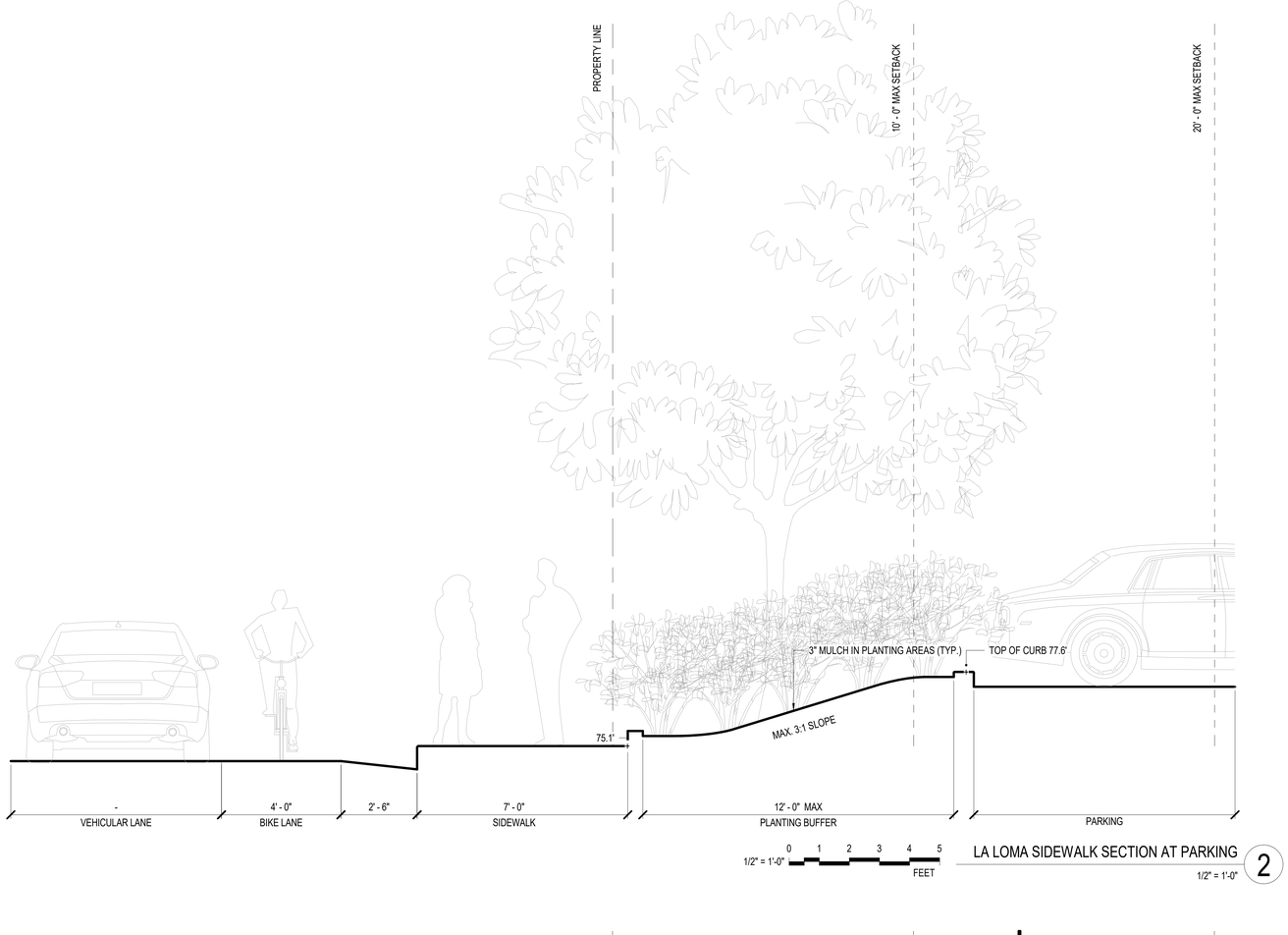
SIDEWALK SECTIONS

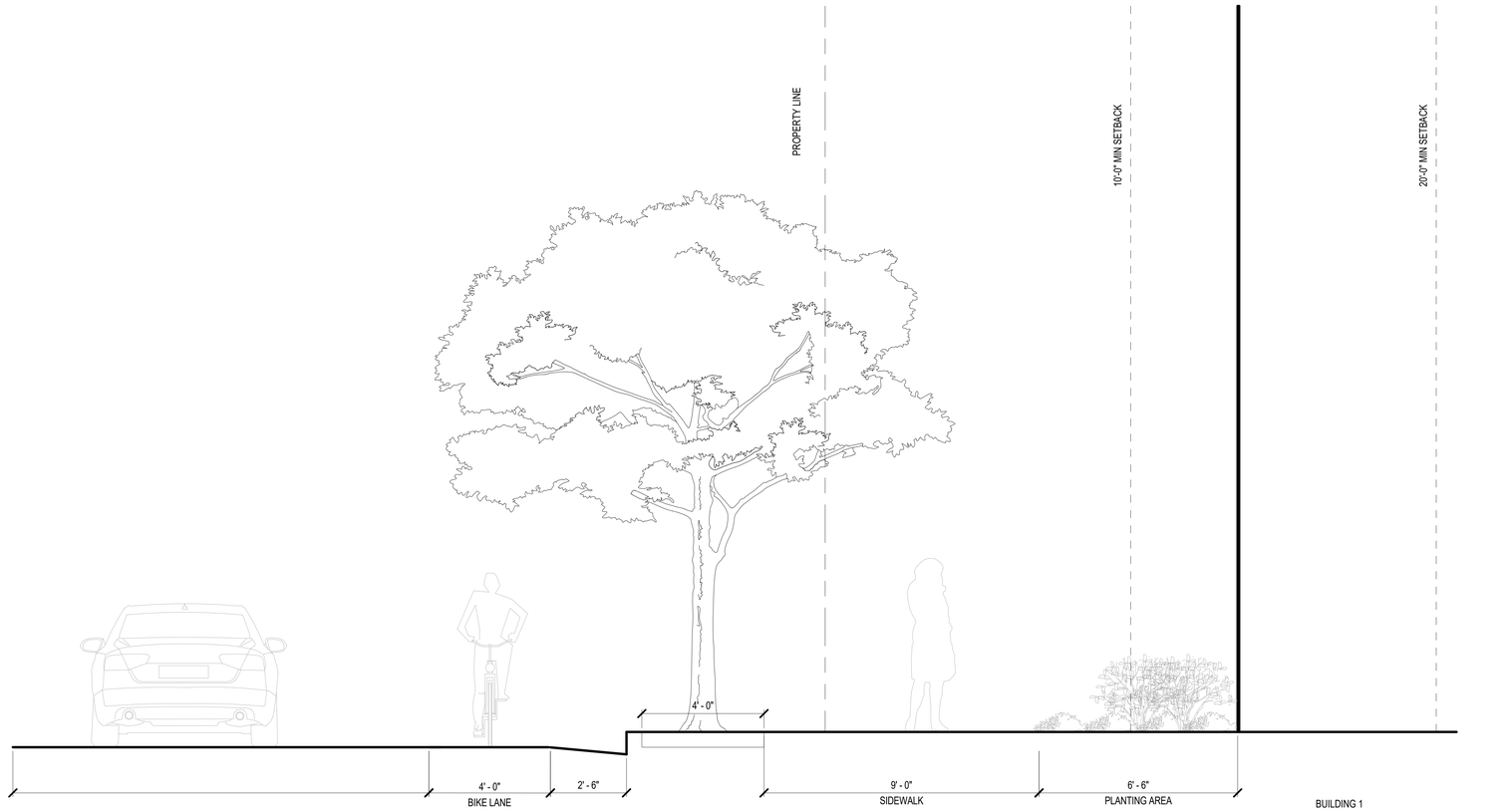
L3.00





LA LOMA SIDEWALK SECTION AT PARKING 2

1/2" = 1'-0"



LA LOMA SIDEWALK SECTION AT BUILDING 1 1

1/2" = 1'-0"

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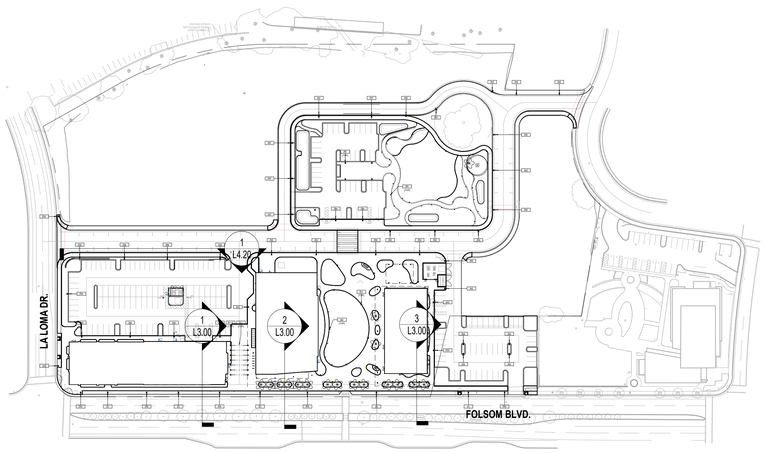
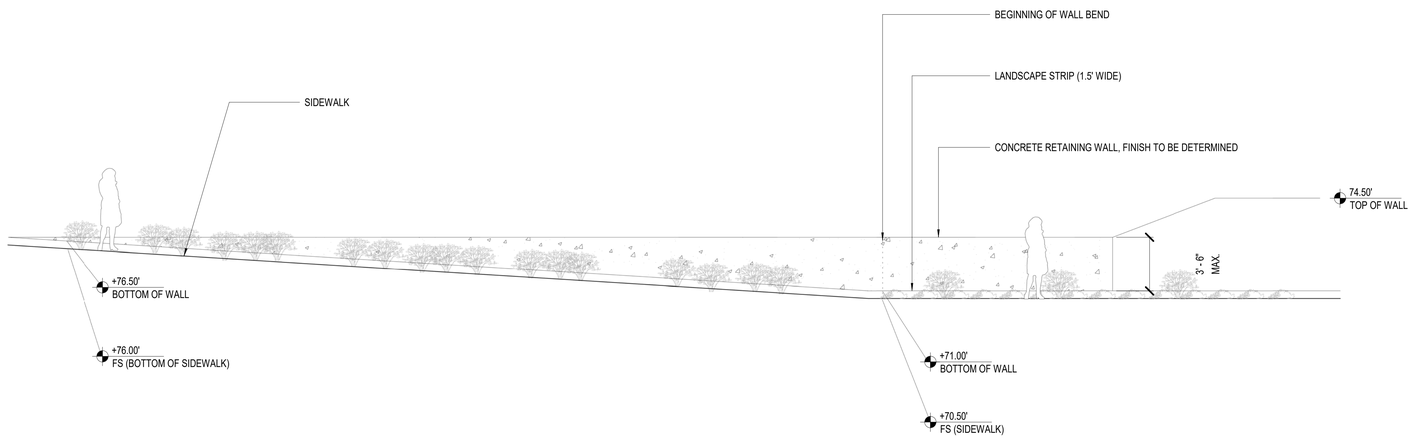
SIDEWALK SECTIONS

L3.01





1/4" = 1'-0" 0 2 4 6 8 10 FEET

STREET A - SOUTH RETAINING WALL ELEVATION 1

1/4" = 1'-0"

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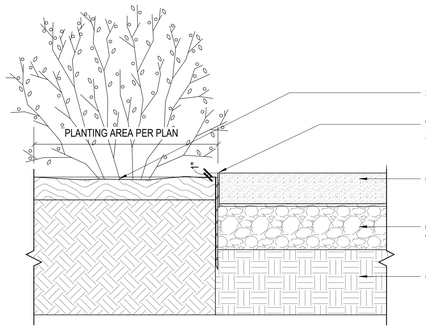
SITE ELEVATIONS

L4.20

NOTES:
1. REFER TO HARDSCAPE SCHEDULE AND SPECIFICATONS FOR MATERIAL REQUIREMENTS.
2. SEE CIVIL DWGS. FOR FINISH GRADING AND DRAINAGE.
3.
4.

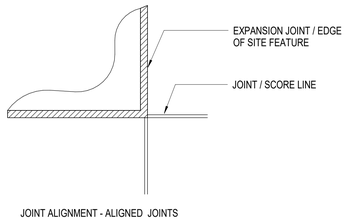


SURFACING 2
1 1/2" = 1'-0"

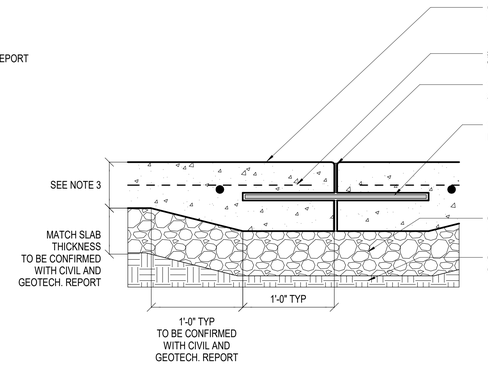


TREE GRATE, TYP. TO MATCH EXISTING 5
NOT TO SCALE

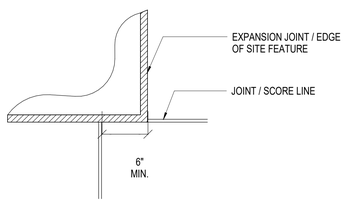
NOTE:
1. ALIGN JOINTS AND SCORE LINES WITH CORNERS OF SITE FEATURES. WHEN NOT FEASIBLE, OFFSET THE ALIGNMENT AT LEAST 6".
2. REFER TO CIVIL DRAWINGS FOR FINISH GRADES UNLESS NOTED OTHERWISE.
3. PROVIDE 4" SLABS AT PEDESTRIAN AREAS AND 6" SLABS AT VEHICULAR AREAS.TO BE CONFIRMED WITH CIVIL AND GEOTECH. REPORT
4. PROVIDE 1/4" RADIUS AT SLAB EDGES



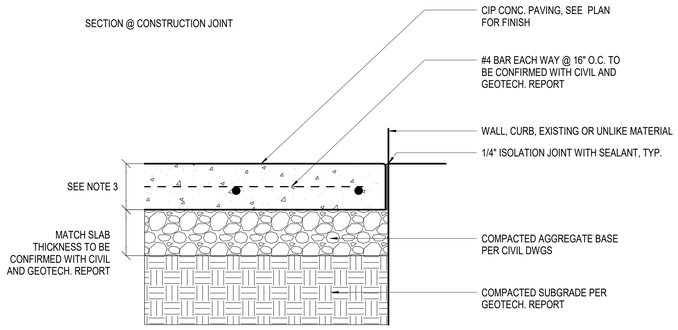
JOINT ALIGNMENT - ALIGNED JOINTS



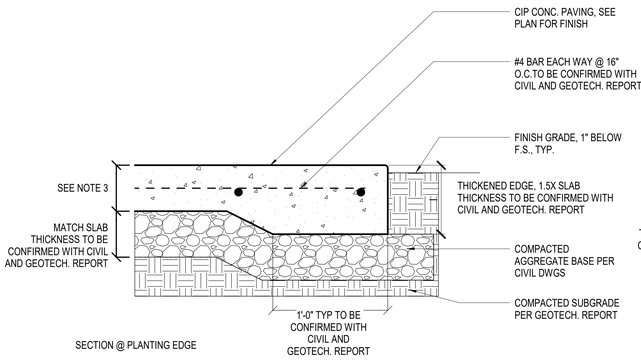
SECTION @ CONSTRUCTION JOINT



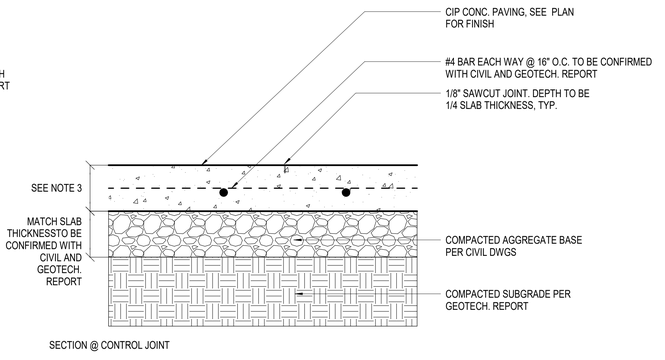
JOINT ALIGNMENT - OFFSET JOINTS



SECTION @ ISOLATION JOINT



SECTION @ PLANTING EDGE

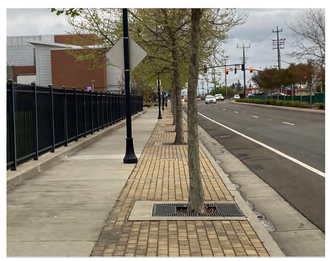


SECTION @ CONTROL JOINT

C.I.P. REGULAR CONRETE PAVING 1
1 1/2" = 1'-0"



PAINTED MURAL, TYP. 4
NOT TO SCALE



CONCRETE PAVERS - FOLSOM STREETSCAPE TO MATCH EXISTING 3
NOT TO SCALE

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PAVING AND EDGE DETAILS

L5.10

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
9. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
10. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
11. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
12. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
13. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.
14. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. SWEENEY AND ASSOCIATES RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.
15. THE CONTRACTOR IS REQUIRED TO CONTACT DIGALERT OR 811 A MINIMUM OF TWO (2) DAYS PRIOR TO THE START OF ANY EXCAVATIONS ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG TO START A PROJECT TICKET. DIGALERT AND 811 IS A FREE SERVICE PROVIDED TO THE PROJECT. FAILURE TO CONTACT AND HAVE THE EXISTING UTILITIES IDENTIFIED, LOCATED AND MARKED SHALL MAKE THE CONTRACTOR SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES.

PRELIMINARY WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package

Project Name: Mills Crossing

Project Address: 10179 Folsom Blvd, Rancho Cordova, CA 95670

sweeney + associates — IRRIGATION DESIGN AND CONSULTING

Reference Evapotranspiration (ETo) 51.9 In./Yr. **Residential Project?** No

Hydrozone # / Planting Description[a]	Plant Factor	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF / IE)	Landscape Area (Sq. Ft.)	ETAF x Area	Estimated Total Water Use (ETWU)[d]
Regular Landscape Areas							
1. Low Water Use Plantings	0.20	Drip	0.81	0.25	28,083	7,021	225,914
	0.20	Overhead	0.75	0.27	7,733	2,088	67,185
2. Moderate Water Use Plantings	0.40	Overhead	0.75	0.54	4,170	2,252	72,458
3. High Water Use Turf	0.70	Overhead	0.75	0.94	15,396	14,472	465,688
4. Low Water Use Trees	0.20	Bubb	0.81	0.25	10,125	2,531	81,451
5. Medium Water Use Trees	0.40	Bubb	0.81	0.50	1,625	813	26,145
				Totals:	67,132	29,176	
					Estimated Total Water Use (ETWU) Total:		938,840
					Maximum Applied Water Allowance (MAWA)*:		972,078

[a] **Hydrozone # / Planting Description** — *E.g. 1.) Front Lawn; 2.) Low Water Use Plantings; 3.) Medium Water Use Plantings*

[b] **Irrigation Method** — *Overhead Spray of Drip*

[c] **Irrigation Efficiency** — *0.75 for Spray; 0.81 for Drip*

[d] ***ETWU (Annual Gallons Required)*** = *ETo x 0.62 x ETAF x Area*

Where 0.62 is a conversion factor that converts acre-inches/acre/year to gallons/square foot/year.

[e] ***MAWA (Annual Gallons Allowed)*** = *ETo x 0.62 x [(ETAF x LA) + ((1 - ETAF) x SLA)]*

Where 0.62 is a conversion factor that converts acre-inches/acre/year to gallons/square foot/year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is 0.55 for residential projects and 0.45 for non-residential projects.

Evapotranspiration Adjustment Factor (ETAF) Calculations

This non-residential project complies with the WELO and its average ETAF is less than **0.45**

Regular Landscape Areas	
Total ETAF x Area	29,176
Total Area	67,132
Average ETAF	**0.43**

All Landscape Areas	
Total ETAF x Area	29,176
Total Area	67,132
Average ETAF	**0.43**

I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE

SIGNATURE: _____ DATE: 02-06-25

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

811

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IRRIGATION MATERIAL LEGEND

SYMBOL Q	T	H	F	MANUFACTURER	MODEL NO. / DESCRIPTION	FLOW RATE (GPM)	PSI	RADIUS	PR. RATE	DETAIL
				RAIN BIRD	RD-06-S-P30-F 6" POP-UP TURF HEAD WITH AN 8 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.29, .39, .59, 1.17	30	8 FT	2.03 IN./HR.	A
				RAIN BIRD	RD-06-S-P30-F 6" POP-UP TURF HEAD WITH AN 10 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.45, .59, .89, 1.78	30	10 FT	1.98 IN./HR.	A
				RAIN BIRD	RD-06-S-P30-F 6" POP-UP TURF HEAD WITH AN 12 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.59, .79, 1.18, 2.37	30	12 FT	1.83 IN./HR.	A
				RAIN BIRD	RD-06-S-P30-F 6" POP-UP TURF HEAD WITH AN 15 SERIES HE-VAN NOZZLE	.93, 1.23, 1.85, 3.70	30	15 FT	1.83 IN./HR.	A
				RAIN BIRD	RD-12-S-P30-F 12" POP-UP SHRUB HEAD WITH 8 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.29, .39, .59, 1.17	30	8 FT	2.03 IN./HR.	A
				RAIN BIRD	RD-12-S-P30-F 12" POP-UP SHRUB HEAD WITH 10 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.45, .59, .89, 1.78	30	10 FT	1.98 IN./HR.	A
				RAIN BIRD	RD-12-S-P30-F 12" POP-UP SHRUB HEAD WITH 12 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.59, .79, 1.18, 2.37	30	12 FT	1.83 IN./HR.	A
				RAIN BIRD	RD-12-S-P30-F 12" POP-UP SHRUB HEAD WITH 15 SERIES HE-VAN ADJUSTABLE ARC NOZZLE	.93, 1.23, 1.85, 3.70	30	15 FT	1.83 IN./HR.	A
				RAIN BIRD	RD-06-S-P30-F 6" POP-UP BUBBLER HEAD WITH A HUNTER MSBN-50Q STREAM BUBBLER NOZZLE EACH SYMBOL REPRESENTS TWO (2) BUBBLER TO PROVIDE A TOTAL OF TWO (2) BUBBLERS PER TREE. PLACE THE BUBBLER HEADS SIX (6) INCHES FROM THE ROOT BALL OF THE TREE AND ON OPPOSITE SIDES OF TREE. ADJUST BUBBLER STREAMS TO WET THE ROOT BALL AND ADJACENT AMENDED SOIL WITHOUT HITTING THE TRUNK OF THE TREE.	.50 (1.00 TOTAL)	30	1.5 FT	1.50 IN./HR.	A,B
NO SYMBOL				RAIN BIRD	SPRINKLER HEADS WITH 1/2" NPT INLETS SHALL BE INSTALLED WITH A SA-125050 POLY SWING JOINT AS PART OF THE ASSEMBLY					A
				RAIN BIRD	5006-PL-(PC)-SAM-R 6" POP-UP TURF ROTOR WITH MPR-25 NOZZLES (RED)	1.00, 1.38, 1.98, 3.82	45	25 FT	0.70 IN./HR.	C
				RAIN BIRD	5006-PL-(PC)-SAM-R 6" POP-UP TURF ROTOR WITH MPR-30 NOZZLES (GREEN)	1.40, 1.85, 2.96, 5.78	45	30 FT	0.70 IN./HR.	C
				RAIN BIRD	5006-PL-(PC)-SAM-R 6" POP-UP TURF ROTOR WITH MPR-35 NOZZLES (BEIGE)	1.92, 2.46, 3.81, 7.58	45	35 FT	0.70 IN./HR.	C
				RAIN BIRD	5012-PL-(PC)-SAM-R 12" POP-UP SHRUB ROTOR WITH MPR-25 NOZZLES (RED)	1.00, 1.38, 1.98, 3.82	45	25 FT	0.70 IN./HR.	C
				RAIN BIRD	5012-PL-(PC)-SAM-R 12" POP-UP SHRUB ROTOR WITH MPR-30 NOZZLES (GREEN)	1.40, 1.85, 2.96, 5.78	45	30 FT	0.70 IN./HR.	C
				RAIN BIRD	5012-PL-(PC)-SAM-R 12" POP-UP SHRUB ROTOR WITH MPR-35 NOZZLES (BEIGE)	1.92, 2.46, 3.81, 7.58	45	35 FT	0.70 IN./HR.	C
NO SYMBOL				RAIN BIRD	MPR-25/30/35 NOZZLES ARE NOT SUPPLIED AS STANDARD NOZZLES WITH THE RAIN BIRD 5000 SERIES ROTOR HEADS. THE CONTRACTOR MUST ORDER THESE NOZZLES SEPARATELY AS AN ADDITIONAL COMPONENT FOR THE ROTOR HEADS. ONLY THE COLOR CODED MPR SERIES NOZZLES SHALL BE ACCEPTABLE IN THE ROTOR HEADS.					C
NO SYMBOL				RAIN BIRD	SPRINKLER HEADS WITH 3/4" NPT INLETS SHALL BE INSTALLED WITH A TSJ-12075 PVC SWING JOINT AS PART OF THE ASSEMBLY					C
				NETAFIM	SUB-SURFACE DRIP TUBING AS DESCRIBED BELOW: TLHCVXRS-12 SUBSURFACE DRIP TUBING (BROWN EXTERIOR COLOR WITH A COPPER OXIDE STRIPE) WITH 0.53 GPH, PRESSURE COMPENSATING EMITTERS INTERNALLY INSTALLED IN THE DRIP TUBING AT 12" O.C. SPACING. DRIP TUBING SHALL BE EQUIPPED WITH A CONTINUOUS EXTERIOR CUPRON STRIPE, COPPER OXIDE INFUSED EMITTERS AND A PHYSICAL BARRIER TO PREVENT ROOT INTRUSION INTO THE DRIP EMITTER. DRIP EMITTERS SHALL BE CONTINUOUS FLUSHING TYPE AND EQUIPPED WITH A CHECK VALVE AND ANTI-SIPHON FEATURE. DRIP TUBING SHALL BE INSTALLED 4" BELOW THE FINISHED SOIL GRADE (NOT COUNTING MULCH) AND IN PARALLEL ROWS A MAXIMUM OF 16" ON CENTER. THE PERIMETER ROW OF DRIP TUBING SHALL BE INSTALLED A MAXIMUM OF 4" FROM THE EDGE OF ANY HARDSCAPE OR TURF EDGE. ALL SUBSEQUENT INTERIOR ROWS SHALL BE ADJUSTED TO PROVIDE AN EVEN SPACING ACROSS THE PLANTER WITHOUT EXCEEDING 16" MAXIMUM SPACING. INSTALL 9" PVC COATED GALVANIZED TUBING STAKES A MAXIMUM OF FIVE (5) FEET ON CENTER ALONG THE LENGTH OF THE TUBING. TUBING STAKES SHALL BE MODEL #GDTS140900 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684. THE LINES SHOWN ON THE PLANS REPRESENT THE APPROXIMATE DIRECTION AND SPACING OF THE DRIP TUBING ROWS, SEE SPACING REQUIREMENTS ABOVE AND IN DETAILS.	0.53 GPH / EMITTER	30	N/A	0.70 IN./HR.	D,E,F
NO SYMBOL				NETAFIM	CONNECTION BETWEEN HCVXR DRIP TUBING AND PVC SUPPLY AND DISCHARGE HEADERS SHALL BE MADE USING TL DRIP LINE BARBED FITTINGS, SCH. 40 PVC THREADED FITTINGS, SCH. 80 NIPPLES AND FLEXIBLE NIPPLES. WHEN THE CONNECTION IS AT THE END RUN OF THE TUBING USE A 1/2" SCH. 40 PVC THREADED 90° ELBOW, A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE, A 1/2" X 6" MIPT X FIPT FLEXIBLE NIPPLE, AND A TL050MA 17mm BARB X 1/2" MIPT ADAPTER FITTING. WHEN THE CONNECTION IS IN THE MIDDLE OF THE TUBING RUN USE A 1/2" SCH. 40 PVC THREADED TEE FITTING, A 1/2" X LENGTH AS REQUIRED SCH. 80 PVC THREADED NIPPLE, A 1/2" X 6" MIPT X FIPT FLEXIBLE NIPPLE, AND TWO (2) TL050MA 17mm BARB X 1/2" MIPT ADAPTERS. ALL END RUNS OF TUBING SHALL BE CONNECTED WITH A PVC DISCHARGE HEADER. FLEXIBLE NIPPLES SHALL BE MODEL #GFN050600 AS MANUFACTURED BY GPH IRRIGATION PRODUCTS (866) 582-9684.					D,E,F
NO SYMBOL				NETAFIM	TL SERIES 17mm BARBED FITTINGS FOR CONNECTIONS BETWEEN DRIP TUBING (TUBING-TO-TUBING ONLY). NO HEATING OF TUBING SHALL BE ALLOWED.					D,E,F
				AS APPROVED	PVC SUPPLY AND DISCHARGE HEADERS SHALL BE PVC LATERAL LINE PIPE (AS SHOWN BELOW), 1" MINIMUM SIZE WITH SCH. 40 PVC FITTINGS.					D,E,F
				GPH IRRIGATION/ HUNTER	GDFN DRIP FLUSH / INDICATOR NOZZLE, ORANGE IN COLOR, INSTALLED ONTO A HUNTER ECO-ID-12 12" POP-UP INDICATOR HEAD. THE FLUSH NOZZLE SHALL BE USED FOR MANUAL OPERATION OF THE DRIP SYSTEM.					E,G
				P.O.C.	2" POTABLE (DOMESTIC) DEDICATED IRRIGATION WATER METER WITH 2" SERVICE LINE. VERIFY SIZE, LOCATION AND PRESSURE IN FIELD.					N/A
				WILKINS	975XLS, 2" R/P BACK FLOW PREVENTION DEVICE WITH WYE STRAINER, INSTALL WITH BRASS NIPPLES, UNIONS AND FITTINGS, SIZED PER DEVICE					H
NO SYMBOL				WILKINS	500XL-HLR 2" BRONZE, HIGH LOW RANGE (10-125 PSI) PRESSURE REGULATOR, WITH SINGLE UNION FIPT X FIPT CONNECTIONS, INSTALL PRESSURE REGULATOR ON THE DOWNSTREAM SIDE OF THE BACK FLOW DEVICE. SET WATER PRESSURE TO 10 PSI ABOVE DESIGN PRESSURE SHOWN ON POC NOTES.					H
NO SYMBOL				V.I.T.	STRONG BOX SBBC-45SS "SMOOTH TOUCH" STAINLESS STEEL BACK FLOW DEVICE ENCLOSURE					H
				SUPERIOR	3200-200 2" NORMALLY CLOSED, BRASS MASTER CONTROL VALVE. WIRE MCV TO THE CONTROLLER USING A SEPARATE PILOT AND GROUND WIRE, ROUTE INSIDE A 1" SCH. 40 PVC (GRAY) ELECTRICAL CONDUIT. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					I
				HUNTER	FCT-200, 2" FLOW SENSOR, WIRE TO CONTROLLER USING TWO (2) #14UF AWG WIRES INSIDE A 1" SCH. 40 PVC (GRAY) ELECTRICAL CONDUIT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSIDE A STANDARD RECTANGULAR VALVE BOX.					J
				LASCO	VXX101N-SC XX" SLO-CLOSE SCH. 80 PVC, TRUE-UNION BALL VALVE WITH SOLVENT WELD SOCKET CONNECTIONS, LINE SIZE PER MAINLINE. INSTALL INSIDE A 10" ROUND VALVE BOX.					K
				RAIN BIRD	HQ-44-LRC 1" QUICK COUPLER VALVE WITH LOCKING VINYL COVER AND A LASCO G13S-218 SWING JOINT. INSTALL INSIDE A 10" ROUND VALVE BOX.					L
				HUNTER	ICV-XX1G-FS-AS-ADJ PRESSURE REGULATING, PLASTIC REMOTE CONTROL VALVE (RCV), SIZE AS SHOWN (1" AND 1 1/2" SIZES), SET PRS-D PRESSURE REGULATOR TO PROVIDE THE OPERATING PRESSURE OF THE SPRINKLER / BUBBLER HEAD AT THE HIGHEST OR FARTHEST HEAD ON THE CONTROL VALVE ZONE (MEASURE PSI AT HEAD). INSTALL THE RCV INSIDE A STANDARD RECTANGULAR VALVE BOX.					M
				HUNTER	ICV-XX1G-FS PLASTIC DRIP REMOTE CONTROL VALVE, SIZE AS SHOWN (1" AND 1 1/2" SIZES). INSTALL A DISC FILTER AND AN INLINE PRESSURE REGULATOR ON THE DOWNSTREAM SIDE OF EACH DRIP REMOTE CONTROL VALVE (DRCV). FOR 1" DRCV'S INSTALL A RAIN BIRD LCRBY-100D DISC FILTER AND A SENNINGER 1" PMR-40-MF PRESSURE REGULATOR. FOR 1 1/2" DRCV'S INSTALL A RAIN BIRD LCRBY-150D DISC FILTER AND A SENNINGER 1 1/4" PMR-40-HF PRESSURE REGULATOR. USE A 1 1/2" SCH. 40 PVC THREADED COUPLING, A 1 1/2" X 1 1/4" PVC THREADED REDUCER BUSHING, AND A 1 1/4" X 2" SCH. 80 PVC NIPPLE AS REQUIRED TO CONNECT THE 1 1/4" REGULATOR TO THE DOWNSTREAM SIDE OF THE 1 1/2" FILTER. INSTALL THE DRCV ASSEMBLY INSIDE A JUMBO RECTANGULAR VALVE BOX.					N
				HUNTER	A2C-1200-P 12 STATION ACC2 CONTROLLER WITH SEVEN (7) A2M-600 6-STATION EXPANSION MODULES AND A A2C-LAN MODULE TO CREATE AN 54 STATION LAN INTERNET READY CONTROLLER. INSTALL CONTROLLER INSIDE A STAINLESS STEEL ENCLOSURE, SEE BELOW FOR TYPE. CONTRACTOR TO SUBSCRIBE TO HYDROWISE INTERNET BASED CENTRAL CONTROL AND WEATHER DATA DOWNLOAD SERVICES. THE CONTRACTOR TO REGISTER THE CONTROLLER SOFTWARE AND FULLY PROGRAM THE CONTROLLER FOR AUTOMATIC PROGRAM ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE PROOF OF REGISTRATION AND PROGRAMMING TO THE OWNER.					O
NO SYMBOL				V.I.T.	SB-16SS STRONGBOX STAINLESS STEEL TOP-ENTRY CONTROLLER ENCLOSURE WITH CSA SUB-ASSEMBLY, PT-TRAY16-HUNICC2 ADAPTER, RGVRSS AND QP-16 "QUICK PAD".					O
NO SYMBOL				PAIGE ELECTRIC	THE CONTROLLER SHALL BE GROUNDED USING A #182000 5/8" X 8 FOOT COPPER CLAD GROUND ROD, A #182005 CAST BRONZE ROD CLAMP AND THE REQUIRED LENGTH OF #6AWG BARE, SINGLE STRAND COPPER GROUND WIRE. INSTALL INSIDE A 10" ROUND VALVE BOX.					P
				HUNTER	RAIN-CLIK WIRED RAIN SENSOR, MOUNT ON EXTERIOR WALL IN AN EXPOSED AREA, WIRE TO THE CONTROLLER.					O
				N/A	120 VOLT ELECTRICAL POWER FOR CONTROLLER, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
				AS APPROVED	PVC PIPE 3/4" - 2" SCH. 40, SOLVENT WELD WITH SCH. 40 PVC FITTINGS, AS LATERAL LINES INSTALLED 12" BELOW FINISHED GRADE					Q
				AS APPROVED	PVC PIPE 2" - 3" CL. 315, SOLVENT WELD WITH SCH. 80 PVC FITTINGS, AS MAINLINES INSTALLED 18" BELOW FINISHED GRADE					Q,S
				AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, TWICE THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED (2" MINIMUM SIZE) INSTALL ALL PIPE AND WIRE UNDER PAVING, HARDSCAPE, ETC. (OR AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE) INSIDE SLEEVES. SLEEVES UNDER PEDESTRIAN PAVING SHALL BE INSTALLED 24" BELOW FINISHED GRADE. SLEEVES UNDER VEHICULAR PAVING SHALL BE INSTALLED 36" BELOW FINISHED GRADE.					R
NO SYMBOL				LASCO	ALL FITTINGS USED WITH SOLVENT WELD MAINLINE PIPE SHALL BE SCH. 80 PVC FITTINGS, GRAY IN COLOR, AND SIZED TO MATCH THE MAINLINE PIPE. ALL FITTINGS USED WITH SOLVENT WELD LATERAL LINE PIPE SHALL BE SCH. 40 PVC, WHITE IN COLOR, AND SIZED TO MATCH THE LATERAL LINE PIPE. ALL THREADED PVC NIPPLES SHALL BE SCH. 80 PVC PIPE, DARK GRAY IN COLOR, WITH MOLDED THREADS.					N/A
NO SYMBOL				WELD-ON	ALL SOLVENT WELD CONNECTIONS FOR BOTH MAINLINE AND LATERAL LINE SHALL BE MADE USING THE TWO-STEP PROCESS OF PRIMER AND SOLVENT CEMENT. PRIMER SHALL BE P-68 LOW VOC "PURPLE PRIMER". SOLVENT CEMENT SHALL BE 705 LOW VOC, GRAY COLORED "MEDIUM BODIED" CEMENT. USE DAUBERS SIZED AT LEAST ONE-HALF THE SIZE OF THE LARGEST PIPE BEING JOINED. ALL SOLVENT CEMENTED JOINTS SHALL BE MADE PER THE PIPE AND FITTING MANUFACTURER'S RECOMMENDATIONS.					N/A
NO SYMBOL				AS APPROVED	ALL SOLVENT WELD MAINLINES ABOVE 2" IN SIZE SHALL HAVE CONCRETE THRUST BLOCKING INSTALLED AT ALL DIRECTIONAL CHANGES INCLUDING ELBOWS (45° AND 90°) AND TEES. MAINLINE PIPES UNDER 2" SIZE AND ALL LATERAL LINES DO NOT REQUIRE THRUST BLOCKING.					S
NO SYMBOL				AS APPROVED	1" SCH. 40 PVC, GRAY ELECTRICAL CONDUIT FOR FLOW SENSOR / MASTER VALVE WIRES. PROVIDE PULL BOX AT A MAXIMUM OF 200 FEET ON CENTER FOR A 3 FOOT WIRE LOOP OR ANY SPLICES. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					N/A
NO SYMBOL				PAIGE ELECTRIC	P7079D POLYETHYLENE INSULATED, SOLID COPPER CONDUCTOR IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED). PILOT WIRES SHALL BE RED IN COLOR, COMMON GROUND WIRE SHALL BE WHITE IN COLOR, SPARE WIRES SHALL BE YELLOW IN COLOR. THE CONTRACTOR SHALL ROUTE TWO (2) SPARE CONTROL WIRES (YELLOW) FROM THE CONTROLLER ALONG THE MAINLINE IN ALL DIRECTIONS AWAY FROM THE CONTROLLER. LOOP SPARE WIRES UP AND INTO EACH VALVE BOX ALONG THE MAINLINE, PROVIDING A 3 FOOT MINIMUM LOOP.					Q,R,T
NO SYMBOL				GPH IRRIGATION	GDBRY6 DIRECT BURIAL, 100% SILICONE GEL, WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE SPLICES AND CONNECTIONS					T
NO SYMBOL				NDS (K.B.I.)	KSC-XXX-S SWING CHECK VALVE, LATERAL LINE SIZE, INSTALL ONE (1) ON THE DOWNSTREAM SIDE OF EACH RCV WHEN THE RCV IS LOWER THAN THE SPRINKLERS, BUBBLERS OR DRIP EMITTERS. INSTALL WITHIN SPRINKLER / BUBBLER / DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.					N/A
NO SYMBOL				NDS (K.B.I.)	KC-XXX-S SPRING CHECK VALVE, LATERAL LINE SIZE, INSTALL ONE (1) ON THE DOWNSTREAM SIDE OF EACH RCV WHEN THE RCV IS HIGHER THAN THE SPRINKLERS, BUBBLERS OR DRIP EMITTERS. INSTALL WITHIN SPRINKLER / BUBBLER / DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.					N/A
NO SYMBOL				RAIN BIRD	ALL VALVE BOXES SHALL BE VB SERIES, PLASTIC TYPE WITH OVERLAPPING LIDS. VALVE BOX BODIES SHALL BE BLACK IN COLOR. LIDS FOR BOXES IN TURF AREAS SHALL BE GREEN. LIDS FOR VALVE BOXES IN SHRUB AREAS SHALL BE BLACK. ALL BOXES SHALL BE SECURED WITH A RAIN BIRD VB-LOCK-H HEXAGON HEAD BOLT, WASHER AND CLIP. BOXES SHALL BE AS SHOWN BELOW:					U

DESCRIPTION	TURF AREAS (GREEN LIDS)	SHRUB AREAS (BLACK BOXES AND LIDS)
10" ROUND BOXES	VB-10RND	VB-10RNDB (BOX) AND VB-10RNDBKL (LID)
STANDARD RECTANGULAR BOXES	VB-STD	VB-STDB (BOX) AND VB-STDBKL (LID)
JUMBO RECTANGULAR BOXES	VB-JMB	VB-JMBB (BOX) AND VB-JMBBKL (LID)

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LICENSED LANDSCAPE ARCHITECT — Nathanial S. Cormier No. 6226 — Signature — 7/31/25 Renewal Date — Date — STATE OF CALIFORNIA

MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670
Developed for
GRIFFIN | SWINERTON

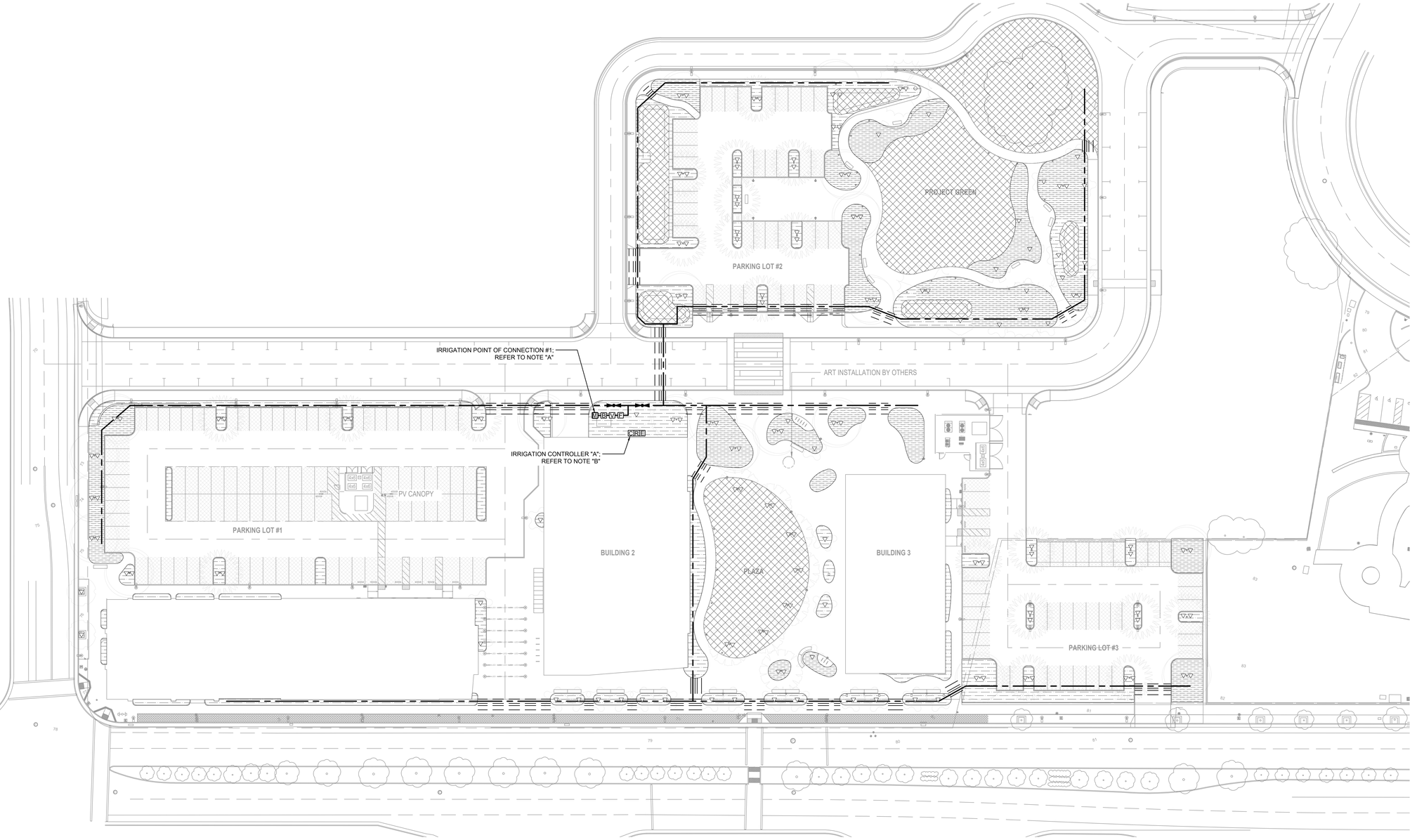
Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/10/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	As indicated

IRRIGATION LEGEND & NOTES

L6.00



NOTE A:
POINT OF CONNECTION (POC) #1 SHALL BE A 2" DOMESTIC WATER METER WITH A 2" SERVICE LINE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION, WATER TYPE, METER SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. MEASUREMENT OF THE STATIC (NO WATER MOVING) WATER PRESSURE IS ACCEPTABLE FOR POTABLE WATER SYSTEMS WHERE NO PUMP HAS BEEN INDICATED ON THESE PLANS. WHEN USING RECYCLED WATER, OR ON POTABLE WATER SYSTEMS REQUIRING A PUMP, ONLY THE MEASUREMENT OF DYNAMIC (WATER MOVING THROUGH THE METER) WATER PRESSURE, SHALL BE ACCEPTABLE. THE DYNAMIC WATER PRESSURE SHALL BE MEASURED AT THE MAXIMUM SYSTEM DEMAND AS INDICATED BELOW. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION AS SHOWN HEREIN, ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

WATER PRESSURE AT POC:	N/A	PSI (STATIC / DYNAMIC)
DESIGN WATER PRESSURE:	N/A	PSI
MAXIMUM SYSTEM DEMAND:	N/A	GPM
PRESSURE BOOST REQUIRED:	N/A	PSI
RESIDUAL WATER PRESSURE:	N/A	PSI

NOTE B:
CONTROLLER "A" SHALL BE OF THE BRAND, MODEL AND STATION SIZE AS INDICATED ON THE IRRIGATION MATERIALS LEGEND. THE CONTROLLER SHALL BE INSTALLED IN THE APPROXIMATE LOCATION SHOWN. THE CONTRACTOR SHALL COORDINATE THE REQUIRED ELECTRICAL POWER SUPPLY AT THIS LOCATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE. FINAL LOCATION OF CONTROLLER AND ELECTRICAL POINT OF CONNECTION SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE D:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE E:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY, THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE F:
PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND LANDSCAPE ARCHITECT A SCALED SHOP DRAWING INDICATING THE PROPOSED LOCATIONS FOR THE IRRIGATION EQUIPMENT LISTED BELOW. THE SHOP DRAWING SHALL BE PREPARED TO THE SATISFACTION OF THE OWNER AND LANDSCAPE ARCHITECT. SHOP DRAWINGS MUST INCLUDE THE PROPOSED LOCATIONS FOR THE FOLLOWING ITEMS:

1. POINT OF CONNECTION (INCLUDING WATER POC, BACK FLOW DEVICES, MASTER CONTROL VALVES, FLOW SENSORS, ETC.)
2. ISOLATION VALVES
3. AUTOMATIC CONTROL VALVES (INDICATE STATION NUMBER)
4. QUICK COUPLING VALVES
5. IRRIGATION CONTROLLER(S)
6. RELATED EQUIPMENT (AS MAY BE DIRECTED).

EACH PIECE OF AFOREMENTIONED EQUIPMENT SHALL HAVE IT'S PROPOSED INSTALLED LOCATION SHOWN ON THE SHOP DRAWINGS. THE SYMBOL FOR EACH PRODUCT SHALL BE A SCALED REPRESENTATION OF THE FOOTPRINT OF THE EQUIPMENT OR THE VALVE BOX IN WHICH THE EQUIPMENT IS INSTALLED. CONTRACTOR SHALL INSTALL ALL VALVE BOXES AND RELATED EQUIPMENT PER THE OWNER APPROVED SHOP DRAWINGS. ONCE THE SHOP DRAWING LOCATIONS ARE APPROVED, THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE WILL ALLOW NO ADJUSTMENTS TO THE APPROVED VALVE BOX PLACEMENT WITHOUT PRIOR WRITTEN ACCEPTANCE. ANY IRRIGATION EQUIPMENT INSTALLED WITHOUT PRIOR APPROVAL WITH SHOP DRAWINGS WILL BE SUBJECT TO RELOCATION BASED ON DIRECTION BY THE LANDSCAPE ARCHITECT AT THE CONTRACTOR'S EXPENSE.

OVERHEAD IRRIGATION

DRIP IRRIGATION

DRAWING NORTH
NORTH

1" = 30'-0" 0 30 60 FEET

IRRIGATION OVERALL PLAN 1
1" = 30'-0"

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

811

sweeney + associates
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Signature
7/31/25
Renewal Date
Date
STATE OF CALIFORNIA

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ENTITLEMENT SUBMITTAL #3	12/10/2024
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Job Number	30911
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Scale	As indicated

IRRIGATION OVERALL PLAN

L6.10

PLANT SCHEDULE

SYMBOL	KEY GENUS	KEY SPECIES	CONTAINER SIZE	QTY.	SCIENTIFIC NAME	COMMON NAME	FORM	WATER USE (WUCOLS)	CALIFORNIA NATIVE	MATURE HEIGHT	MATURE WIDTH	SUN / SHADE REQ.	Deciduous / Evergreen	COMMENTS
	AES	CAL	36" BOX	2	Aesculus Californica	California Buckeye	TREES	VERY LOW	YES	25'	20'-30'	PARTIAL SHADE	DECIDUOUS	
	ARB	MAR	60" BOX	21	Arbutus 'Marina'	Strawberry Tree	TREES	LOW	NO	40'	30'	FULL SUN	EVERGREEN	
	CER	OCC	36" BOX	31	Cercis occidentalis	Western Redbud	TREES	VERY LOW	YES	20'	20'	FULL SUN - PARTIAL SHADE	DECIDUOUS	
	PIS	CHI	48" BOX	2	Pistacia Chinensis	Chinese Pistache	TREES	LOW	NO	40'	25'-35'		DECIDUOUS	
	PLA	OCC	60" BOX	8	Platanus occidentalis	American Sycamore	TREES	MODERATE	NO	90'	<varies>	FULL SUN - PARTIAL SHADE	DECIDUOUS	
	PLA	RAC	48" BOX	5	Platanus racemosa	Western Sycamore	TREES	MODERATE	YES	80'	20'-30'	FULL SUN - PARTIAL SHADE	DECIDUOUS	
	QUE	DOU	60" BOX	4	Quercus douglasii	Blue Oak	TREES	VERY LOW	YES	70'	40'-50'	FULL SUN	DECIDUOUS	
	QUE	WIZ	60" BOX	21	Quercus wislizeni	Interior Live Oak	TREES	VERY LOW	YES	70'	<varies>	FULL SUN	EVERGREEN	

Grand total: 94 94

41 % OF PROPOSED TREES ARE EVERGREEN

NOTES:
1. ROOT BARRIERS ARE REQUIRED FOR ALL TREES PLANTED WITHIN 10' - 0" OF PAVING OR HARDSCAPE.
2. MINIMUM 3" DEPTH BARK MULCH IN ALL NON-TURF LANDSCAPE PLANTERS.
3. 3: 25% OF PROPOSED TREES ARE REQUIRED TO BE SIZE 24" BOX MINIMUM CONTAINER SIZE.

PLANTING MIX LEGEND

TURF

BIORETENTION MIX

GENERAL PLANTING MIX

GENERAL PLANTING MIX

PLANTER MIX SCIENTIFIC NAME	COMMON NAME	TYPE	SIZE	WUCOLS	MATURE HEIGHT	MATURE WIDTH
PERENNIALS						
Achillea millefolium	Yarrow	Perennial	1 gallon	LOW	1-3 ft	6-18 inches
Epilobium canum	California fuschia	Perennial	1 gallon	LOW	6-18 inches	2-3 ft
Eriophyllum lanatum	Wooly sunflower	Perennial	1 gallon	LOW	1-3 ft	2 ft
Asclepias fascicularis	Narrow-leaf milkweed	Perennial	1 gallon	LOW	2-3 ft	12 inches
Asclepias speciosa	Showy milkweed	Perennial	1 gallon	LOW	4-6 ft	4 ft
Penstemon heterophyllus 'Margarita BOP'	Foothill penstemon	Perennial	1 gallon	LOW	1-2 ft	2-3 ft
Euthamia occidentalis	Western Goldenrod	Perennial	1 gallon	V-LOW	4-6 ft	1-2 ft
Solidago velutina californica	California Goldenrod	Perennial	1 gallon	LOW	2-3 ft	1-2 ft
Monardella villosa	Coyote mint	Perennial	1 gallon	V-LOW	2 ft	3 ft
Eschscholzia californica	California poppy	Perennial	1 gallon	V-LOW	2-24 inches	1-2 ft
GRASSES						
Muhlenbergia rigens	Deer grass	Grass	5 gallon	LOW	4-5 ft	4 ft
Muhlenbergia dubia	Pine muhly	Grass	5 gallon	LOW	2-3 ft	2-3 ft
Muhlenbergia lindheimeri	Lindheimeri muhly	Grass	5 gallon	LOW	3-5 ft	3-4 ft
Festuca mairei	Maire's fescue	Grass	5 gallon	LOW	2-3 ft	2-3 ft
Festuca glauca	Blue fescue	Grass	5 gallon	LOW	1-2 ft	1-2 ft
SHRUBS						
Arctostaphylos hookeri 'Wayside'	Wayside manzanita	Shrub, Groundcover	15 gallon	LOW	3 ft	8 ft
Arctostaphylos 'John Dourley'	John Dourley manzanita	Shrub, Groundcover	15 gallon	LOW	1-2 ft	4-6 ft
Arctostaphylos 'Austin Griffiths'	Austin Griffith manzanita	Shrub	15 gallon	LOW	8-10 ft	6 ft
Baccharis pilularis 'Pigeon Point'	Dwarf coyote bush	Shrub	5 gallon	LOW	1-2 ft	6-8 ft
Rosa californica	California Wild Rose	Shrub	15 gallon	LOW	8-10 ft	10 ft
Rhamnus californica 'Eve Case'	Eve Case coffeeberry	Shrub	15 gallon	LOW	6-8 ft	6-8 ft
Rhamnus californica 'Leatherleaf'	Leatherfleaf coffeeberry	Shrub	15 gallon	LOW	6-8 ft	6-8 ft
Ceanothus maritimus 'Valley Violet'	Valley Violet ceanothus	Shrub	5 gallon	LOW	2 ft	4 ft
Calycanthus occidentalis	Spicebush	Shrub	15 gallon	LOW	3-13 ft	3-12 ft

BIO-RETENTION MIX

BIO-RETENTION MIX SCIENTIFIC NAME	COMMON NAME	TYPE	SIZE	WUCOLS	MATURE HEIGHT	MATURE WIDTH
PERENNIALS						
Achillea millefolium	Yarrow	Perennial	1 gallon	LOW	1-3 ft	6-18 inches
Eriophyllum lanatum	Wooly sunflower	Perennial	1 gallon	LOW	1-3 ft	2 ft
Asclepias fascicularis	Narrow-leaf milkweed	Perennial	1 gallon	LOW	2-3 ft	12 inches
Fragaria chiloensis	Beach strawberry	Perennial groundcover	1 gallon	MOD	1-4 inches	2-3 ft
Iris macrosiphon	Foothill iris	Perennial	1 gallon	MOD	1-2 ft	12 inches
Sisyrinchium bellum	Blue-eyed grass	Perennial	1 gallon	LOW	1-2 ft	3 inches
GRASSES + RUSHES						
Carex praegracilis	Clustered field sedge	Grass	5 gallon	MOD	2-4 ft	spreading
Calamagrostis foliosa	Feather reed grass	Grass	5 gallon	MOD	1-2 ft	2 ft
Calamagrostis nutkaensis	Pacific reed grass	Grass	5 gallon	MOD	3 ft	3 ft
Festuca rubra	Red fescue	Grass	5 gallon	MOD	1-3 ft	spreading
Festuca 'Siskiyou Blue'	Siskiyou Blue Fescue	Grass	5 gallon	MOD	1-2 ft	1-2 ft
Muhlenbergia lindheimeri	Lindheimeri muhly	Grass	5 gallon	LOW	3-5 ft	3-4 ft
Festuca mairei	Maire's fescue	Grass	5 gallon	LOW	2-3 ft	2-3 ft
Juncus patens	Common rush	Grass	5 gallon	MOD	1-3 ft	3 ft
SHRUBS						
Arctostaphylos 'Emerald Carpet'	Emerald carpet manzanita	Shrub, Groundcover	5 gallon	MOD	6-12 inches	3-5 ft
Calycanthus occidentalis	Spicebush	Shrub	15 gallon	LOW	3-13 ft	3-12 ft

TREE MITIGATION TABLES

Mills Crossing: Tree Removal and Mitigation Table

Reference: Arborist and Tree Protection Report, Lori Murphy (11.05.2024)

Tree #	Species	DSH (in.)	Protected (Y/N)	Condition	Tree to be removed? (Y/N)	Mitigation requirement (in.)
1	Crabapple	6	N			n/a
2	Valley Oak	3	N			n/a
3	Chinese pistache	16	Y	Fair	Y	**16**
4	Chinese pistache	18	Y	Fair	Y	**18**
5	Chinese pistache	13.5	Y	Fair	Y	**13.5**
6	Chinese pistache	16.5	Y	Good	Y	**16.5**
7	Chinese pistache	16	Y	Fair	Y	**16**
8	Valley Oak	20.5	Y	Fair	Y	**20.5**
9	Valley Oak	17	Y	Fair	Y	**17**
10	Valley Oak	35	Y	Fair	Y	**35**
18	Siberian elm	18	Y	Fair	Y	**18**
19	Elm spp.	8	N	Fair		n/a
20	Blue Oak	45.5	Y	Fair	N	n/a
TOTAL:						**170.5**

Tree Planting Plan: Mitigation provided

Quantity	Box Size	Mitigation Equivalent (in.)	Total (in.)
33	36"	3	99
7	48"	4	28
54	60"	5	270
TOTAL:			**397**

Conclusion: Proposed Tree Planting Plan meets mitigation requirements for tree removal proposed

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Renewal Date
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MILLS CROSSING
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ENTITLEMENT SUBMITTAL #1	09/09/2024
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ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	12" = 1'-0"

PLANTING NOTES AND SCHEDULES

L7.00

HIGH WATER USE - TURF AREAS (15,396 SQ.FT)

MODERATE WATER USE - BIO RETENTION (4,170 SQ.FT)

LOW WATER USE - PLANTER AREAS (36,036 SQ.FT)



DRAWING NORTH

NORTH 1" = 30'-0"

0 30 60 FEET

HYDROZONE PLAN 1

1" = 30'-0"

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HYDROZONE PLAN

L7.01

PLANT SCHEDULE

SYMBOL	KEY GENUS	KEY SPECIES	CONTAINER SIZE	QTY.	SCIENTIFIC NAME	COMMON NAME	FORM	WATER USE (WUCOLS)	CALIFORNIA NATIVE	MATURE HEIGHT	MATURE WIDTH	SUN / SHADE REQ.	Deciduous / Evergreen	COMMENTS
	AES	CAL	36" BOX	2	Aesculus Californica	California Buckeye	TREES	VERY LOW	YES	25'	20'-30'	PARTIAL SHADE	DECIDUOUS	
	ARB	MAR	60" BOX	21	Arbutus 'Marina'	Strawberry Tree	TREES	LOW	NO	40'	30'	FULL SUN	EVERGREEN	
	CER	OCC	36" BOX	31	Cercis occidentalis	Western Redbud	TREES	VERY LOW	YES	20'	20'	FULL SUN - PARTIAL SHADE	DECIDUOUS	
	PIS	CHI	48" BOX	2	Pistacia Chinensis	Chinese Pistache	TREES	LOW	NO	40'	25'-35'		DECIDUOUS	
	PLA	OCC	60" BOX	8	Platanus occidentalis	American Sycamore	TREES	MODERATE	NO	90'	<varies>	FULL SUN - PARTIAL SHADE	DECIDUOUS	
	PLA	RAC	48" BOX	5	Platanus racemosa	Western Sycamore	TREES	MODERATE	YES	80'	20'-30'	FULL SUN - PARTIAL SHADE	DECIDUOUS	
	QUE	DOU	60" BOX	4	Quercus douglasii	Blue Oak	TREES	VERY LOW	YES	70'	40'-50'	FULL SUN	DECIDUOUS	
	QUE	WIZ	60" BOX	21	Quercus wislizeni	Interior Live Oak	TREES	VERY LOW	YES	70'	<varies>	FULL SUN	EVERGREEN	

Grand total: 94 94

41 % OF PROPOSED TREES ARE EVERGREEN

PARKING SHADE CALCULATIONS

PARKING LOT 1

Botanical Name/Common Name	Symbol	Tree Diameter	Quantity @ 100% Shade/SQ.FT	Quantity @ 75% Shade/SQ.FT	Quantity @ 50% Shade/SQ.FT	Quantity @ 25% Shade/SQ.FT	Total SQ.FT
Quercus wislizeni - Interior Live Oak		25'-30'	0 @ 707	0 @ 530	3 @ 354	2 @ 177	1,416.0
Arbutus 'Marina' - Strawberry Tree		25'-30'	0 @ 707	3 @ 530	0 @ 354	1 @ 177	1,767.0

Total Tree Shade	3,183.0
Total Auxiliary Shade (PV)	8,493.0
Total Parking Area to be shaded	16,296.0
Total Shaded Area	11,676.0
Percent Shaded	**72 %**

PARKING LOT 2

Botanical Name/Common Name	Symbol	Tree Diameter	Quantity @ 100% Shade/SQ.FT	Quantity @ 75% Shade/SQ.FT	Quantity @ 50% Shade/SQ.FT	Quantity @ 25% Shade/SQ.FT	Total SQ.FT
Arbutus 'Marina' - Strawberry Tree		25'-30'	0 @ 707	4 @ 530	3 @ 354	0 @ 177	3182
Quercus wislizeni - Interior Live Oak		25'-30'	0 @ 707	0 @ 530	0 @ 354	5 @ 177	885.0

Total Tree Shade	4,067.0
Total Auxillary Shade	-
Total Parking Area to be shaded	6,550.0
Total Shaded Area	4,243.0
Percent Shaded	**62 %**

PARKING LOT 3

Botanical Name/Common Name	Symbol	Tree Diameter	Quantity @ 100% Shade/SQ.FT	Quantity @ 75% Shade/SQ.FT	Quantity @ 50% Shade/SQ.FT	Quantity @ 25% Shade/SQ.FT	Total SQ.FT
Quercus wislizeni - Interior Live Oak		25'-30'	0 @ 707	0 @ 530	0 @ 354	3 @ 177	531.0
Arbutus 'Marina' - Strawberry Tree		25'-30'	0 @ 707	4 @ 530	4 @ 354	0 @ 177	3,536.0

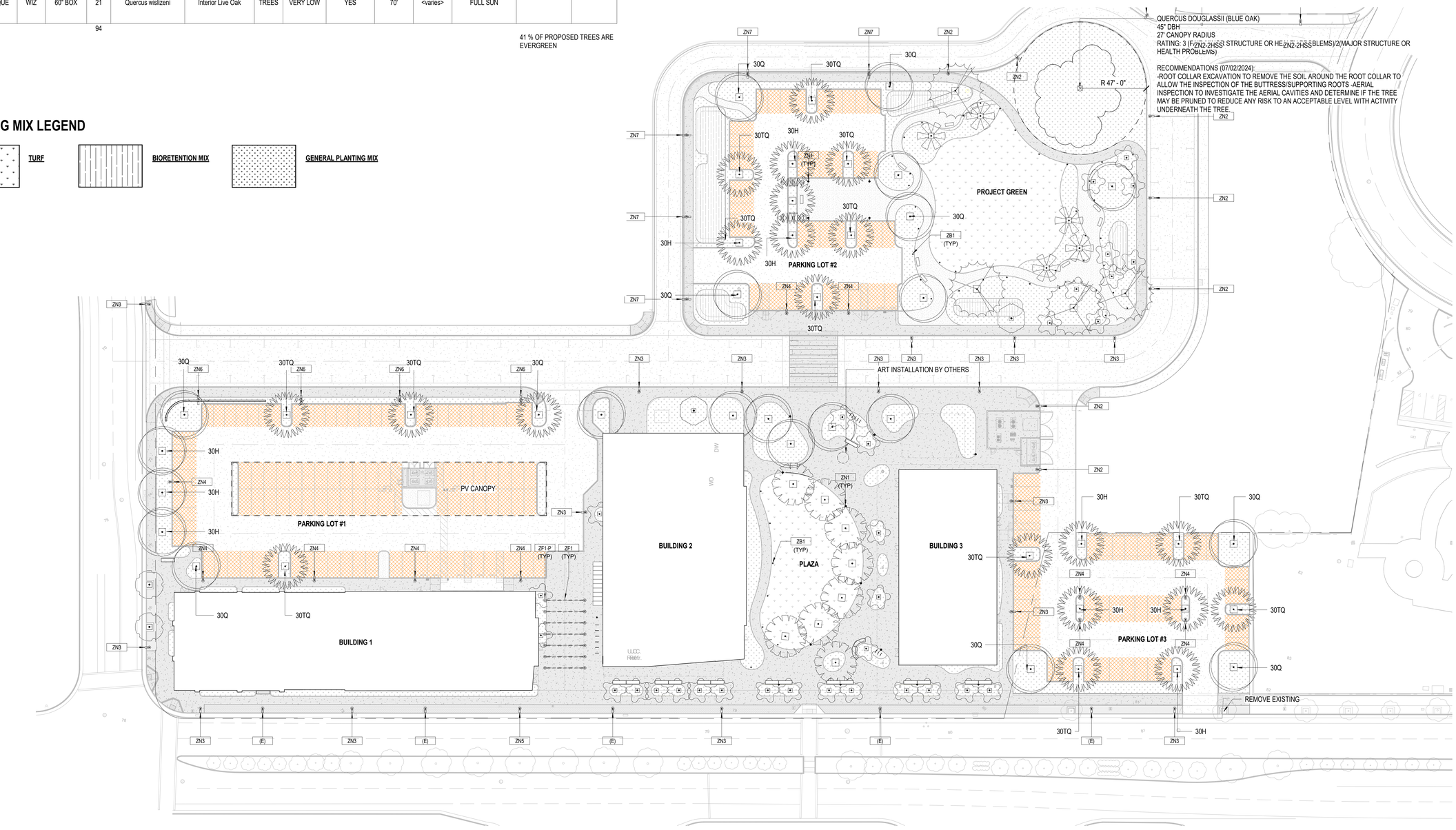
Total Tree Shade	4,067.0
Total Auxillary Shade	-
Total Parking Area to be shaded	7,338.0
Total Shaded Area	3,890.0
Percent Shaded	**53 %**

PLANTING MIX LEGEND

TURF

BIORETENTION MIX

GENERAL PLANTING MIX



DRAWING NORTH

NORTH

1" = 30'-0"

0 30 60 FEET

PLANTING PLAN 1

1" = 30'-0"

ATTACHMENT 6
Exhibit A to the Resolution

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LICENSED LANDSCAPE ARCHITECT
Nathaniel S. Cormier, No. 6226
Signature
7/31/25
Renewal Date
Date
STATE OF CALIFORNIA

MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670

Developed for
GRIFFIN | SWINERTON

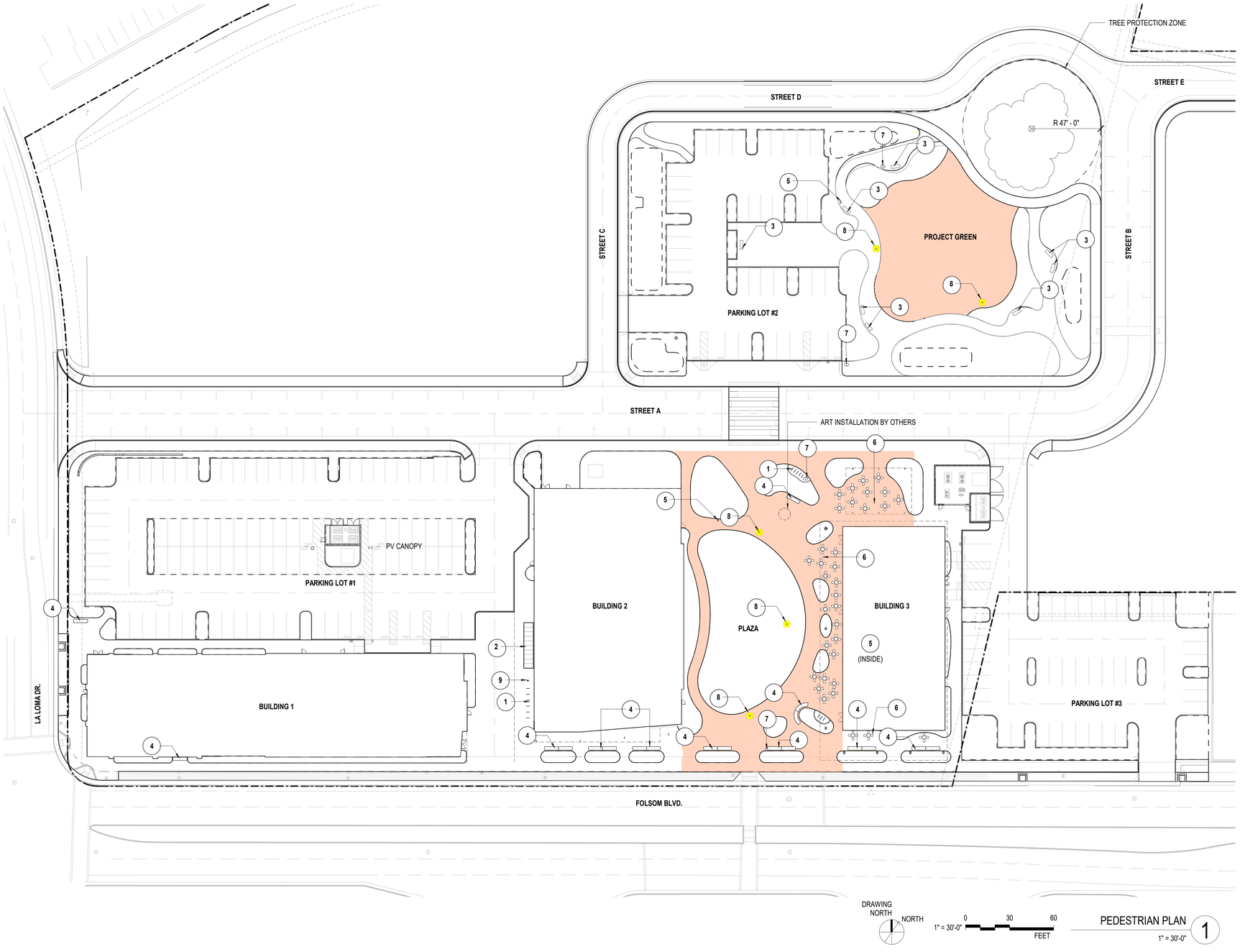
Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/10/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	As indicated

PLANTING PLAN

L7.10



PEDESTRIAN PLAN 1
1" = 30'-0"

PEDESTRIAN ORIENTED OPEN SPACE AREAS

PLAZA: ~20,000 SQ. FT.

PROJECT GREEN: ~8,400 SQ. FT.

1. SHORT TERM BIKE STORAGE (minimum 10 percent of all required motorized vehicle parking)
   REQUIRED: 11 RACKS / 22 BIKES
   PROVIDED: 14 RACKS/ 28 BIKES
2. LONG TERM BIKE STORAGE (minimum 5 percent of all required motorized vehicle parking)
   REQUIRED / PROVIDED: 9 LOCKERS / BIKES

TOTAL PROVIDED BIKE PARKING: 37 BIKES
TOTAL COVERED BIKE PARKING: 15 BIKES (9 LONG TERM, 6 SHORT TERM)

3. PROJECT GREEN SEATING
   PROVIDED: 8 (80 LINEAR FEET)
4. PLAZA SEATING
   PROVIDED: 19 (190 LINEAR FEET)
5. DRINKING FOUNTAIN
   PROVIDED: 3
6. MODULAR TABLE AND CHAIR (4 CHAIRS PER TABLE)
   PROVIDED: 35 (210 LINEAR FEET)
7. WASTE AND RECYCLING RECEPTACLES
   PROVIDED: 4
8. ELECTRICAL POWER OUTLETS : IN FLUSH LOCKABLE BOXES OR ATTACHED TO LIGHT POLES
   PROVIDED: 5
9. BIKE REPAIR WORK STAND
   PROVIDED: 1

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PEDESTRIAN PLAN

PLAZA SEATING: PERMANENT MODULAR BENCHES (BACKLESS)



DESIGN INTENT

HEBI BENCH
MANUFACTURER : LANDSCAPE FORMS

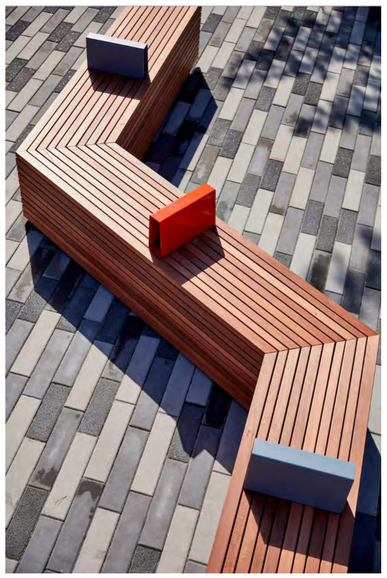


ALTERNATIVES:

BENCH 427
MANUFACTURER : DU MOR (ALT)



PARALLEL 42 BENCH
MANUFACTURER : LANDSCAPE FORMS (ALT)



PROJECT GREEN SEATING ALONG PATHS: PERMANENT MODULAR BENCHES (WITH BACKS AND ARMRESTS)



DESIGN INTENT

PERISPHERE BENCH
MANUFACTURER : LANDSCAPE FORMS



ALTERNATIVES:

CITYVIEW PEDESTAL MOUNT RADIUS
MANUFACTURER: SITESCAPES



TECNO RS SEATING SYSTEM
MANUFACTURER: FORMS + SURFACES



PLAZA SEATING: MOVABLE TABLES AND CHAIRS, A RANGE OF OPTIONS



BOHEM TABLE AND CHAIR
MANUFACTURER: MMCITE



ALTERNATIVES:

RIVIERA ARMCHAIR AND DARWIN TABLE
MANUFACTURER: EMU



BISTROT
MANUFACTURER : MMCITE



CAROUSEL TABLE
MANUFACTURER : LANDSCAPE FORMS (ALT)



RIVIERA STOOL AND DARWIN HIGH TABLE
MANUFACTURER: EMU



ORBIT
MANUFACTURER : MMCITE

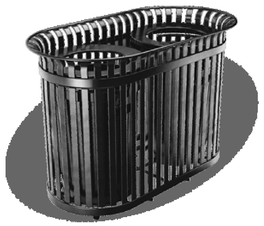


MORSE DOT
MANUFACTURER : MMCITE (ALT)



SITE AMENITIES

ALTERNATIVE:



WASTE & RECYCLING RECEPTACLE
MANUFACTURER TONYO BY FORMS + SURFACES



RECEPTACLE 435
MANUFACTURER DU MOR (ALT)

ALTERNATIVE:



DRINKING FOUNTAIN
HYDRO 410
MANUFACTURER: MMCITE



DRINKING FOUNTAIN
440 SM OR SMSS
MANUFACTURER: MOST DEPENDABLE FOUNTAINS, INC

LONG TERM BIKE STORAGE
MANUFACTURER : CYCLESAFE PROPARK



SHORT TERM BIKE STORAGE
MANUFACTURER : BOLA BY LANDSCAPE FORMS



BIKE REPAIR WORK STAND
MANUFACTURER : BIKE FIXTATION



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PEDESTRIAN PLAN SPECIFICATIONS

L8.11

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ENTITLEMENT SUBMITTAL

12/19/24

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670



LIGHTING PACKAGE

COVER SHEET

AD0.00

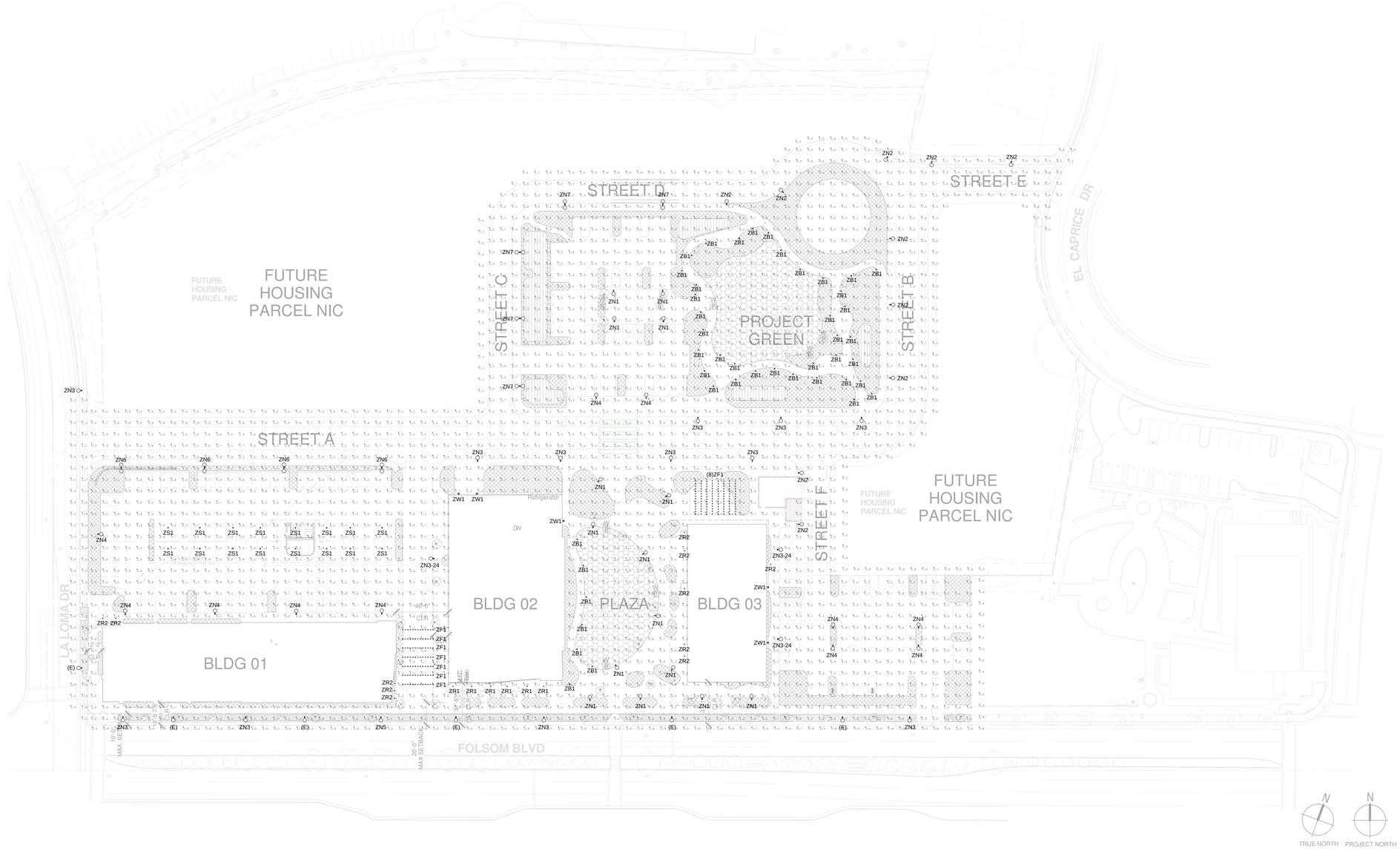
LIGHTING ILLUMINANCE SUMMARY

LABEL	AVG (FC)	MIN (FC)
PARKING LOT 1	3.1	1.5
PARKING LOT 2	2.5	1.0
PARKING LOT 3	2.9	1.0
DRIVE AISLE (PARKING LOT 1)	1.4	1.0
TRASH ENCLOSURE (PARKING LOT 1)	3.6	2.9
DRIVE AISLE (PARKING LOT 3 - NORTH)	2.0	1.1
DRIVE AISLE (PARKING LOT 3 - SOUTH)	1.7	1.1
TRASH ENCLOSURE (PARKING LOT 3)	1.8	1.6
STREET A	1.9	0.7
STREET B	1.4	0.9
STREET C	2.6	1.1
STREET D	1.8	0.6
STREET E	1.5	0.7
PEDESTRIAN WALKWAYS	2.0	0.5

LABEL	AVG (FC)	MIN (FC)
BLDG 1 EXIT - SE LOBBY*	5.5	2.5
BLDG 1 EXIT - SE STAIR	2.4	1.8
BLDG 1 EXIT - FIRE RISER	3.4	2.4
BLDG 1 EXIT - ELEC/IDF	1.9	1.3
BLDG 1 EXIT - NW LOBBY	5.6	3.4
BLDG 1 EXIT - NW STAIR	3.9	2.9
BLDG 2 EXIT - LOBBY	3.8	1.8
BLDG 2 EXIT - STAIR	1.4	1.1
BLDG 2 EXIT - ELEC	1.6	1.1
BLDG 2 EXIT - FIRE CONTROL	1.6	1.2
BLDG 2 EXIT - NW CORRIDOR	1.9	1.4
BLDG 3 EXIT - SE STORAGE	3.3	2.4
BLDG 3 EXIT - FLEX NW ENTRY	2.8	1.3
BLDG 3 EXIT - FLEX SE ENTRY	3.8	1.3
BLDG 3 EXIT - ELEC	2.2	1.5
BLDG 3 EXIT - VESTIBULE	2.4	1.0

NOTE:
THIS LIGHTING CALCULATION REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY (IES) APPROVED METHODS.

*CALCULATION POINTS FOR EXITS TAKEN WITHIN 5' RADIUS OF EXIT (TYP).



KEYNOTES

1. PHOTOMETRIC ANALYSIS SHOWN REPRESENTS ILLUMINANCE VALUES, IN FOOT-CANDLES, UNDER NORMAL POWER WITH CALCULATION POINTS EVERY 10 FEET WITHIN THE PROJECT BOUNDARY, AND INCLUDING 10 FT BEYOND PROJECT BOUNDER, PER RANCHO CORDOVA CITY ORDINANCE 23.725.070.B.4.

LEGEND

ASSUMED PROPERTY LINE

LIMIT OF WORK (L.O.W.)

SITE LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUF, SERIES (REF. CUTSHEETS)	MOUNTING/OVERALL HEIGHT (A.F.G.)
ZB1	BOLLARD PATH LIGHT	LOUIS POULSEN "FLINDT"	3'-6"
ZF1	FESTOON LIGHTS	TOKISTAR "EXHIBITOR"	15'-0"
ZN1	PEDESTRIAN POLE	LOUIS POULSEN "HOMANN PARK"	12'-0"
ZN2	ROADWAY POLE	PHILIPS HADCO "CXF5" TYPE 2	25'-0"
ZN3	ROADWAY POLE	PHILIPS HADCO "CXF5" TYPE 3	25'-0"
ZN3-24	PARKING POLE	PHILIPS HADCO "CXF5" TYPE 3	24'-0"
ZN4	PARKING POLE	PHILIPS HADCO "CXF5" TYPE 4	24'-0"
ZN5	ROADWAY POLE	PHILIPS HADCO "CXF5" TYPE 5	25'-0"
ZN6	ROADWAY POLE	PHILIPS HADCO "CXF5" TYPES 3, 4	25'-0"
ZN7	ROADWAY POLE	PHILIPS HADCO "CXF5" TYPES 2, 4	25'-0"
ZR1	RECESSED DOWNLIGHT	DMF "M SERIES COMMERCIAL"	15'-0"
ZR2	RECESSED DOWNLIGHT	KLIK "LEDPOD XL50"	9'-0"
ZS1	SURF-MT CYLINDER	DMF "M SERIES CYLINDER"	11'-6"
ZW1	WALL-MT DOWNLIGHT	BEGA "33329"	7'-6"

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Job Number	30911
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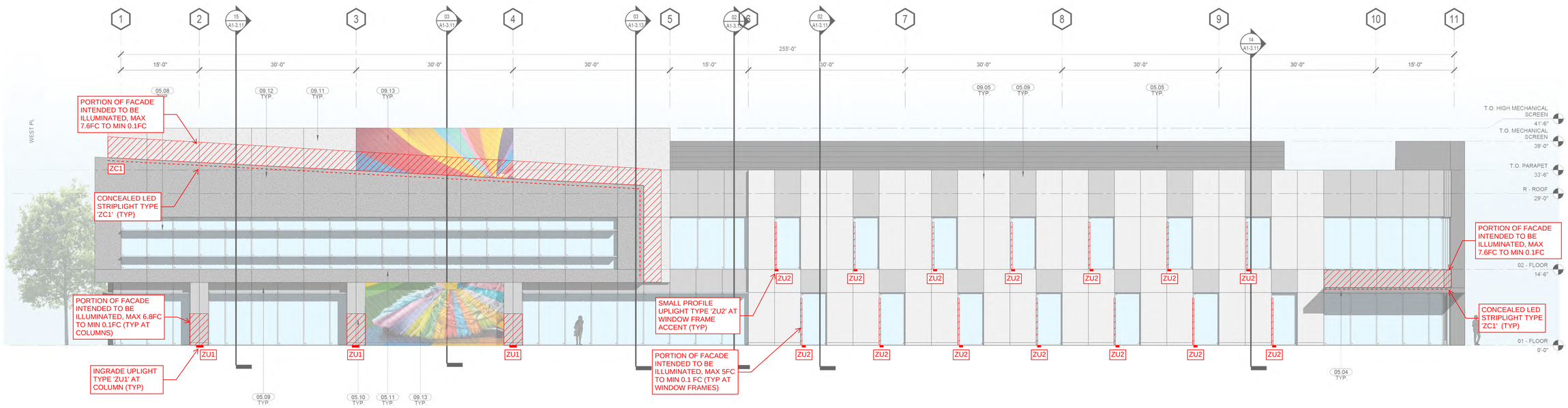
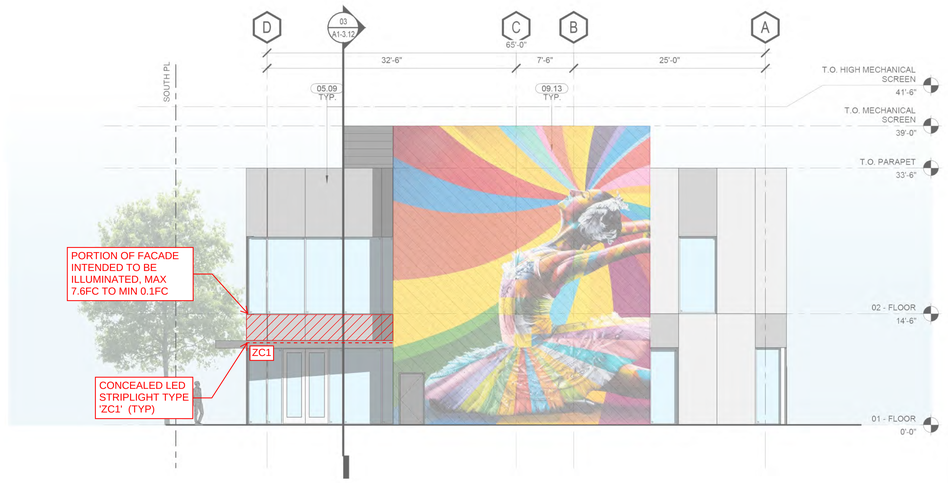
LIGHTING SITE PLAN

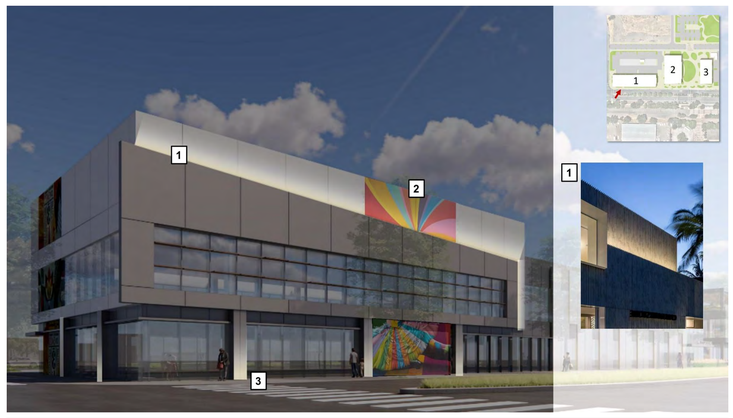
E2.00

LIGHTING SITE PLAN | 1" = 40'-0" | E1.11B | 05



EXT ELEVATION - SOUTH | 1/8" = 1'-0" | E1-3.01 | 03





BUILDING 1 - VIEW FROM FOLSOM

EXT ELEVATION - EAST | 1/8" = 1'-0" | E1-3.01 | 02

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL, HIGH PERFORMANCE PVDF COATING ON STEEL
05.05	MECHANICAL ROOF SCREEN. ALUMINUM LOUVER SCREEN SYSTEM. FINISH TO MATCH MULLIONS
05.08	18" ALUMINUM MULLION EXTENSION CAP. FINISH: WOOD LOOK
05.09	ALUMINUM METAL COMPOSITE PANEL, FINISH: TBD GREY
05.10	ALUMINUM METAL COMPOSITE PANEL COLUMN ENCLOSURE
05.11	18" ALUMINUM MULLION EXTENSION CAP. FINISH: HIGH PERFORMANCE PVDF COATING TO MATCH MULLIONS
09.05	ALUMINUM METAL COMPOSITE PANEL, FINISH: TBD LIGHT GREY
09.11	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
09.12	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
09.13	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS

LEGEND

- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
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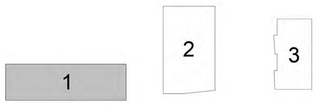
- METAL PANEL 01 - BASE
- METAL PANEL 02
- INSULATED LOW-E VISION GLAZING (GL-1)
- DRIFT JOINT

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-22.
2. ROOF ASSEMBLY TO BE MIN R-30.

KEYPLAN



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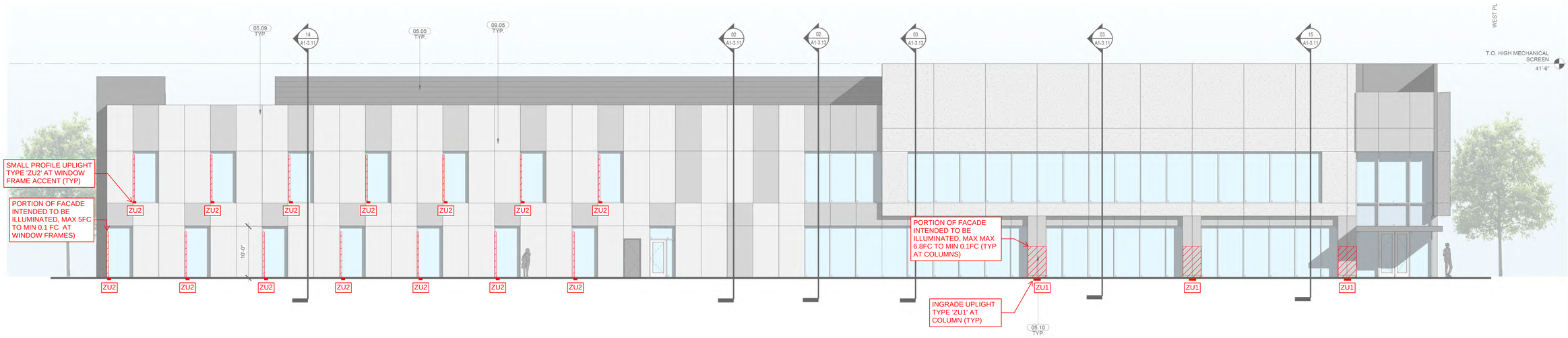
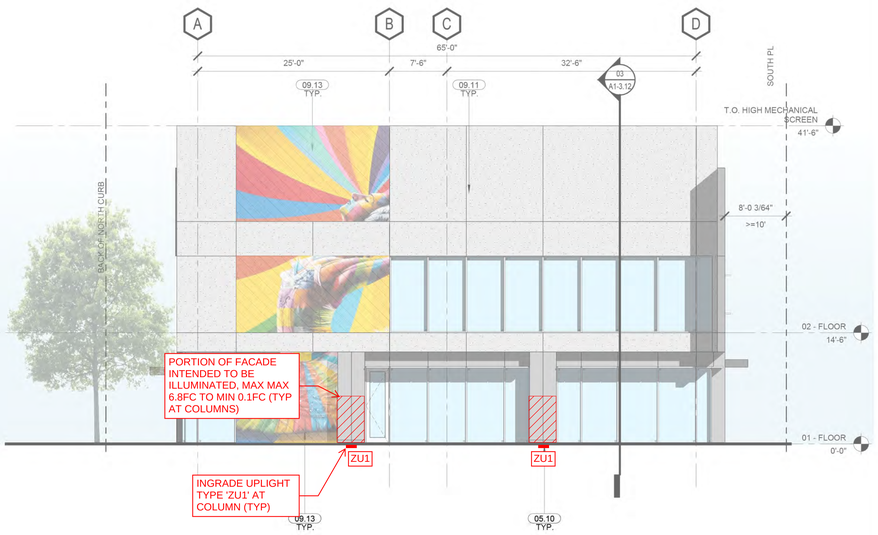
EXTERIOR LIGHTING ELEVATIONS

E4.10



EXT ELEVATION - NORTH | 1/8" = 1'-0" | E1-3.02 | 03



EXT ELEVATION - WEST | 1/8" = 1'-0" | E1-3.02 | 02

KEYNOTES

05.05	MECHANICAL ROOF SCREEN. ALUMINUM LOUVER SCREEN SYSTEM. FINISH TO MATCH MULLIONS
05.09	ALUMINUM METAL COMPOSITE PANEL. FINISH: TBD GREY
05.10	ALUMINUM METAL COMPOSITE PANEL COLUMN ENCLOSURE
09.05	ALUMINUM METAL COMPOSITE PANEL. FINISH: TBD LIGHT GREY
09.11	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
09.13	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS

LEGEND

- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
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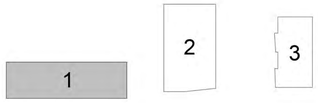
- METAL PANEL 01 - BASE
- METAL PANEL 02
- INSULATED LOW-E VISION GLAZING (GL-1)
- DRIFT JOINT

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-22.
2. ROOF ASSEMBLY TO BE MIN R-30.

KEYPLAN



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MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670

Developed for
GRIFFIN | SWINERTON

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	01/10/2025
ENTITLEMENT SUBMITTAL #4	02/10/2025

Revision	Date

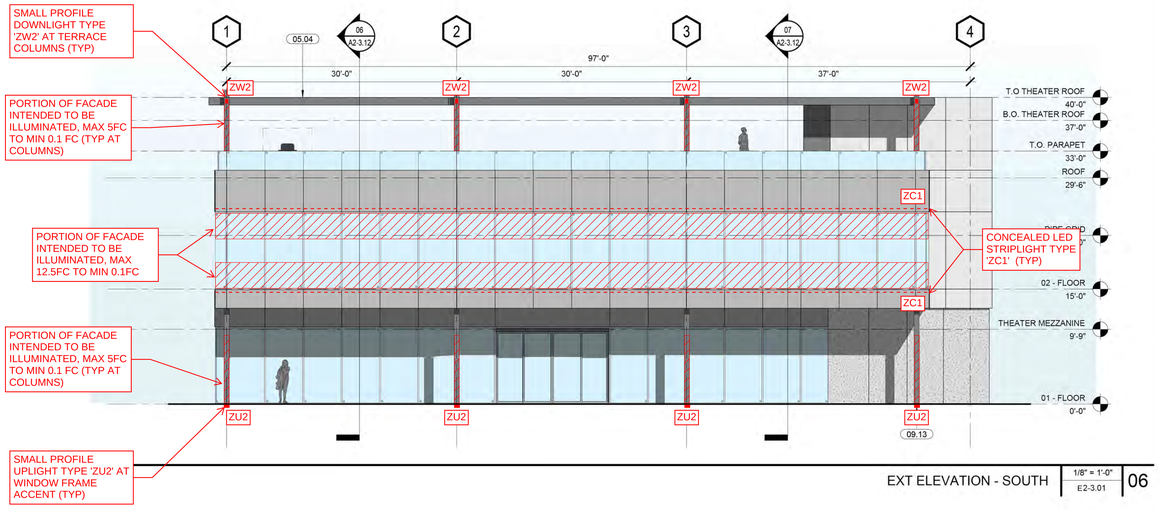
Job Number	30911
Checked By	Checker
Scale	1/8" = 1'-0"

EXTERIOR LIGHTING ELEVATIONS

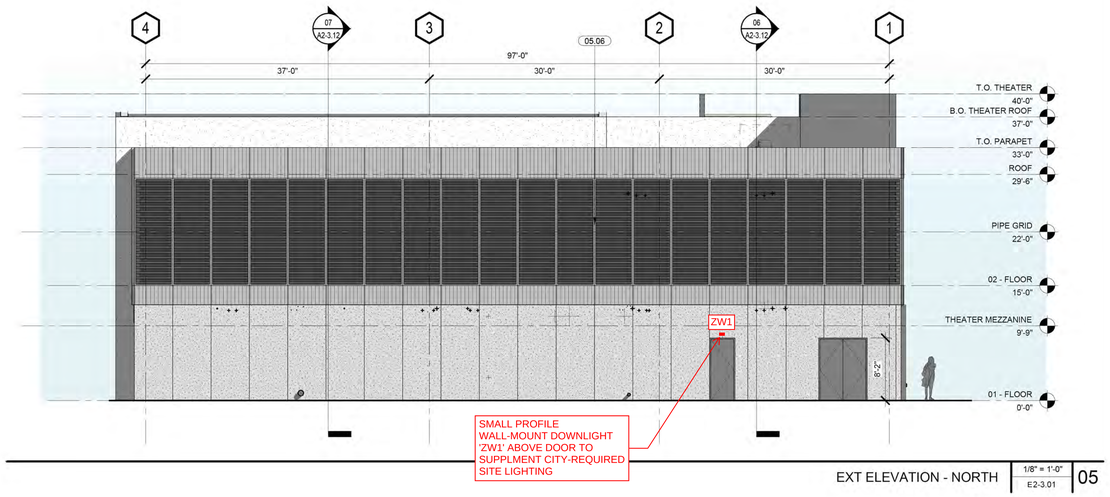
E4.11



BUILDING 2 - VIEW FROM FOLSOM



EXT ELEVATION - SOUTH — 1/8" = 1'-0" — E2-3.01 — 06



EXT ELEVATION - NORTH — 1/8" = 1'-0" — E2-3.01 — 05

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL, HIGH PERFORMANCE PVDF COATING ON STEEL
05.06	ALUMINUM ACOUSTIC LOUVER SCREEN SYSTEM, 50% OPENING. FINISH: TO MATCH MULLIONS
09.13	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS

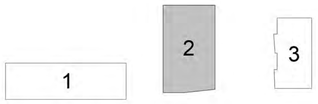
LEGEND

- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS
- METAL PANEL 01 - BASE
- METAL PANEL 02
- INSULATED LOW-E VISION GLAZING (GL-1)
- METAL WALL PANELS WITH RIBBED PROFILE, VERTICAL ORIENTATION,
- DRIFT JOINT

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-_____.
2. ROOF ASSEMBLY TO BE MIN R-_____.

KEYPLAN



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RANCHO CORDOVA, CA 95670

Developed for
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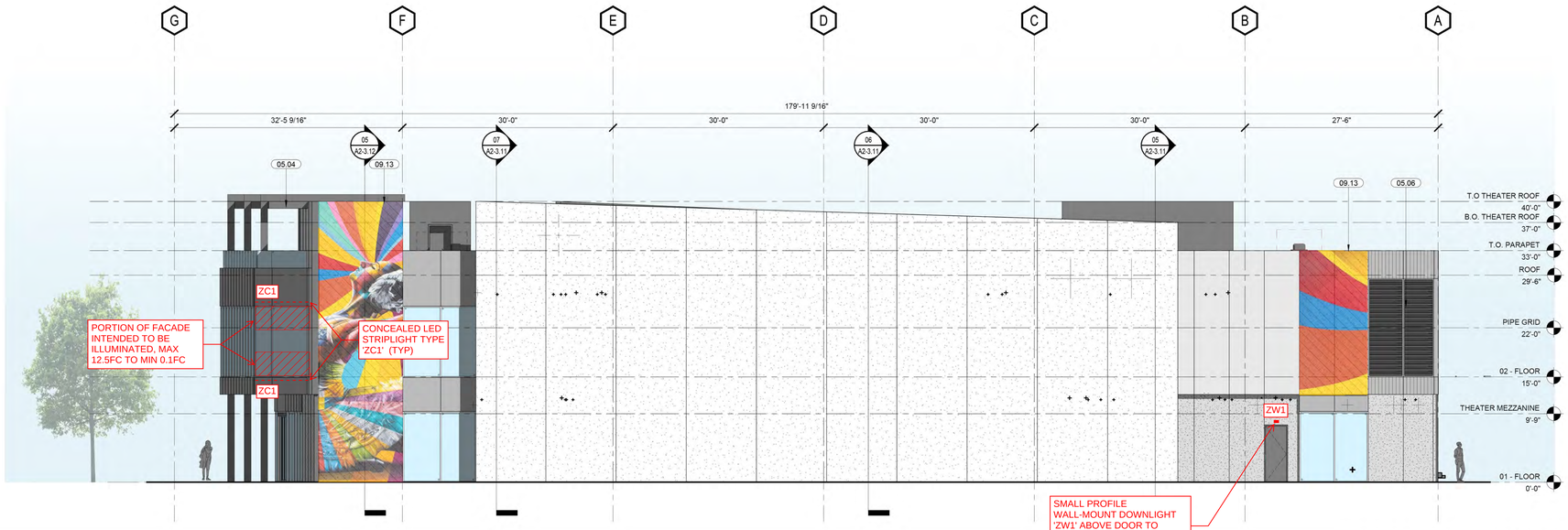
Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/13/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

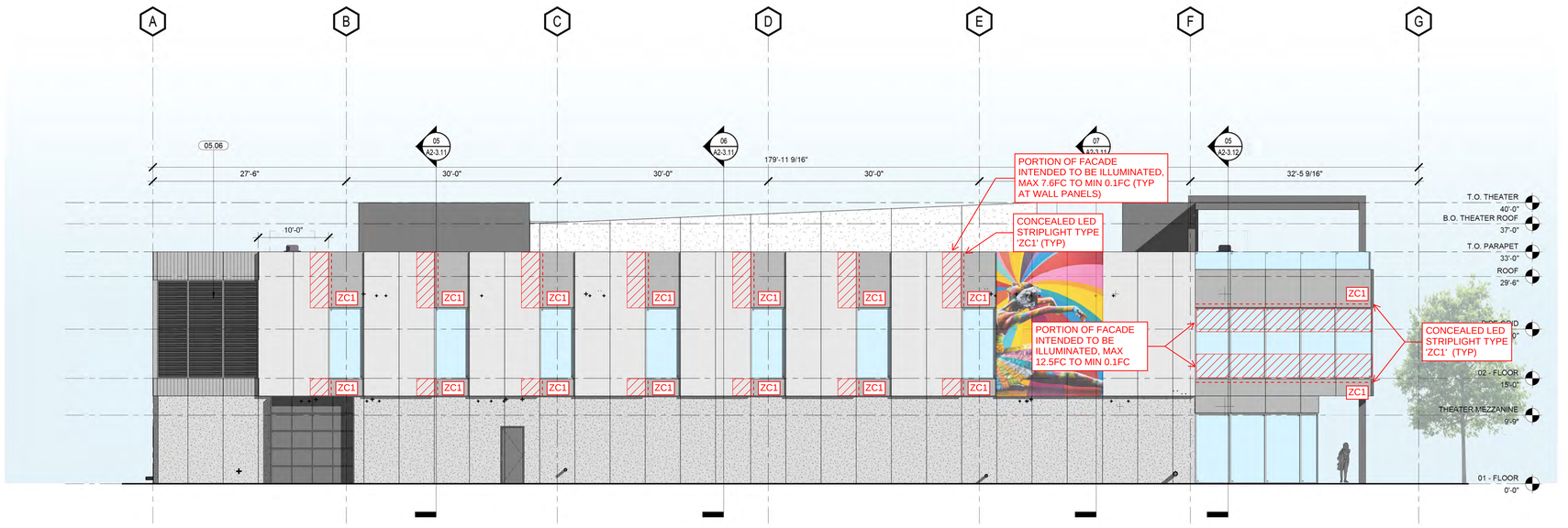
Job Number	30911
Checked By	Checker
Scale	1/8" = 1'-0"

EXTERIOR LIGHTING ELEVATIONS

E5.10



EXT ELEVATION - EAST | 1/8" = 1'-0" | E2-3.02 | 07



EXT ELEVATION - WEST | 1/8" = 1'-0" | E2-3.02 | 05

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL; HIGH PERFORMANCE PVDF COATING ON STEEL
05.06	ALUMINUM ACOUSTIC LOUVER SCREEN SYSTEM, 50% OPENING. FINISH: TO MATCH MULLIONS
09.13	7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS

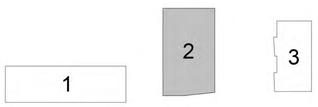
LEGEND

- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: TBD. CONTROL JOINTS NOT TO EXCEED 12' O.C. IN EACH DIRECTION
- 7/8" CEMENT PLASTER ASSEMBLY (PAINTED) WITH SELF-FURRING METAL LATH. FINISH: STEEL TROWELED SMOOTH, TYP. COLOR: WHITE, ART MURAL PAINTED BY OTHERS
- METAL PANEL 01 - BASE
- METAL PANEL 02
- INSULATED LOW-E VISION GLAZING (GL-1)
- METAL WALL PANELS WITH RIBBED PROFILE, VERTICAL ORIENTATION,
- DRIFT JOINT

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-____.
2. ROOF ASSEMBLY TO BE MIN R-____.

KEYPLAN



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Developed for
GRIFFIN | SWINERTON

Submittal	Date
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ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/13/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Revision
Date

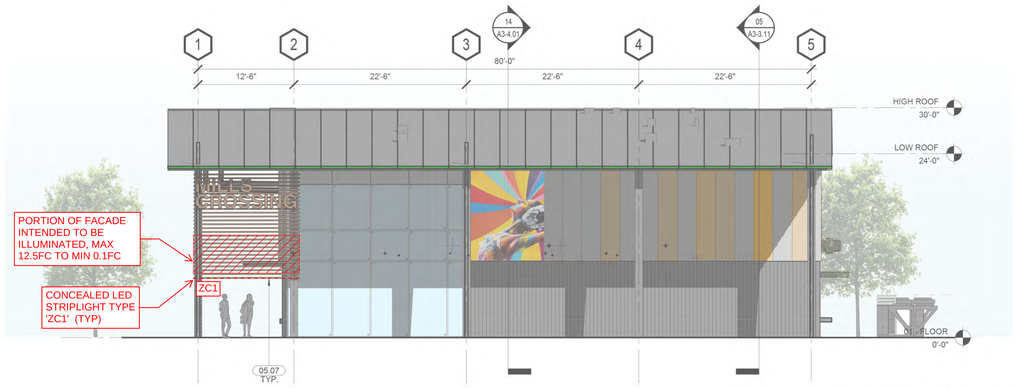
Job Number	30911
Checked By	Checker
Scale	1/8" = 1'-0"

EXTERIOR LIGHTING ELEVATIONS

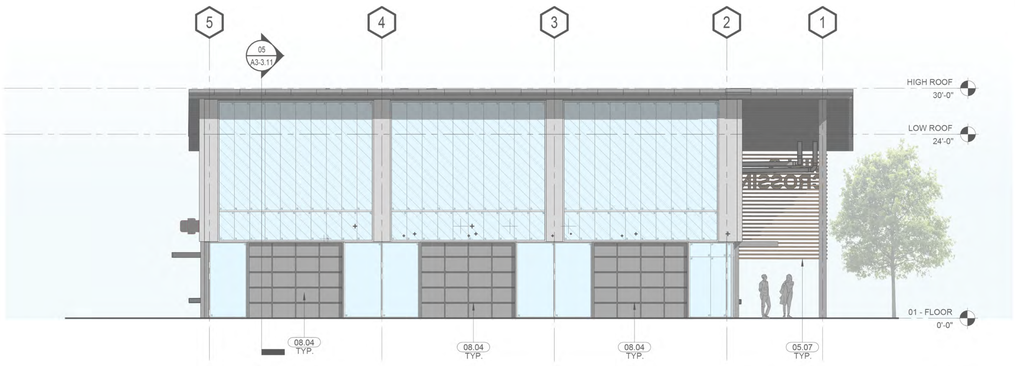
E5.11



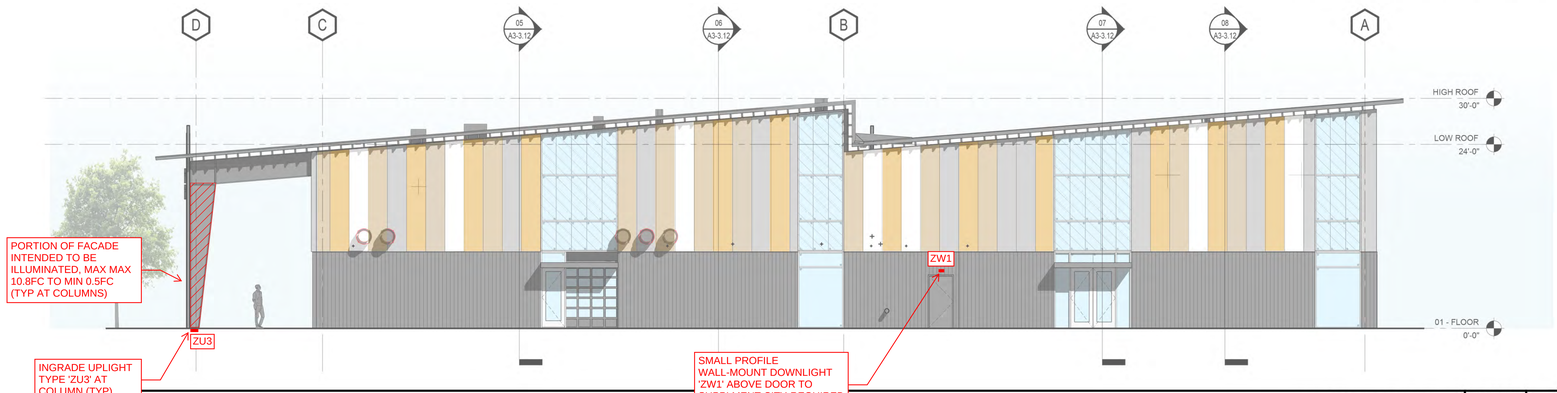
BUILDING 3 - VIEW FROM FOLSOM



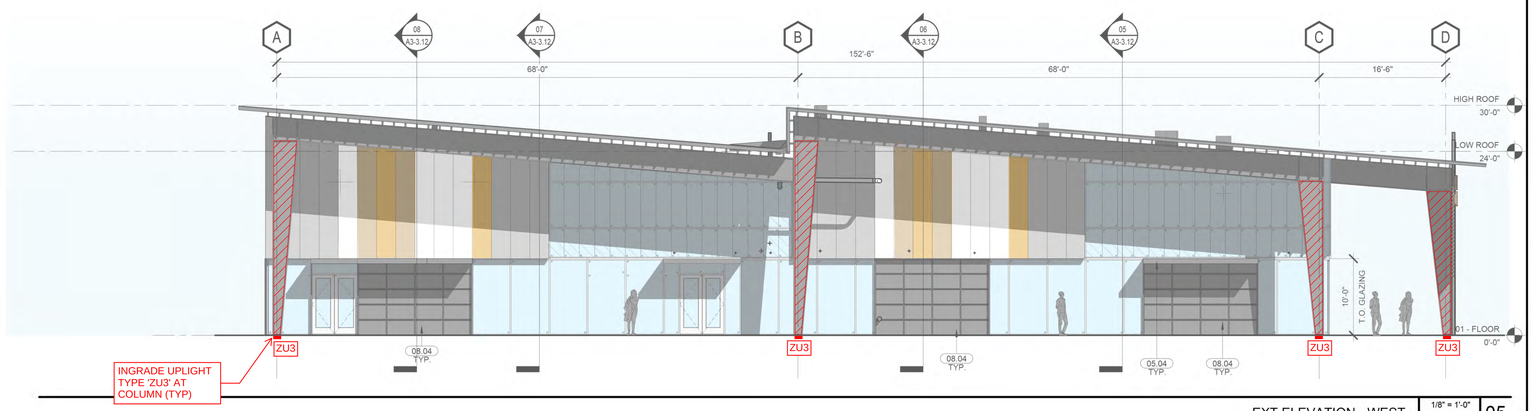
EXT ELEVATION - SOUTH 1/8" = 1'-0" E3-3.01 08



EXT ELEVATION - NORTH 1/8" = 1'-0" E3-3.01 07



EXT ELEVATION - EAST 1/8" = 1'-0" E3-3.01 06



EXT ELEVATION - WEST 1/8" = 1'-0" E3-3.01 05

KEYNOTES

05.04	HSS TUBE STEEL CANOPY WITH ALUMINUM WOOD LOOK LOUVER IN-FILL, HIGH PERFORMANCE PVDF COATING ON STEEL
05.07	CORRUGATED METAL PANEL
08.04	SECTIONAL OVERHEAD DOOR W/ GLAZING

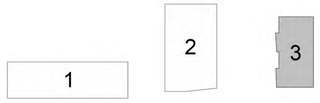
LEGEND

- METAL 01- BASE
  INSULATED METAL WALL PANELS, 30" WIDE, VERTICAL ORIENTATION
- METAL 02- ACCENT
  INSULATED METAL WALL PANELS WITH RIBBED PROFILE, 30" WIDE, VERTICAL ORIENTATION.
- TRANSLUCENT WALL PANELS, 24" WIDE KINGSPAN UNIQUAD
- STANDING SEAM INSULATED METAL ROOF PANELS, 48" WIDE
- INSULATED LOW-E VISION GLAZING (GL-1)
- DRIFT JOINT

GENERAL NOTES

1. EXTERIOR WALL ASSEMBLY TO BE MIN R-____.
2. ROOF ASSEMBLY TO BE MIN R-____.

KEYPLAN



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Date
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Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
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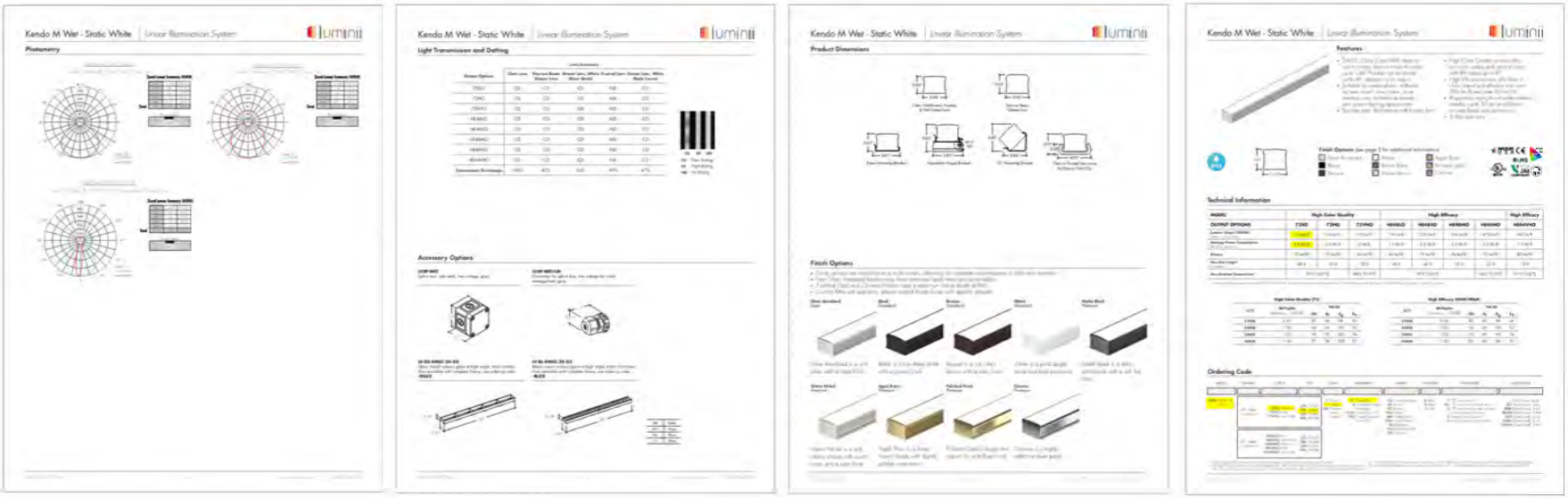
ENTITLEMENT SUBMITTAL #3	11/07/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

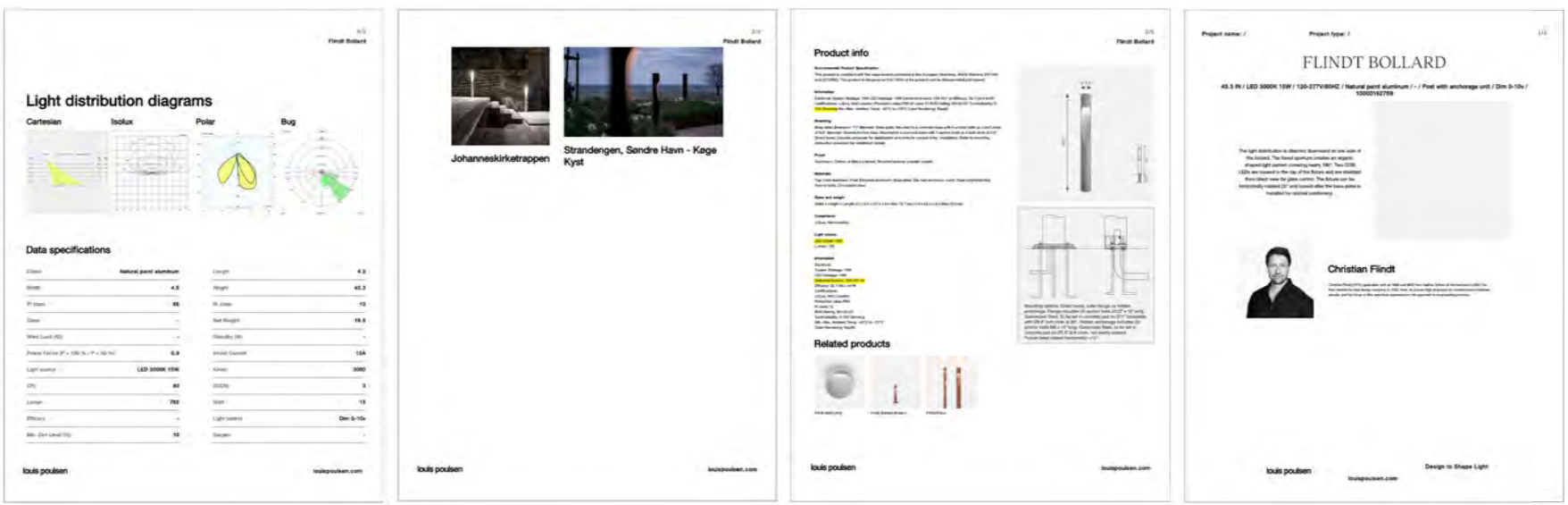
Job Number	30911
Checked By	Checker
Scale	1/8" = 1'-0"

EXTERIOR LIGHTING ELEVATIONS

E6.10



LIGHTING FIXTURE TYPE ZC1 | 03



LIGHTING FIXTURE TYPE ZB1 | 01

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ENTITLEMENT SUBMITTAL #1 03/03/2024
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ENTITLEMENT SUBMITTAL #4 02/10/2024

Job Number 30911
Checked By Checker
Scale

LIGHTING FIXTURE CUTSHEETS

E9.10

CXF5 PIMA

Pendant

Specifications

Housing

In a round shape, this housing is constructed of low copper die-cast aluminum and 0.090" thick spun aluminum. All non-ferrous fasteners prevent corrosion and ensure longer life.

Access-mechanism

The hinged lens frame is cast aluminum with a stainless steel spring latch for tool-less access

Mounting

T: Top arm mount



Light engine

LEDgine is composed of five main components: **Heat Sink, Lens, LED lamp, Optical System, and Driver.** Electrical components are RoHS compliant.

LED module

LED type Lumileds LUXEON T.Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA bin Neutral White, 4000 Kelvin nominal (3985K +/- 275K or 3710K to 4260K) or Warm White, 3000 Kelvin nominal (3045K +/- 175K or 2870K to 3220K), CRI 70 Min. 75 Typical.

Heat sink

Made of cast aluminum optimizing the LEDs efficiency and life. Product does not use any cooling device with moving parts (only passive cooling device).

Finish

Color in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils / 24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard.

Optical system

Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance. Type 2, 3, 3W, 4 and Type 5 Street side indicated. House side shield optional (can be field installed) 2H: Type 2 with House Side Shield, 3H: Type 3 short with house side shield, 3WH: Type 3 Wide with House side shield.

Driver

Driver comes standard with dimming compatible 0-10V. High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC rated for both application line to line or line to neutral. Class I, THD of 20% max. Maximum ambient operating temperature from 40ºF (4ºC) to 130ºF (55ºC). Certified in compliance to UL1310 cULus requirement (dry and damp location). Assembled on a unitized removable tray with Tyco quick disconnect plug resisting to 221ºF (105ºC). The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver sure protection of 2.5kV (min).

DA: 4 Hrs 25% Reduction
DB: 4 Hrs 50% Reduction
DC: 4 Hrs 75% Reduction
DD: 6 Hrs 25% Reduction
DE: 6 Hrs 50% Reduction
DF: 6 Hrs 75% Reduction
DG: 8 Hrs 25% Reduction
DH: 8 Hrs 50% Reduction
DJ: 8 Hrs 75% Reduction
DALI: Pre-set driver compatible with the the DALI logarithmic control system.

FAWS: Field Adjustable Wattage Selector, pre-set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level - see the FAWS multiplier chart for more details. **Note:** It is not recommended to use FAWS with other dimming or controls; if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls.

SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle.

SRD1: Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock.

Surge protection

Surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

Wiring

Gauge 18 wires. Top mount option come with quick disconnects. Arm mount options provide a 6" Minimum exceeding from luminaire.

Hardware

All non-ferrous fasteners prevent corrosion and ensure longer life.

CXF5 PIMA

Pendant

LED Wattage and Lumen Values: Pima CXF5

LED Module: 3000K				Type 2			Type 3			Type 3W			Type 4			Type 4W		
Ordering Code	LED qty	LED Current (mA)	Color Temp.	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)
32-G3-x-730-3	32	350	35	4715	B1-U0-G1	134	4601	B1-U0-G1	131	4521	B1-U0-G1	128	4650	B1-U0-G1	132	4516	B3-U0-G1	128
32-G3-x-730-5	32	530	51	6750	B2-U0-G1	132	6587	B1-U0-G1	129	6473	B1-U0-G2	126	6657	B1-U0-G2	130	6465	B3-U0-G1	126
32-G3-x-730-7	32	700	71	8405	B2-U0-G1	119	8203	B2-U0-G2	116	8061	B2-U0-G2	114	8290	B2-U0-G2	118	8051	B3-U0-G2	114
48-G3-x-730-3	48	350	54	6870	B2-U0-G1	127	6705	B1-U0-G1	124	6589	B1-U0-G2	122	6776	B1-U0-G2	125	6580	B3-U0-G1	122
48-G3-x-730-5	48	530	80	9836	B2-U0-G2	123	9599	B2-U0-G2	120	9433	B2-U0-G2	118	9701	B2-U0-G2	121	9421	B3-U0-G2	118
48-G3-x-730-7	48	700	105	12249	B3-U0-G2	117	11954	B2-U0-G2	114	11747	B2-U0-G2	112	12081	B2-U0-G2	115	11732	B4-U0-G2	112
64-G3-x-730-3	64	350	68	7602	B2-U0-G1	112	7418	B2-U0-G1	109	7290	B1-U0-G2	107	7497	B2-U0-G2	110	7281	B3-U0-G2	107
64-G3-x-730-5	64	530	99	10882	B2-U0-G2	110	10620	B2-U0-G2	107	10437	B2-U0-G2	105	10733	B2-U0-G2	108	10423	B4-U0-G2	105
64-G3-x-730-7	64	700	114	13552	B3-U0-G2	119	13226	B2-U0-G2	116	12997	B2-U0-G2	114	13367	B2-U0-G2	117	12980	B4-U0-G2	114
80-G3-x-730-3	80	350	87	10695	B2-U0-G2	123	10438	B2-U0-G2	120	10257	B2-U0-G2	118	10549	B2-U0-G2	121	10244	B4-U0-G2	118
80-G3-x-730-5	80	530	126	15312	B3-U0-G2	121	14943	B3-U0-G2	118	14684	B2-U0-G2	116	15102	B3-U0-G2	120	14665	B4-U0-G2	116
80-G3-x-730-7	80	700	168	19068	B3-U0-G2	113	18609	B3-U0-G2	111	18287	B3-U0-G3	109	18807	B3-U0-G3	112	18263	B4-U0-G2	109

LED Module: 4000K				Type 2			Type 3			Type 3W			Type 4			Type 4W		
Ordering Code	LED qty	LED Current (mA)	Color Temp.	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)	Delivered Lumens[1]	BUG Rating	Efficacy (LPW)
32-G3-x-740-3	32	350	35	4950	B1-U0-G1	141	4831	B1-U0-G1	137	4747	B1-U0-G1	135	4882	B1-U0-G1	139	4741	B3-U0-G1	135
32-G3-x-740-5	32	530	51	7087	B2-U0-G1	138	6916	B1-U0-G1	135	6797	B1-U0-G2	133	6990	B1-U0-G2	137	6788	B3-U0-G1	133
32-G3-x-740-7	32	700	71	8926	B2-U0-G1	125	8703	B2-U0-G2	122	8564	B2-U0-G2	120	8753	B2-U0-G2	123	8453	B4-U0-G2	120
48-G3-x-740-3	48	350	54	7214	B2-U0-G1	134	7040	B2-U0-G1	130	6918	B1-U0-G2	128	7115	B1-U0-G2	132	6910	B3-U0-G1	128
48-G3-x-740-5	48	530	80	10328	B2-U0-G2	129	10079	B2-U0-G2	126	9904	B2-U0-G2	124	10186	B2-U0-G2	127	9892	B4-U0-G2	124
48-G3-x-740-7	48	700	105	12861	B3-U0-G2	122	12552	B2-U0-G2	120	12334	B2-U0-G2	117	12685	B2-U0-G2	121	12319	B4-U0-G2	117
64-G3-x-740-3	64	350	68	7982	B2-U0-G1	117	7789	B2-U0-G2	114	7655	B1-U0-G2	112	7872	B2-U0-G2	116	7645	B3-U0-G2	112
64-G3-x-740-5	64	530	99	11427	B3-U0-G2	115	11151	B2-U0-G2	112	10958	B2-U0-G2	111	11270	B2-U0-G2	114	10944	B4-U0-G2	110
64-G3-x-740-7	64	700	114	14230	B3-U0-G2	125	13887	B3-U0-G2	122	13647	B2-U0-G2	120	14035	B2-U0-G2	123	13629	B4-U0-G2	120
80-G3-x-740-3	80	350	87	11230	B3-U0-G2	129	10960	B2-U0-G2	126	10770	B2-U0-G2	124	11078	B2-U0-G2	127	10756	B4-U0-G2	123
80-G3-x-740-5	80	530	126	16077	B3-U0-G2	127	15690	B3-U0-G2	124	15418	B2-U0-G2	122	15857	B3-U0-G2	126	15399	B4-U0-G2	122
80-G3-x-740-7	80	700	168	20022	B3-U0-G2	119	19539	B3-U0-G2	116	19201	B3-U0-G3	114	19747	B3-U0-G3	117	19177	B4-U0-G2	114

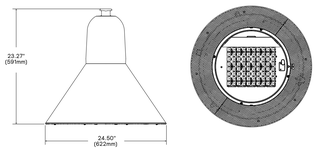
1. System input wattage may vary based on input voltage, by up to +/- 10% , and based on manufacturer forward voltage, by up to +/- 8%.
2. Lumen values based on photometric tests performed in compliance with IESNA LM-79.
Note: Some data may be scaled based on tests of similar, but not identical, luminaires.

CXF5 PIMA

Pendant

Dimensions

Width 24-1/2" diameter
Height 23-3/8"
EPA 1.52 sq. ft
Weight (maximum) 44 lbs (19.96 kg)



Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours.

Ambient Temperature °C	Driver mA	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	700 mA	>100,000 hours	>60,000 hours	>87%

Field Adjustable Wattage (FAWS) Multiplier Chart

FAWS Position	Typical Delivered Lumens Multiplier	Typical System Wattage
1	0.31	0.28
2	0.53	0.50
3	0.62	0.58
4	0.70	0.67
5	0.78	0.75
6	0.83	0.81
7	0.89	0.87
8	0.92	0.91
9	0.96	0.95
10	1.00	1.00

Note: Typical value accuracy +/- 5%

HADCO by Signify

Urban

PIMA

CXF5 Pendant



The Hadco Pima pendant family offers a simple modern take on the traditional pendant lantern, providing style and elegance to downtownareas, commercial developments, parks and residential communities. These pendants use the latest LED technology which maximizes energy savings and provides uniform and comfortable light.

Project:
Location:
Cat.No.
Type:
Lamps: Qty:
Notes:

Ordering guide

example: CXF5-32-G3-T-A-2-730-A-3-N-SP1-N

Series	LEDs	Generation	Mounting	Finish	Optics	CCT	Voltage	Drive current
CXF5 Pima	32 32 LEDs 48 48 LEDs 64 64 LEDs 80 80 LEDs	G3 Gen 3	T Top arm	A Black B White G Verde H Bronze I Gray J Green	2 Type 2 2H Type 2 w/HSS 3 Type 3 3H Type 3 w/HSS 3W Type 3 Wide 3WH Type 3 Wide w/HSS 4 Type 4 5 Type 5	730 Warm 3000K 740 Neutral 4000K	A 120-277 VAC B[1] 347-480 VAC	3 350mA 5 530 mA 7 700mA

Receptacle 7 pin twist lock. This luminaire but must be selected with the arm bracket. It is not part of the luminaire code. See bracket ordering guide for coding.

Ordering guide (continued)

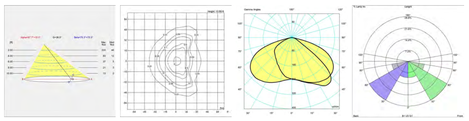
Driver Options	Surge protection
DA 4 Hrs 25% Reduction DB 4 Hrs 50% Reduction DC 4 Hrs 75% Reduction DD 6 Hrs 25% Reduction DE 6 Hrs 50% Reduction DF 6 Hrs 75% Reduction DG 8 Hrs 25% Reduction DH 8 Hrs 50% Reduction DJ 8 Hrs 75% Reduction DALI Compatible with DALI S FAWS Filed adjustable wattage slector SRD[2] Sensor ready driver, standard configuration SRDF Sensor ready driver, alternate configuration N No dimming	SP1 10kV/20kA SP2 20kV/10kV

Footnotes
1. 32 LED at 350mA and 530mA are not compatible with 347-480V.
2. 347-480V not compatible with optional dimming or optional programming.

Class	-	Net Weight	13.1
Wind Load (ft2)	0.6	Standby (W)	-
Power Factor (P = 100 % / P = 50 %)	0.95	Inrush Current	51.5 A
Light source	LED 3000K	Kelvin	3000
CRI	80	SDCM	3
Lumen	3213	Watt	37
Efficacy	87	Light control	Dim 0-10v hi
Min. Dim Level (%)	10	Surges	-
BUG Rating	B1 U0 G1	L80B50 (hours)	-
Driver life	-		

Light distribution diagrams

Cartesian Isolux Polar Bug



Spare parts & accessories

Product	Variant number
Homann Park replacement kit LED-D U 3K 3G U5	5747921383
Homann Park replacement kit LED-D U 4K 3G U5	5747921395
Homann Park replacement kit LED-D U 3K 5F U5	5747921421
Homann Park replacement kit LED-D U 4K 5F U5	5747921434
Homann Park replacement kit LED-D H 3K 3G U5	5747921463
Homann Park replacement kit LED-D H 4K 3G U5	5747921476
Homann Park replacement kit LED-D H 3K 5F U5	5747921489
Homann Park replacement kit LED-D H 4K 5F U5	5747921482
Homann Park Lower front screen U5	5747920019
Homann Park Lower front screen NUP U5	5747920202

Data specifications

Colour	Natural paint aluminum	Length	22.3
Width	15.4	Height	3.9
IP class	64	IK class	08

Product info

Environmental Product Specification
This product is compliant with the requirements contained in the European Directives, RoHS Directive 2011/65 and 2015/863. This product is designed so that 100% of the product can be disassembled and reused.

Information
Electrical: System Wattage: 19W or 37W LED Wattage: 17 W or 35 W Delivered lumens: 1,824 - 3,696 Efficacy: 96.0 lm/W - 99.9 lm/W Certifications: cULus, Wet Location Protection class IP65 IK class 09 BUG Rating: B1-U0-G1; B1-U1-G1; B1-U0-G2; B1-U1-G2 Controllability: 0-10V Dimming Min.-Max. Ambient Temp: -40°C to +55°C Color Rendering: Ra≥80 Wind Load EPA: 0.6 sq ft

Mounting
Post top: T-Taper-SIN-2.4IN mounts directly on top of Taper (SIN-2.4IN) poles; T-CRA-SIN-3IN mounts directly on top of dual round aluminum (CRA-SIN-3IN) poles.

Finish
Natural painted aluminum, powder coated.

Materials
Lower diffuser: Injection molded opal acrylic. Lower glass: Plate of clear polycarbonate. Upper diffuser: Injection molded opal acrylic. Housing: Die cast aluminum. Base: Die cast aluminum.

Sizes and weight
Width x Height x Length (in.) | 15.4 x 3.9 x 22.3 Max 17.1 lbs

Compliance
cULus, Wet location.

Light source
LED 3000K
Lumen: 3213

Information
Electrical:
System Wattage: 19W or 37W
LED Wattage: 17 W or 35 W
Delivered lumens: 1,824 - 3,696
Efficacy: 96.0 lm/W - 99.9 lm/W
Certifications:
cULus, Wet Location
Protection class IP65
IK class 09
BUG Rating: B1-U0-G1; B1-U1-G1; B1-U0-G2; B1-U1-G2
Controllability: 0-10V Dimming
Min.-Max. Ambient Temp: -40°C to +55°C
Color Rendering: Ra≥80
Wind Load EPA: 0.6 sq ft



Project name: / **Project type: /**

HOMANN PARK

LED 3000K / 120-277V/60HZ / Natural paint aluminum / 3G / No Uplight / - / Ø60 pole / Dim 0-10v hi / 5747921146

The fixture provides direct downward illumination and is self-illuminating. The fixture is available in two variants; an uplight and an NO uplight version. Light distribution round symmetrical or asymmetrical. It emphasizes the shape of the luminaire and creates ambience and comfort.





Alfred Homann

Alfred Homann grew up in South Zealand, Denmark. In 1976, he graduated as an architect from the Royal Danish Academy of Fine arts in Copenhagen.





GRIFFIN SWINERTON

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MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670

Developed for
GRIFFIN | SWINERTON

Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	01/03/2025
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	

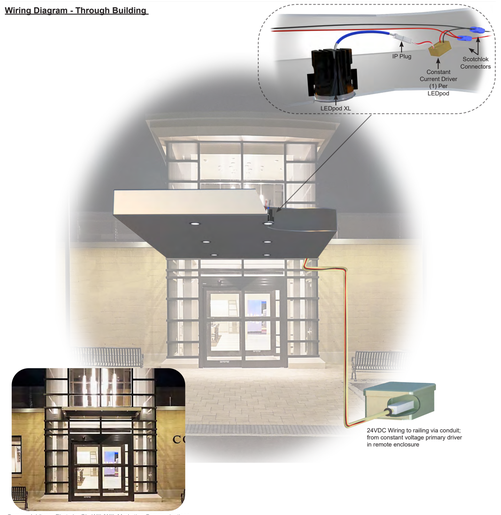
LIGHTING FIXTURE CUTSHEETS

E9.11

KLIK USA
2840 N Brookfield Rd, Suite 3 Brookfield, WI 53045 | PH: 262.505.5124 FX: 262.753.6582 | www.klikusa.com sales@klikusa.com

Project Name: | Location:
Specifier: | Rep Agency:
Fixture Type: | Product Code:

Wiring Diagram - Through Building



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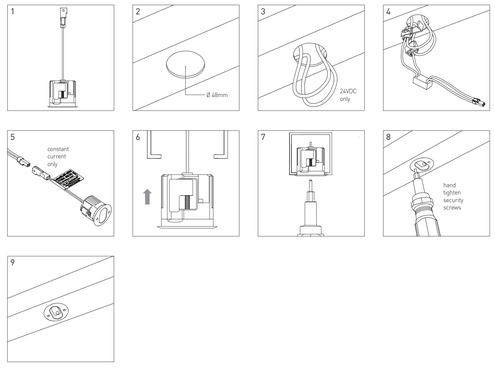
KLIK USA
2840 N Brookfield Rd, Suite 3 Brookfield, WI 53045 | PH: 262.505.5124 FX: 262.753.6582 | www.klikusa.com sales@klikusa.com

Project Name: | Location:
Specifier: | Rep Agency:
Fixture Type: | Product Code:

Installation Instructions *Additional instructions may apply, consult factory.*

KLIK USA — Instruction Sheet
LEDpod XL50 · 24VDC
Dimensions Ø 52 ~ 1.40
Weight 0.088kg/m



35092-A.2

KLIK USA
2840 N Brookfield Rd, Suite 3 Brookfield, WI 53045 | PH: 262.505.5124 FX: 262.753.6582 | www.klikusa.com sales@klikusa.com

Project Name: | Location:
Specifier: | Rep Agency:
Fixture Type: | Product Code:

LED Performance

LED: Cree XT-E
CCT: 2700, 3000, 4000 *(others available)*
CRI: 80-85
Life: 80% at 50k hrs and 85° C
Binning: 3 MacAdam Steps
Warranty: 5 Year Warranty



Optics			Lens			Reflector		
Beam Angle			SP *spot 26°*	NFL *narrow flood 32°*	FL *flood 62°*	SP *spot 24°*	NFL *narrow flood 30°*	FL *flood 64°*
LOR defined by optics			78	77	78	90	87	88
lm	w	mA	System Lumens @4000K					
300	2.3	350	234	231	234	270	260	264
375	3.1	500	293	289	293	338	325	330
525	4.4	700	410	405	410	473	456	462
690	6.3	1000	539	532	539	621	600	607
810	7.5	1200	632	624	632	729	704	712

Remote Mounting Distance

24 VDC 100W Driver:
- Up to 300' remote length from driver to first LED w/10ga wire
- Contact factory for detailed calculations
- Calculations based on 2' centers between pods at 700mA (2.5W).
- Increased spacing reduces number of pods per circuit.

Primary Driver

	Secondary LED Driver	Spacing	Maximum KLIK LEDpods™*
110 - 277 Primary Voltage Remotely Mounted Dimming Control 10' x 1.5" x 2"	1200mA	8'	9
	1000mA	8'	12
	700mA	8'	18
	500mA	8'	24
	350mA	8'	32

*Based on 16 AWG between LEDpods

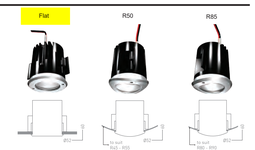
Required Accessories

LPO66WPRITRNDM Class 2 IP67 driver, 110-277VAC to 24VDC constant voltage, 0-10 Dim
LP100WPRITRNDM Class 2 Driver, Dimming, Input voltage = 120-277 VAC, Output voltage = 24 VDC, 5 year warranty
LPNEMA2ENCL NEMA2 INDOOR enclosure for LP100WPRITRNDIM, 12" x 3.3" x 2"
LPNEMA3RENCLJR NEMA 3R Drip Proof Enclosure, 4 x 4 x 12 (IP32 Equivalent)
LPNEMA4ENCLJR NEMA4 Watertight Enclosure, 6 x 4 x 12 (IP66 Equivalent); NEMA4X
LPNEMA6PRENCL Available NEMA 6P Submersible Enclosure 15" x 8" x 6" (IP67 Equivalent)
Additional driver & enclosure configurations available. Please note the KLIK UL Listing requires purchase of a remote driver and enclosure.

KLIK USA
2840 N Brookfield Rd, Suite 3 Brookfield, WI 53045 | PH: 262.505.5124 FX: 262.753.6582 | www.klikusa.com sales@klikusa.com

Project Name: | Location:
Specifier: | Rep Agency:
Fixture Type: | Product Code:

KLIK LEDpod™ XL50 Patented



Description

Minimalist point source LED fixture with multiple outputs for use in hollow metal structures such as guard rails, awnings, canopies and custom luminaires. Please note these fixtures are not for use in hand rail.

Housing

Clear anodized aluminum body as standard. Color-match anodized as an option, consult factory.

Aluminum body has a fine 25-micron finish and is hard-coat anodized, thus preventing galvanic corrosion.

Mounting

Unique concealed internal mounting wings hold the fixture in place, deployed via unobtrusive screw holes with patent-pending anti-tamper screws.
- Tube Size:
  - -XL50 Flat: RHS min 2.75" height, Max. wall .3125"
  - -XL50R50: Ø 3" - 5", Max. wall .3125"
  - -XL50R85: Ø 6" - 8", Max. wall .3125"
  - -*Other sizes available upon request*
- Cut Out: 48mm (1.90")
- Weight: 0.43 LBS



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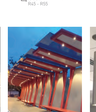

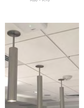

Electrical/LED Driver

- Input Voltage: 24 VDC
- Operating Temp: -40 to 120° F
- Efficiency: Up to 120 lm/W
- Driver: Must use class 2 driver
  - Primary Driver: 110 - 277 VAC UL Listed Constant Voltage
  - Secondary Driver: Constant Current (provided with fixture)
- Control: DALI, 0-10V, DMX
  - DMX control typically for dimming only; Contact factory for addressable and RGBW options
- Enclosure: Minimum NEMA2 for indoor, NEMA 3R for outdoor
- Wire connectors provided; factory wire-harness available, consult factory

*Please note, all KLIK fixtures are now dimmable as standard
**Must purchase Driver and Enclosure through KLIK to hold warranty



Symmetric

Listings

- ETL listed, UL 1598/CSA 22.2; CE
- cETL
- IP65 rated *All IP rated luminaires tested to AS60529-2004 Degrees of protection provided by enclosures (IP Code)*
- Class 3 device
- Viet location rated
- International Dark Sky Association Certified *(Color temperature must be Amber or less than 3000K)*

Product Codes Follow the steps to specify your fixture. Enter Product Code in field at top of page. Example: **LPXL50F0027K2.3SSPT**

Fixture Type	Size	Bezel Profile	Color	Wattage	Distribution	Optic	Lens[1,2]	Custom Bezel[1,2]
LPXL LEDpod XL	**50** Drill: 1.90" Hole	**F90** Flat **R50** 50mmR **R85** 85mmR	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K **50K** 5000K **RED** Red **GRN** Green **BLU** Blue **AMB** Amber **PCA** PC Amber **RGB** RGBW	**2.3** 2.3 Watts **3.2** 3.2 Watts **4.5** 4.5 Watts **6.6** 6.6 Watts **7.5** 7.5 Watts	**S** Symmetric	**SPT** Spot **NFL** Narrow Flood **FLD** Flood **SPTRFL** Spot Reflector **NFLRFL** Narrow Flood Reflector **FLDRFL** Flood Reflector	Clear lens standard **FRS** Frosted (only optic FLDRFL)	**DUL** DULUX Colors (request color guide) **ANO** Anodize **SPC** Standard Powdercoat **SHR** Diode shroud for horizontal mount

1. *Additional charges and lead time apply for this feature.*
2. Contact factory

GRIFFIN SWINERTON

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dmf
M Series Commercial
4" Round Downlight

TRIMS

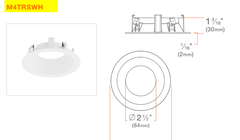


4" Round Trims
M4TR

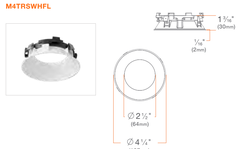
SUMMARY

CONSTRUCTION: Die-cast aluminum
DECORATIVE: Acrylic diffuser
INSTALLATION: Twist & Lock

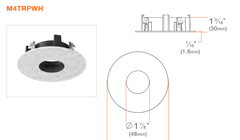
Standard
M4TRSWH



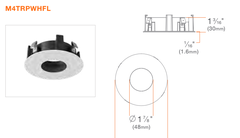
Flangeless
M4TRSWHFL



Pinhole
M4TRPWH



Flangeless Pinhole
M4TRPWHFL



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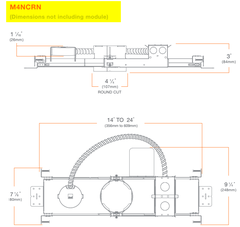
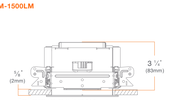
dmf
M Series Commercial
4" Round Downlight

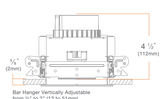
New Construction
M4NCRN
(Dimensions not including module)



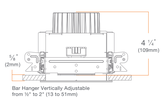
Total Height in Plenum
750LM-1500LM



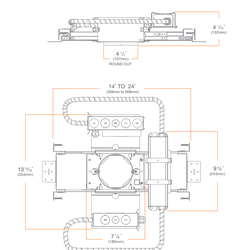
2000LM



2500LM-3500LM/DALI-2



Emergency Lighting
M4NCRNxxxEM
M4NCRNxxxAWNEM
(Dimensions not including module)



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dmf
M Series Commercial
4" Round Downlight

PRODUCT BUILDER | ROUND | DOWNLIGHT | EMBEDDED 0-10V

HOUSING

PRODUCT CODE	
M4NCRN	4" Round Housing, New Construction, Non-IC Rated
M4RMRN	4" Round Housing, Remodel, Non-IC Rated [1]

LIGHT MODULE

PRODUCT CODE		LUMENS		CRI		CCT		BEAM SPREAD		DIMMING	
MD				9						O	
MD	Downlight Module	07	750 lm	9	93 CRI	27	2700K	GA	General Ambient (90°+) [3]	D	0-10V
		10	1000 lm			30	3000K	NS	Narrow Spot (15°) [3]		
		12	1250 lm			35	3500K	SP	Spot (25°)		
		15	1500 lm			40	4000K	FL	Flood (60°)		
		20	2000 lm			3W	Warm Dim (3000–1800K) [2]	WF	Wide Flood (60°)		
		25	2500 lm								
		30	3000 lm								
		35	3500 lm								

TRIM | STANDARD

PRODUCT CODE		FINISH		OPTION	
M4TRS	Standard Trim	WH	White	[Blank]	None
M4TRL	Wall Wash/Sloped Ceiling Trim [4]	BK	Black	FL	Flangeless [4,7]
M4TRP	Pinhole Trim [5,6]	BZ	Bronze	VP	Vandal Proof/IP65 [5]
M4TRH	Hyperbolic Trim [6]	CW	Clear Diffuse, White Flange		
		WW	Warm Diffuse, White Flange		
		CC	Custom Color		

TRIM | DECORATIVE (WHITE FINISH ONLY)

PRODUCT CODE	
M4TRSWHDOF	Decorative Open, Frosted [3,8]
M4TRSWHDCF	Decorative Closed, Frosted [3,8]
M4TRSWHDCC	Decorative Closed, Clear Frosted Side [3,8]
M4TRSWHDCCF	Decorative Closed, Clear Frosted Inside [3,8]

OPTICS

MDLX-GA	Low Lumen (750-2000LM) Downlight Optic GA 90° Beam Spread
MDLX-NS	Low Lumen (750-2000LM) Downlight Optic NS 15° Beam Spread
MDLX-SP	Low Lumen (750-2000LM) Downlight Optic SP 25° Beam Spread
MDLX-FL	Low Lumen (750-2000LM) Downlight Optic FL 40° Beam Spread
MDLX-WF	Low Lumen (750-2000LM) Downlight Optic WF 60° Beam Spread
MDHX-SP	High Lumen (2500-3500LM) Downlight Optic SP 25° Beam Spread
MDHX-FL	High Lumen (2500-3500LM) Downlight Optic FL 40° Beam Spread
MDHX-WF	High Lumen (2500-3500LM) Downlight Optic WF 60° Beam Spread

ACCESSORIES

M4XRMUD	Flangeless Mud Plate [10]
M4KRTEMPLATE	Flangeless Wood Template [11]
M4CREXT	Round Extension Collar [12]

[1] *Not available with flangeless or vandal proof trim options nor extension collars*
[2] *Only available in 1500 lm, not available in Narrow Spot beam spread*
[3] *Only available in 750-2000 lm*
[4] *Recommended with WF Beam spread for general wall washing and SP for sloped ceilings. Not available in Custom Color*
[5] *Only available in 750-1500 lm*
[6] *Only available in White, Black, or Bronze finish*
[7] *Mud plate required for FL installation, except for wood ceiling; Not compatible with remodel housing*
[8] *Only available in Standard Style and White, Anti-Microbial Finish for Installation in New Construction housing only. Not compatible with extension collars*
[9] *Recomended for use with General Ambient beam spread*
[10] *Required for Flangeless Trim drywall installation*
[11] *Recommended for Flangeless Trim wood installation*
[12] *For New Construction Only - Ceiling Installations up to 3"*

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dmf
M Series Commercial

Project:	Type:
Product Code:	Date:

V091224



4" Round Downlight

Versatile Solution for all spaces providing high quality lighting ranging from 750lm all the way up to 3500lm

Expedited Install with our easily adjustable universal housing and bar hanger systems allowing for application in most ceiling types

Enhanced Serviceability is achieved through interchangeable modules, optics, and trims, all of which allow for ease of maintenance and implementation of design changes below the ceiling plane

Seamless Integration with several control systems allowing two-channel control dimming options down as low as 0.1%

INSTALLATION

Ceiling Thickness
New Construction: ½" up to 2"
Remodel: ¼" up to 1 ¼"
Extension Collar: ⅛" to 3"

Ceiling Material
Drywall, Millwork

TRIMS

Aperture
4"

Shape
Round

Style
Standard, Hyperbolic, Pinhole, Wall Wash, Flangeless, Decorative, Vandal Proof/IP65

Finish
White, Black, Bronze, Clear Diffuse, Warm Diffuse

LIGHT OUTPUT & DISTRIBUTION

Module
Downlight

Lumens (Power)
750 lm (9.5W), 1000 lm (12.5W), 1250 lm (14.3W), 1500 lm (14.3W), 2000 lm (24.5W), 2500 lm (27.5W), 3000 lm (34.0W), 3500 lm (40.5W)

Color Quality
93 CRI, 2-step SDCM

Color Temperature
2700K 3000K 3500K
4000K Warm Dim (3000-1800K)
Tunable White (4000–1800K)
Tunable White (6500–2700K)

Beam Spread
15° Narrow Spot
25° Spot
40° Flood
60° Wide Flood
90°+ General

POWER & CONTROLS

Input Voltage
120/277V

Dimming
0-10V (1%), Lutron Athena Wireless Node (1%), DALI-2 (0.1%) (Coming Soon)

RATINGS & CERTIFICATIONS

Housing
RoHS Compliant

Module and Trim
Wet Location/IP65 Rated Configurations Available
(Standard trims and covered areas only)
NSF Listed
(White and black finish only)
IK10 Rated Option Available
(Vandal Proof trim)

Warranty
5 year limited warranty; 50,000 hours

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MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670
Developed for
GRIFFIN | SWINERTON

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	01/10/2025
ENTITLEMENT SUBMITTAL #4	02/10/2025

Date
Revision

Job Number	30911
Checked By	Checker
Scale	

LIGHTING FIXTURE CUTSHEETS

E9.12

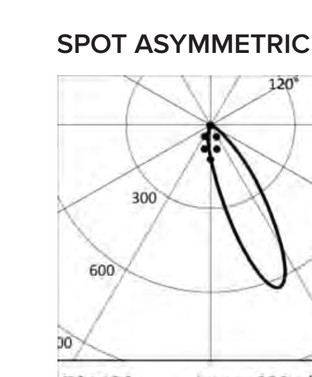
TARGETTI

JUPITER

PHOTOMETRY

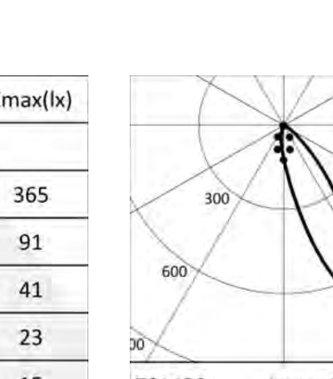
IES FILES WATTAGE AND EFFICIENCY CALCULATIONS BASED WITH SUPPLIED DRIVER

SPOT ASYMMETRIC LOUVER



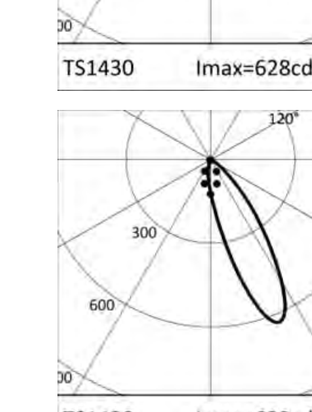
2700K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			26°	26°	
Fixture Power	7W	1	0.56	0.50	365
Source Flux	723lm	2	1.11	1.00	91
Fixture Flux	153lm	3	1.67	1.51	41
Efficacy	23lm/W	4	2.22	2.01	23
Imax	454cd	5	2.78	2.51	15

TS1430 Imax=628cd/klm



3000K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			26°	26°	
Fixture Power	7W	1	0.56	0.50	381
Source Flux	756lm	2	1.11	1.00	95
Fixture Flux	161lm	3	1.67	1.51	42
Efficacy	24lm/W	4	2.22	2.01	24
Imax	475cd	5	2.78	2.51	15

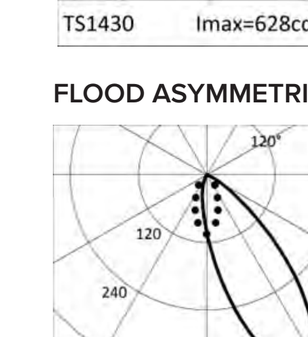
TS1430 Imax=628cd/klm



4000K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			26°	26°	
Fixture Power	7W	1	0.56	0.50	393
Source Flux	779lm	2	1.11	1.00	98
Fixture Flux	165lm	3	1.67	1.51	44
Efficacy	25lm/W	4	2.22	2.01	25
Imax	489cd	5	2.78	2.51	16

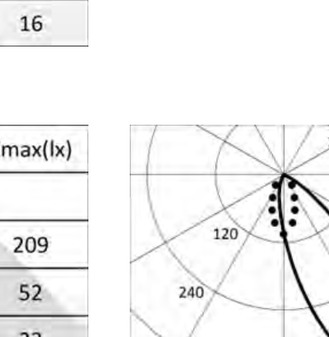
TS1430 Imax=628cd/klm

FLOOD ASYMMETRIC LOUVER



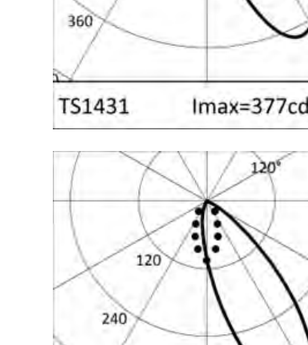
2700K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			36°	41°	
Fixture Power	7W	1	0.82	0.82	209
Source Flux	723lm	2	1.64	1.64	52
Fixture Flux	147lm	3	2.46	2.46	23
Efficacy	22lm/W	4	3.29	3.29	13
Imax	273cd	5	4.11	4.11	8

TS1431 Imax=377cd/klm



3000K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			36°	41°	
Fixture Power	7W	1	0.82	0.82	218
Source Flux	756lm	2	1.64	1.64	55
Fixture Flux	154lm	3	2.46	2.46	24
Efficacy	23lm/W	4	3.29	3.29	14
Imax	285cd	5	4.11	4.11	9

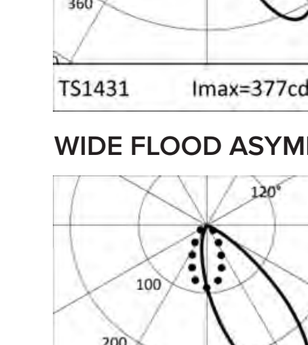
TS1431 Imax=377cd/klm



4000K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			36°	41°	
Fixture Power	7W	1	0.82	0.82	225
Source Flux	779lm	2	1.64	1.64	56
Fixture Flux	159lm	3	2.46	2.46	25
Efficacy	24lm/W	4	3.29	3.29	14
Imax	294cd	5	4.11	4.11	9

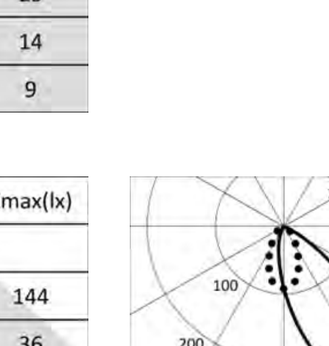
TS1431 Imax=377cd/klm

WIDE FLOOD ASYMMETRIC LOUVER



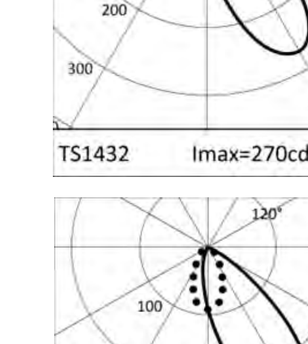
2700K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			42°	49°	
Fixture Power	7W	1	1.01	1.05	144
Source Flux	723lm	2	2.01	2.11	36
Fixture Flux	136lm	3	3.02	3.16	16
Efficacy	20lm/W	4	4.03	4.22	9
Imax	195cd	5	5.03	5.27	6

TS1432 Imax=270cd/klm



3000K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			42°	49°	
Fixture Power	7W	1	1.01	1.05	151
Source Flux	756lm	2	2.01	2.11	38
Fixture Flux	143lm	3	3.02	3.16	17
Efficacy	21lm/W	4	4.03	4.22	9
Imax	204cd	5	5.03	5.27	6

TS1432 Imax=270cd/klm



4000K		H(m)	D1(m)	D2(m)	Emax(lx)
Ra90			42°	49°	
Fixture Power	7W	1	1.01	1.05	155
Source Flux	779lm	2	2.01	2.11	39
Fixture Flux	147lm	3	3.02	3.16	17
Efficacy	22lm/W	4	4.03	4.22	10
Imax	211cd	5	5.03	5.27	6

TS1432 Imax=270cd/klm

TARGETTI

JUPITER

9 - POWER SUPPLY (REQUIRED)

ENCLOSURE

Part No.	Wattage	Control	Dim Range	Rating	In / Out Voltage	Certification	Dimensions (Enclosure)	Description
DMLE301242UD	30W	MLV / ELV / 0-10V / TRIAC	10%	NEMA3R	120-277V / 24V	UL Class 2	4.47" X 6.79" X 1.38"	EMCOD MLE-UD electronic driver with wiring compartment.
DELV30124DJBX	30W	0-10V	0.1%	IP65	120-277V / 24V	UL Class 2	12.1" X 2.4" X 1.4"	Magnitude SOLIDrive electronic driver with built in junction box.
DMLE601242UD	60W	MLV / ELV / 0-10V / TRIAC	10%	NEMA3R	120-277V / 24V	UL Class 2	4.47" X 6.79" X 1.38"	EMCOD MLE-UD electronic driver with wiring compartment.
DELV60124DJBX	60W	0-10V	0.1%	IP65	120-277V / 24V	UL Class 2	12.1" X 2.4" X 1.4"	Magnitude SOLIDrive electronic driver with built in junction box.
DMLE961242UD	96W	MLV / ELV / 0-10V / TRIAC	10%	NEMA3R	120-277V / 24V	UL Class 2	5.16" X 7.73" X 1.54"	EMCOD MLE-UD electronic driver with wiring compartment.
DELV96124DJBX	96W	0-10V	0.1%	IP65	120-277V / 24V	UL Class 2	12.1" X 2.4" X 1.4"	Magnitude SOLIDrive electronic driver with built in junction box.
DMLE1922242UD	2X96W	MLV / ELV / 0-10V / TRIAC	10%	NEMA3R	120-277V / 24V	UL Class 2	5.04" X 10.94" X 1.81"	EMCOD MLE-UD electronic driver with wiring compartment.
DMLE2882242UD	3X96W	MLV / ELV / 0-10V / TRIAC	10%	NEMA3R	120-277V / 24V	UL Class 2	5.04" X 10.94" X 1.81"	EMCOD MLE-UD electronic driver with wiring compartment.

STANDALONE

Part No.	Wattage	Control	Dim Range	Rating	In / Out Voltage	Certification	Dimensions (Standalone)	Description
DELV30124D	30W	0-10V	0.1%	IP65	120-277V / 24V	UR Class 2	7.5" X 2.4" X 1.4"	Magnitude SOLIDrive electronic standalone driver. **UL listed enclosure provided by others.**
DELV60124D	60W	0-10V	0.1%	IP65	120-277V / 24V	UR Class 2	7.5" X 2.4" X 1.4"	Magnitude SOLIDrive electronic standalone driver. **UL listed enclosure provided by others.**
DELV96124D	96W	0-10V	0.1%	IP65	120-277V / 24V	UR Class 2	7.5" X 2.4" X 1.4"	Magnitude SOLIDrive electronic standalone driver. **UL listed enclosure provided by others.**

MAX FIXTURES PER DRIVER

Fixture Wattage	Driver Wattage: 30W	60W	96W	2 x 96W	3 x 96W
7W	3	6	10	10+10	10+10+10

MAX CABLE DISTANCE

Fixture Wattage	No. Fixtures	Load	18 AWG	16 AWG	14 AWG	12 AWG
7W	3	≤21W	55ft	85ft	140ft	220ft
	6	≤42W	31ft	50ft	80ft	125ft
	10	≤70W	19ft	30ft	48ft	75ft

**Voltage drop calculations are based on 3% max drop to last fixture in run for load and distances below*

TARGETTI

JUPITER

SPECIFICATION INFORMATION

JU ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 / ___ 10 / ___ 11

REQUIRED — OPTIONAL

Ex: JURSPL12724SSLV / DMLE301242UD / 1US3175M

1 - PRODUCT CODE	2 - DRIVER	3 - OPTIC	4 - WATTAGE	5 - KELVIN	6 - VOLTAGE	7 - TRIM	8 - OPTICAL ACCESSORY
JU — JUPITER	R — Remote Driver	SP — SP 21°	L1 — 7W	27 — 2700K	24 — 24V DC	SS — Natural	__ — No Optical Accessory
		FL — FL 39°		30 — 3000K		BZ — Bronze	LV[C,D] — Honeycomb Louver
		WF — WFL 53°		35 — 3500K		BK — Black	AS[C,D] — Asymmetric Louver
		DV — Direct View		40 — 4000K			

9 - POWER SUPPLY	10 - INSTALLATION	11 - INSTALLATION ACCESSORIES
Power Supply *See section for details*	3" Installation Sleeve *See section for details*	Sleeve mounting HUB *See section for details*
	6" Installation Sleeve *See section for details*	Installation J-box *See section for details*
	9" Installation Sleeve *See section for details*	

[C] Not compatible with DV optic.
[D] Optical accessories are factory pre-installed integral to the fixture.

For applicable quick ship items, see model configurations listed below. Lead time for quick ship fixtures is 1-2 weeks from processed PO date. Consult factory for quantities of over 20pcs to confirm lead time.

QS
QSJURSPL13024SSLV + 1US3175M + 1US3175HB + 1US317BX + DMLE301242UD / DMLE601242UD / DMLE961242UD
QSJURFLL13024SS + 1US3175M + 1US3175HB + 1US317BX + DMLE301242UD / DMLE601242UD / DMLE961242UD

FINISHES

OPTIC VERSIONS

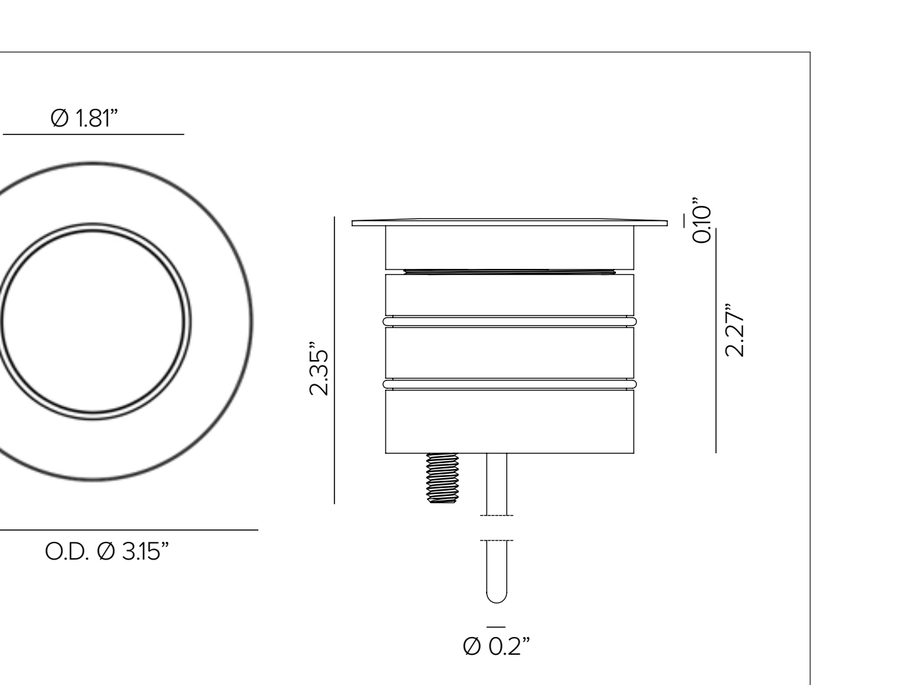


JUPITER

Professional Compact Inground LED Fixture



JUPITER Shown in brushed natural finish.



RoHS3 · QS · Marine · Drive Over · Cool Touch · IP69K · IP68 · cULus Class2

CONCEPT

Small scale compact recessed ingrade LED fixture.

MECHANICAL CHARACTERISTICS

Housing	3.15"Dia. X 2.21"H
Materials	Milled anodized aluminum marine grade cataphoresis[A] body with Passive cooling system. AISI316L stainless steel trim ring with beveled edge and with extra clear glass lens.
Finish	Brushed Natural · Bronze PVD* · Black PVD* *Physical Vapor Deposition.
Power Connection	Pre-cabled with 2ft direct burial 18ga 2 conductor cable for connection to remote power supply.
Mounting	Semi-flush recessed ingrade / surface wall mounting installation sleeve required, see available options.
Weight	1.1lbs
Protection	IP68[B] / IP69K
Impact	IK10
Load	Resistant to static loads up to 4,496lbs in flush mounted cement and pavement installations.

CERTIFICATIONS

cULus Class 2 Wet Location Listed E479873.
Tested in accordance with LM-79-08.
Compliant for California installations.
RoHS3 EU 215/863

WARRANTY

5 year limited warranty
[A] Fixture body complete with marine grade cataphoresis suitable for use in marine grade environments. Stainless steel trim will need to be maintained and cleaned regularly to avoid mineral deposits. Not to be in direct contact with salt or corrosive agents for extended periods of time.
[B] Temporary immersion up to 24 hours at a max depth of 2 meters. Installation of fixture requires proper drainage to prevent any standing water. Should not be used for permanent submersion.

SUSTAINABILITY

Luminaire designed for disposal/recycling at end-of-life. Replaceable LED light source and control gear by a Targetti technician.

ELECTRICAL CHARACTERISTICS

Power Supply	Remote Class 2 120V-277V AC power supply required, see available options.
Wattage	7W
Voltage	24V DC

SOURCE

High efficiency LED Chip on Board.

TM30	CCT (Nominal)	CRI	Rf	Rg	SDCM
	2700K	90	92	99	2
	3000K	90	92	101	2
	3500K	90	90	98	2
	4000K	90	90	98	2

OPTIC

Precision optic system with PMMA lenses for the SP, FL and WFL versions with a light cut system integrated into the front glass.

Beam	SP 21°	FL 39°	WFL 53°
Delivered Lumens 2700K	509Lm	526Lm	503Lm
3000K	532Lm	550Lm	526Lm
4000K	548Lm	567Lm	542Lm

Data represents max output version only, refer to photometry section for all fixture variations.
For 3500K lumen values use multiplier of 1.02 from 3000K.

Efficacy	93Lm/W max. Refer to photometric graphs for specific values.
Lifetime	L80/B10 >100,000hrs at max Tq +25°C
Photobiological Classification	Low risk safety RG1

LIGHTING FIXTURE TYPE ZU1 | NTS | E-9.04 | 03

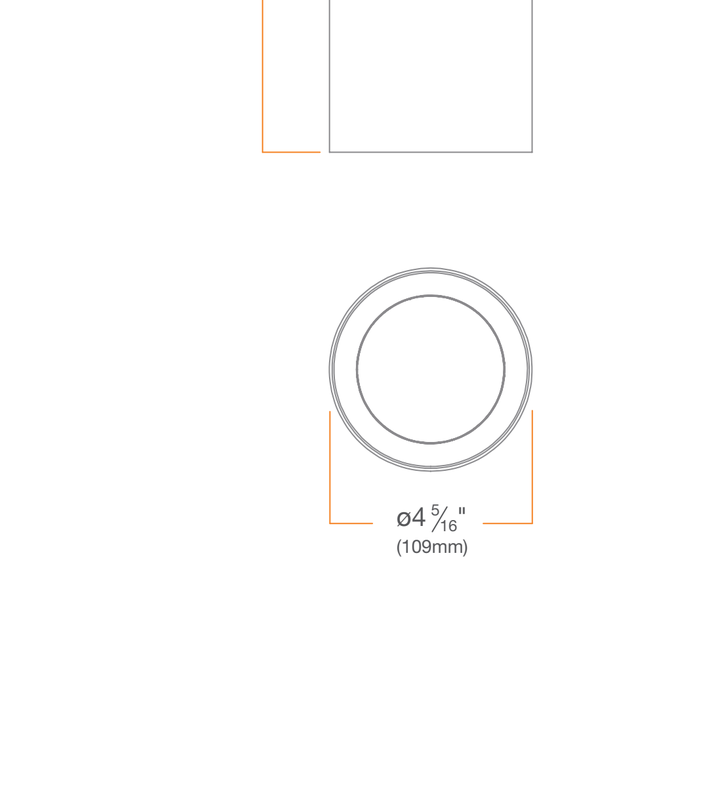
dmf

M Series Cylinder

4" Surface Mount

Surface Mount

DC4SM



CYLINDER SIZE	A
Small	4" [102 mm]
Medium	8" [203 mm]
Large	12" [305 mm]

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dmf

M Series Cylinder

4" Surface Mount

PRODUCT SUMMARY

LED: Cree® LED, Bridgelux

DELIVERED LUMENS: 750 lm (9.5W), 1000 lm (12.5W), 1250 lm (14.3W), 1500 lm (16.5W), 2000 lm (24.5W), 2500 lm (27.5W), 3000 lm (34W)

EFFICACY: 79 lm/W, 80 lm/W, 87lm/W, 91 lm/W, 82 lm/W, 91 lm/W, 88 lm/W

COLOR QUALITY: 93+ CRI, 2-step SDCM

CCT: 2700K, 3000K, 3500K, 4000K, Warm Dim (3000K-1800K), Tunable White (4000K-1800K), Tunable White (6500K-2700K)

DIMMING: Down to 1% for TRIAC/ELV at 120V, 1% for 0-10V at 120/277V, 0.1% DALI-2

INPUT VOLTAGE: 120/277V, 50/60Hz

MAX INPUT CURRENT (120V): 0.085 amps (750 lm), 0.110 amps (1000 lm), 0.125 amps (1250 lm), 0.145 amps (1500 lm), 0.205 amps (2000 lm), 0.235 amps (2500 lm), 0.290 amps (3000 lm)

MAX INPUT CURRENT (277V): 0.045 amps (750 lm), 0.055 amps (1000 lm), 0.060 amps (1250 lm), 0.070 amps (1500 lm), 0.100 amps (2000 lm), 0.110 amps (2500 lm), 0.135 amps (3000 lm)

POWER FACTOR: Greater than 0.9

TOTAL HARMONIC DISTORTION: Less than 20%

AMBIENT OPERATING TEMPERATURE: -20°C to 40°C

EMERGENCY LIGHTING: Optional installer mounted Remote Inverter or Emergency LED Driver for lighting up to 90 minutes in event of power failure

PHOTOMETRIC TESTING: Tested in accordance to IESNA LM-79-2008

LISTINGS: ENERGY STAR® qualified*, California Title 24 2019 - 2022 JA8-E Compliant, UL Listed for Wet Location (option), IP65 rated (option), UL Certified US·CA, Declare, NSF/ANSI-2 Splash Zone Safe**, Dark Sky Compliant (option), DALI-2 Compliant

LIFETIME: 50,000 hours at 70% lumen maintenance

CYLINDER: Extruded aluminum; 4" (small), 8" (medium), 12" (large)

FINISH: White, Black, Bronze, Brushed Aluminum, Custom Color

MOUNT: Installs in most 3" octagonal, 4" octagonal, 3" round, 4" round and 4" square boxes.

JUNCTION BOX COVERS: Allows up to 4 solid metal conduit branches. Compatible with 4" octagonal and 4" square boxes.

WARRANTY: 5 year limited warranty

* Refer to ENERGY STAR Certified light fixtures database
** This product is evaluated in accordance to NSF/ANSI 2 for Splash Zones having designated trim finishes

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dmf

M Series Cylinder

4" Surface Mount

PRODUCT BUILDER

CYLINDER	DC4	DC4 4" Cylinder			
MOUNT	SM	SM Surface Mount			
MOISTURE RATING		S Standard (Damp Location)	W Wet Location ⦿ [1]		
LENGTH		S Small (4") 1500 lm Max	M Medium (8") 2000 lm Max	L Large (12") 3000 lm Max	
LIGHT OPTIONS		D Fixed ⦿	A Adjustable [2]		
LUMENS DOWN [3]		07 750 lm ⦿; 20 2000 lm ⦿ [4,5]	10 1000 lm ⦿; 25 2500 lm [4,5]	12 1250 lm ⦿ [4]; 30 3000 lm [4,5]	15 1500 lm ⦿ [3,4]
BEAM SPREAD DOWN		GA General Ambient (90°+) [4,6]; FL Flood (40°)	NS Narrow Spot (15°) [7]; WF Wide Flood (60°) [4]	SP Spot (25°)	
SPECIALTY LENS DOWN		0 None ⦿	H Hexcell Louver [8]		
LUMENS UP	00	00 None			
BEAM SPREAD UP	00	00 None			
CCT		27 2700K; 3W Warm Dim (3000K-1800K) [9]	30 3000K; T1 Tunable White (4000K–1800K) [10]	35 3500K; T2 Tunable White (6500K–2700K) [10]	40 4000K
FINISH		WH White; BZ Bronze	BK Black; CC Custom Color	BA Brushed Aluminum	
DIMMING		T TRIAC/ELV (1%)	O 0-10V (1%)	D DALI-2 (0.1%) [11]	
EMERGENCY		00 None	EM EM, Remote Test Switch [12]		
TRIM / SHADE DOWN		R Round Standard Trim ⦿; L Low Profile Decorative Trim ⦿ [6,13]; RBW Round Shade: Black, Warm; FBC Flat Shade: Black, Clear	H Hyperbolic Trim; RWC Round Shade: White, Clear; RAC Round Shade: Aluminum, Clear; FBW Flat Shade: Black, Warm	S Snoot (black only); RWW Round Shade: White, Warm; FWC Flat Shade: White, Clear; FAC Flat Shade: Aluminum, Clear	D Decorative Trim ⦿ [6,13]; RBC Round Shade: Black, Clear; FWW Flat Shade: White, Warm

⦿ Required for Wet Location/IP65 rating

[1] Only available in 750, 1000, 1250, 1500 or 2000 lm; with Round Standard, Decorative, or Low Profile Trim
[2] Only available in 750 or 1000 lm; Damp Location moisture rating; Round Standard or Hyperbolic trim
[3] Sum of Lumens cannot be greater than 1500 lm for Small size, 2000 lm for Medium size, 3000 lm for Large size
[4] Not available in Adjustable
[5] Only available in 0-10V
[6] Only available in 750 lm, 1000 lm, 1250 lm, or 1500 lm
[7] Only available in 750-2000 lm; Not available in Warm Dim or Tunable White
[8] Only available for Adjustable; not available for DALI-2
[9] Only available in 1000 lm; not available in Narrow Spot
[10] Only available in 1000 lm Downlight, 750 lm Adjustable and DALI-2 dimming
[11] Only available in 1000 lm Warm Dim, Tunable White or 1250 lm Static CCT Downlight and 1000 lm Warm Dim or Static CCT and 750 lm Tunable White Adjustable
[12] Not available in Uplight; TRIAC/ELV driver utilizes micro inverter; 0-10V or EcoSystem drivers utilize EM Kit mounted above ceiling with emergency LED driver & remote test switch
[13] Only available in General Ambient beam spread

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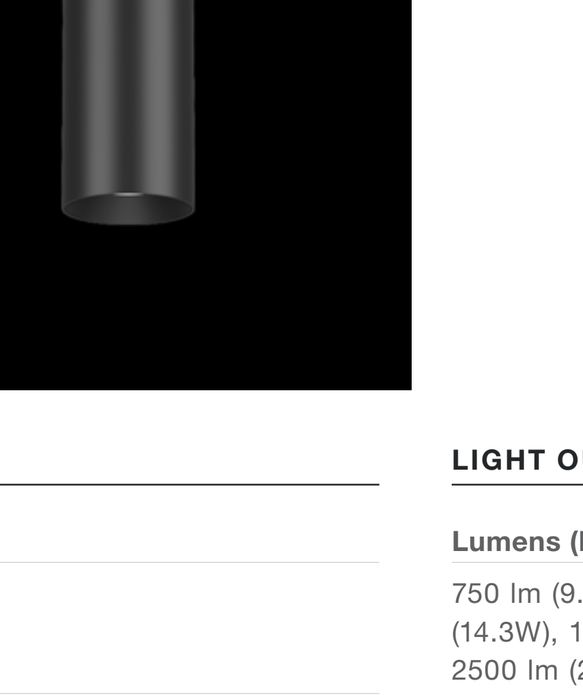
M Series Cylinder

Project:	Type:
Product Code:	Date:

V102523



4" Surface Mount

- Integrated Drivers allow for down to 0.1% dimming options within the pendant and no need to locate anything above the canopy
- Customize your cylinder with over one million configurations, allowing for easy maintenance and on-site modifications
- Attaches directly to a surface or recessed mounted junction box, ideal for areas with limited ceiling height & plenum space restrictions
- Die-cast aluminum trims with no visible hardware for a sleek, symmetrical design

CYLINDER

Mount
Surface

Size
Diameter: 4"
Height: Small (4"), Medium (8"), Large (12")

Canopy
Standard

Trims & Shades
Standard, Snoot, Decorative, Hyperbolic, Flat Shade, Round Shade

Finish
White, Black, Brushed Aluminum, Bronze, Custom Color

EMERGENCY LIGHTING

Optional Remote Inverter or Emergency LED Driver for lighting up to 90 minutes in event of power failure

LIGHT OUTPUT & DISTRIBUTION

Lumens (Power)
750 lm (9.5W), 1000 lm (12.5W), 1250 lm (14.3W), 1500 lm (16.5W), 2000 lm (24.5W), 2500 lm (27.5W), 3000 lm (34W)

Color Quality
93 CRI, 2-step SDCM

Color Temperature
2700K · 3000K · 3500K · 4000K · Warm Dim (3000K–1800K) · Tunable White (4000K–1800K) · Tunable White (6500K–2700K)

Beam Spread
Narrow Spot (15°) · Spot (25°) · Flood (40°) · Wide Flood (60°) · General (90°)

Lighting Type
Downlight · Adjustable

POWER & CONTROLS

Input Voltage
120 / 277V

Dimming
0-10V (120/277V): 1%
TRIAC/ELV (120V): 1%
DALI-2 (120/277V): 0.1%

SPECIALTY LENS

Hexcell Louver

RATINGS

Wet Location / IP65 Rated Configurations Available
NSF Listed (White and Black Finish Only)
DarkSky Approved (Downlight only, CCT less than or equal to 3000K)

WARRANTY

5 year limited warranty; 50,000 hours

Title 24 · Energy Star · UL Certified US-CA · Declare. · NSF · DarkSky Approved

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LIGHTING FIXTURE TYPE ZS1 | NTS | E-9.04 | 01

GRIFFIN SWINERTON

LPA

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MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670
Developed for
GRIFFIN | SWINERTON

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Revision	Date

Job Number	30911
Checked By	Checker
Scale	

LIGHTING FIXTURE CUTSHEETS

E9.13

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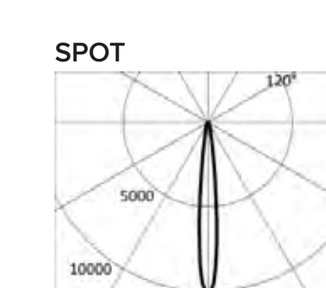
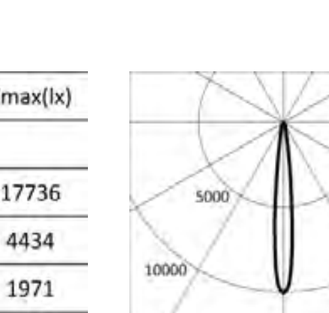
KEPLERO MINI HIGH EFFICACY

PHOTOMETRY

SPOT

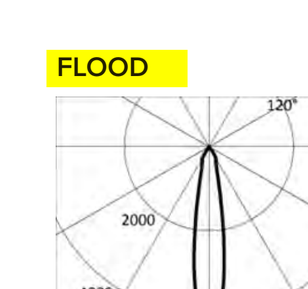

TS821 Imax=9992cd/klm

3000K		H(m)	D(m)	Emax(lx)
Ra84			11°	
Fixture Power	14W	1	0.20	17736
Source Flux	1775lm	2	0.39	4434
Fixture Flux	1387lm	3	0.59	1971
Efficacy	103lm/W	4	0.79	1109
Imax	17736cd	5	0.99	709

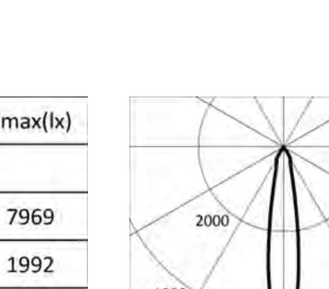

TS821 Imax=9992cd/klm

4000K		H(m)	D(m)	Emax(lx)
Ra84			11°	
Fixture Power	14W	1	0.20	18196
Source Flux	1821lm	2	0.39	4549
Fixture Flux	1423lm	3	0.59	2022
Efficacy	105lm/W	4	0.79	1137
Imax	18196cd	5	0.99	728

FLOOD

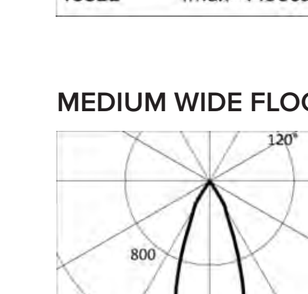

TS822 Imax=4490cd/klm

3000K		H(m)	D(m)	Emax(lx)
Ra84			18°	
Fixture Power	14W	1	0.31	7969
Source Flux	1775lm	2	0.63	1992
Fixture Flux	1397lm	3	0.94	885
Efficacy	104lm/W	4	1.25	498
Imax	7969cd	5	1.57	319

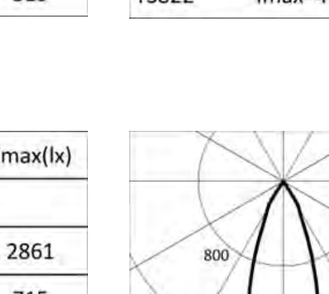

TS822 Imax=4490cd/klm

4000K		H(m)	D(m)	Emax(lx)
Ra84			18°	
Fixture Power	14W	1	0.31	8175
Source Flux	1821lm	2	0.63	2044
Fixture Flux	1434lm	3	0.94	908
Efficacy	106lm/W	4	1.25	511
Imax	8175cd	5	1.57	327

MEDIUM WIDE FLOOD


TS823 Imax=1624cd/klm

3000K		H(m)	D(m)	Emax(lx)
Ra84			40°	
Fixture Power	14W	1	0.73	2861
Source Flux	1775lm	2	1.47	715
Fixture Flux	1384lm	3	2.20	318
Efficacy	102lm/W	4	2.93	179
Imax	2882cd	5	3.67	114


TS823 Imax=1624cd/klm

4000K		H(m)	D(m)	Emax(lx)
Ra84			40°	
Fixture Power	14W	1	0.73	2935
Source Flux	1821lm	2	1.47	734
Fixture Flux	1420lm	3	2.20	326
Efficacy	105lm/W	4	2.93	183
Imax	2957cd	5	3.67	117

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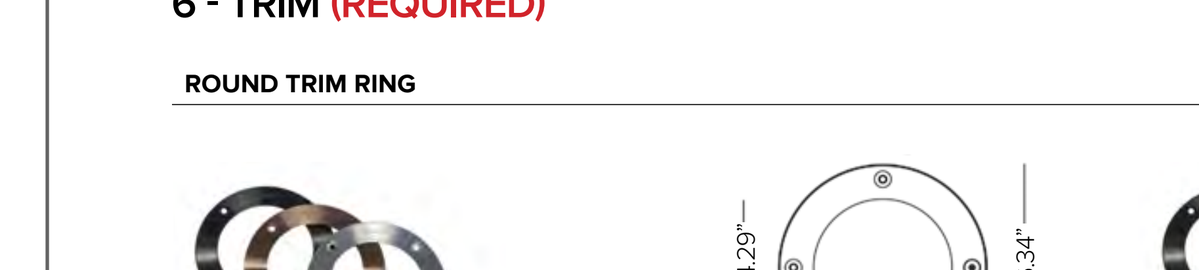
KEPLERO MINI HIGH EFFICACY

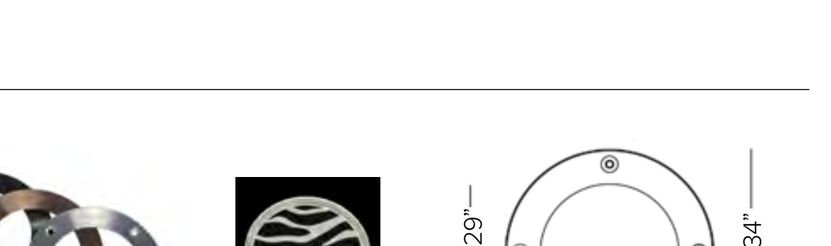
6 - TRIM (REQUIRED)

ROUND TRIM RING



Round stainless steel (AISI316L) decorative ring. 10mm thick extra clear protective glass. Silicone gasket. Tamper proof (AISI316L) Torx screws.

Finish	Brushed Natural	Bronze PVD	Black PVD
Part No.	1E2525	1DU2525B	1DU2525K



Round stainless steel (AISI316L) decorative ring with anti-slip glass. 10mm thick extra clear protective glass. Silicone gasket. Tamper proof (AISI316L) Torx screws.

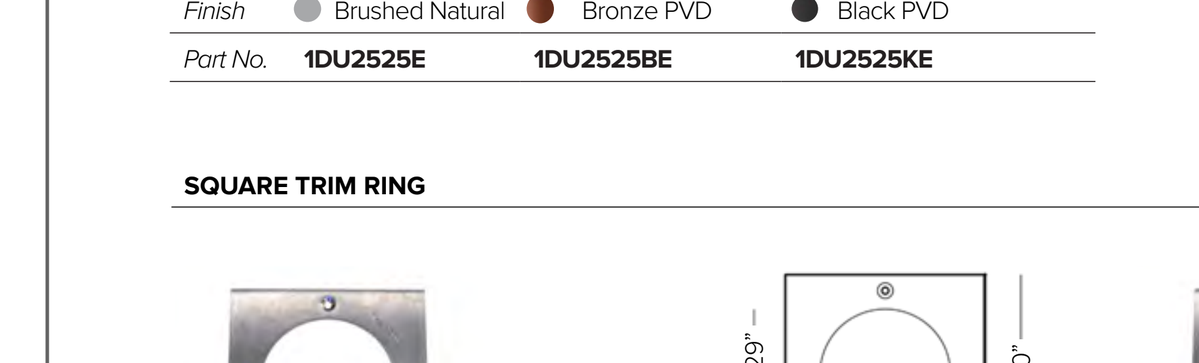
Finish	Brushed Natural	Bronze PVD	Black PVD
Part No.	1DU2525A	1DU2525BA	1DU2525KA



Round stainless steel (AISI316L) decorative ring with half frosted glass. 10mm thick extra clear protective glass. Silicone gasket. Tamper proof (AISI316L) Torx screws.

Finish	Brushed Natural	Bronze PVD	Black PVD
Part No.	1DU2525E	1DU2525BE	1DU2525KE

SQUARE TRIM RING

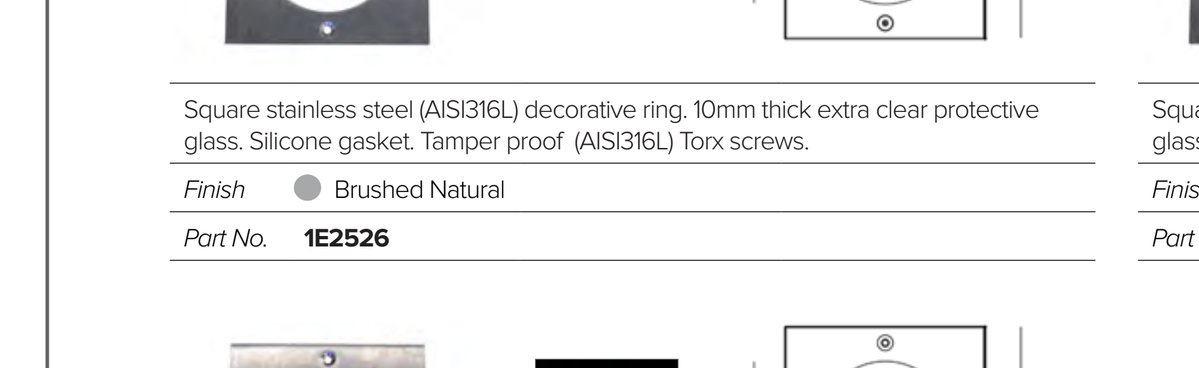


Square stainless steel (AISI316L) decorative ring. 10mm thick extra clear protective glass. Silicone gasket. Tamper proof (AISI316L) Torx screws.

Finish	Brushed Natural
Part No.	1E2526

Square stainless steel (AISI316L) decorative ring. 10mm thick extra clear protective glass. Silicone gasket. Tamper proof (AISI316L) Torx screws.

Finish	Brushed Natural
Part No.	1DU2526A



Square stainless steel (AISI316L) decorative ring. 10mm thick extra clear protective glass. Silicone gasket. Tamper proof (AISI316L) Torx screws.

Finish	Brushed Natural
Part No.	1DU2526E

TARGETTI

KEPLERO MINI HIGH EFFICACY

SPECIFICATION INFORMATION

KPLM _ _ _ _ _ / _ / _ / _
1 2 3 4 5 6 7 8 9 10

Ex: KPLM41HESPL227 / 1E2525 / 1DU2521 / 1DU2530

REQUIRED (7–9) OPTIONAL (10)

1 - PRODUCT CODE	2 - DRIVER	3 - TYPE	4 - OPTICS	5 - WATTAGE	6 - KELVIN
KPLM — KEPLERO MINI	41 — 4/1 Smart Dimming (Non-Dimming / 0-10V / Reverse Phase / Forward Phase)	HE — High Efficacy	SP — SP 11°	L2 — 14W	27 — 2700K
			FL — FL 18°		30 — 3000K
			MF — MWFL 40°		35 — 3500K
					40 — 4000K

7 - TRIM	8 - INSTALLATION	9 - INSTALLATION ACCESSORIES	10 - OPTICAL ACCESSORIES
Round Trim Ring *See section for details*	Flush Mount Sleeve *See section for details*	Torx Key *See section for details*	Holder Ring *See section for details*
Square Trim Ring *See section for details*	Raised Tube *See section for details*	Fixture Removal Tool *See section for details*	Blade of Light Linear Spread Lens *See section for details*
	Junction Box *See section for details*	Glass Removal Tool *See section for details*	Blade of Light Linear Spread Lens *See section for details*
			Anti Glare Honeycomb Louver *See section for details*
			Half Moon Anti Glare Shutter *See section for details*
			Chromatic Filter *See section for details*

TARGETTI

KEPLERO MINI HIGH EFFICACY

Professional Inground LED Fixture





KEPLERO® Mini HE with brushed natural trim and clear lens

Marine | RoHS3 | Drive Over | Cool Touch | IP69K | IP68 | cULus

CONCEPT

Compact high performance inground for even illumination with maximum efficiency.

MECHANICAL CHARACTERISTICS

Housing	8"H x 6.34"Dia. Housing.
Materials	Anodized marine grade cataphoresis[A] die-cast aluminum heat sink body with PVC installation sleeve. AISI316L stainless steel trim ring with beveled edge with extra clear glass lens.
Finish	Brushed Natural, Bronze PVD*, Black PVD* *Physical Vapor Deposition.
Power Connection	Provided with 4ft SJOOW 16-6 cable and DSMT anti-wicking quick disconnect to direct burial brass ingrade j-box (required, sold separately).
Functionality	Adjustable +/-20° on the vertical axis and rotated 355° on the horizontal axis with friction locking mechanism.
Mounting	Flush, semi-flush or raised tube mountings. Installation sleeve for flush or semi-flush mountings includes optional stainless steel 'L' brackets for additional mounting support. Fixture equipped with fastening holes and stainless steel screws for attachment into installation sleeve assembly.
Weight	2.43lbs
Protection	IP68[B] / IP69K
Impact	IK10
Load	Resistant to static loads up to 4,496lbs in flush mounted cement and pavement installations.

CERTIFICATIONS

cULus Wet Location Listed.
Tested in accordance with LM-79-08.
Compliant for California installations.
IEC 62471
RoHS3 EU 215/863

SUSTAINABILITY

Luminaire designed for disposal/recycling at end-of-life. Replaceable LED light source and control gear by a Targetti technician.

ELECTRICAL CHARACTERISTICS

Power Supply	Integral 4/1 smart driver (Non-Dimmable / 0-10V / Reverse Phase / Forward Phase).
Wattage	14W
Voltage	Universal Voltage 120-277V AC 50/60Hz

SOURCE

High efficiency LED Chip on Board.

TM30	CCT (Nominal)	CRI	Rf	Rg	SDCM
	2700K	80	82	96	2
	3000K	80	83	96	2
	3500K	80	83	95	2
	4000K	80	82	95	2

Ra90 available upon request

OPTIC

Highly reflective metallic polycarbonate optic.

Beam		SP 11°	FL 18°	MWFL 40°
Delivered Lumens	3000K	1387Lm	1397Lm	1384Lm
	4000K	1423Lm	1434Lm	1420Lm

For 2700K lumen values use multiplier of 0.96 from 3000K. For 3500K lumen values use multiplier of 1.02 from 3000K.

Efficacy	102Lm/W max. Refer to photometric graphs for specific values.
Lifetime	L92/B10 30,000hrs at max TA +25°C L90/B10 50,000hrs at max TA +25°C
Photobiological Classification	Low risk safety RG1

WARRANTY

5 year limited warranty.
[A] Fixture body complete with marine grade cataphoresis suitable for use in marine grade environments. Stainless steel trim will need to be maintained and cleaned regularly to avoid mineral deposits. Not to be in direct contact with salt or corrosive agents for extended periods of time.
[B] Temporary immersion up to 24 hours at a max depth of 2 meters. Installation of fixture requires proper drainage to prevent any standing water. Should not be used for permanent submersion.

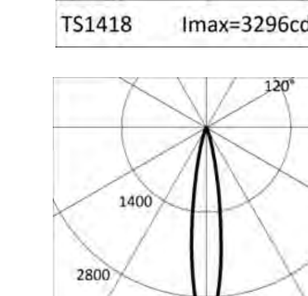
LIGHTING FIXTURE TYPE ZU3 | NTS | E-9.05 | 03

TARGETTI

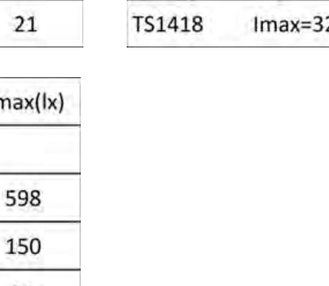
JUPITER MINI

PHOTOMETRY

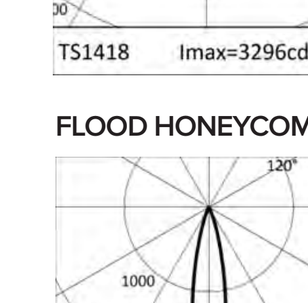
SPOT HONEYCOMB LOUVER


TS1418 Imax=3296cd/klm

2700K		H(m)	D(m)	Emax(lx)
Ra90			17°	
Fixture Power	3W	1	0.29	518
Source Flux	157lm	2	0.58	129
Fixture Flux	60lm	3	0.88	58
Efficacy	22lm/W	4	1.17	32
Imax	518cd	5	1.46	21

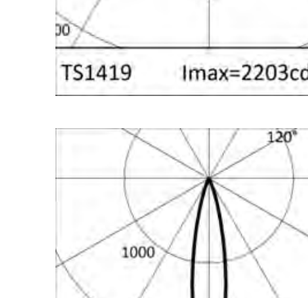

TS1418 Imax=3296cd/klm

3000K		H(m)	D(m)	Emax(lx)
Ra90			17°	
Fixture Power	3W	1	0.29	559
Source Flux	170lm	2	0.58	140
Fixture Flux	64lm	3	0.88	62
Efficacy	24lm/W	4	1.17	35
Imax	559cd	5	1.46	22

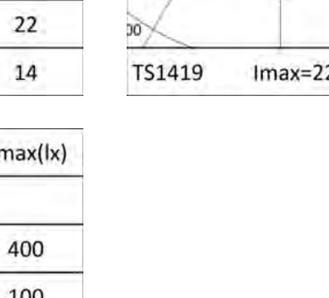

TS1418 Imax=3296cd/klm

4000K		H(m)	D(m)	Emax(lx)
Ra90			17°	
Fixture Power	3W	1	0.29	598
Source Flux	182lm	2	0.58	150
Fixture Flux	69lm	3	0.88	66
Efficacy	26lm/W	4	1.17	37
Imax	598cd	5	1.46	24

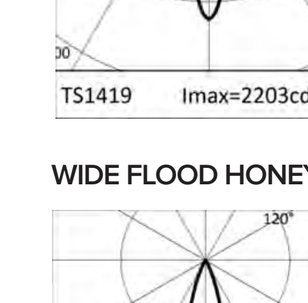
FLOOD HONEYCOMB LOUVER


TS1419 Imax=2203cd/klm

2700K		H(m)	D(m)	Emax(lx)
Ra90			20°	
Fixture Power	3W	1	0.36	346
Source Flux	157lm	2	0.72	87
Fixture Flux	56lm	3	1.07	38
Efficacy	21lm/W	4	1.43	22
Imax	346cd	5	1.79	14

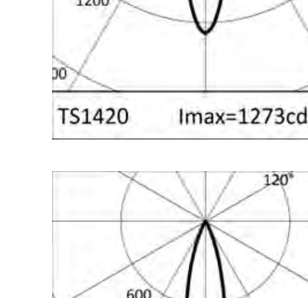

TS1419 Imax=2203cd/klm

3000K		H(m)	D(m)	Emax(lx)
Ra90			20°	
Fixture Power	3W	1	0.36	374
Source Flux	170lm	2	0.72	93
Fixture Flux	60lm	3	1.07	42
Efficacy	22lm/W	4	1.43	23
Imax	374cd	5	1.79	15

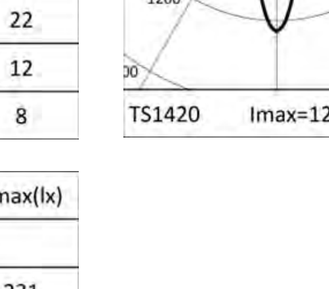

TS1419 Imax=2203cd/klm

4000K		H(m)	D(m)	Emax(lx)
Ra90			20°	
Fixture Power	3W	1	0.36	400
Source Flux	182lm	2	0.72	100
Fixture Flux	65lm	3	1.07	44
Efficacy	24lm/W	4	1.43	25
Imax	400cd	5	1.79	16

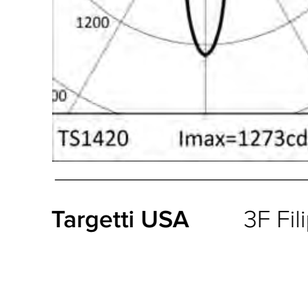
WIDE FLOOD HONEYCOMB LOUVER


TS1420 Imax=1273cd/klm

2700K		H(m)	D(m)	Emax(lx)
Ra90			25°	
Fixture Power	3W	1	0.44	200
Source Flux	157lm	2	0.88	50
Fixture Flux	48lm	3	1.32	22
Efficacy	18lm/W	4	1.75	12
Imax	200cd	5	2.19	8


TS1420 Imax=1273cd/klm

3000K		H(m)	D(m)	Emax(lx)
Ra90			25°	
Fixture Power	3W	1	0.44	216
Source Flux	170lm	2	0.88	54
Fixture Flux	52lm	3	1.32	24
Efficacy	19lm/W	4	1.75	13
Imax	216cd	5	2.19	9


TS1420 Imax=1273cd/klm

4000K		H(m)	D(m)	Emax(lx)
Ra90			25°	
Fixture Power	3W	1	0.44	231
Source Flux	182lm	2	0.88	58
Fixture Flux	55lm	3	1.32	26
Efficacy	20lm/W	4	1.75	14
Imax	231cd	5	2.19	9

TARGETTI

JUPITER MINI

9 - POWER SUPPLY (REQUIRED)

ENCLOSURE

Part No.	Wattage	Control	Dim Range	Rating	In / Out Voltage	Certification	Dimensions (Enclosure)	Description
DMLE301242UD	30W	MLV / ELV / 0-10V / TRIAC	1%	NEMA3R	120-277V / 24V	UL Class 2	4.47" X 6.79" X 1.38"	EMCOD MLE-UD electronic driver with wiring compartment.
DELV30124DJBX	30W	0-10V	10%	IP65	120-277V / 24V	UL Class 2	12.1" X 2.4" X 1.4"	Magnitude SOLIDrive electronic driver with built in junction box.
DMLE601242UD	60W	MLV / ELV / 0-10V / TRIAC	1%	NEMA3R	120-277V / 24V	UL Class 2	4.47" X 6.79" X 1.38"	EMCOD MLE-UD electronic driver with wiring compartment.
DELV60124DJBX	60W	0-10V	10%	IP65	120-277V / 24V	UL Class 2	12.1" X 2.4" X 1.4"	Magnitude SOLIDrive electronic driver with built in junction box.
DMLE961242UD	96W	MLV / ELV / 0-10V / TRIAC	1%	NEMA3R	120-277V / 24V	UL Class 2	5.16" X 7.73" X 1.54"	EMCOD MLE-UD electronic driver with wiring compartment.
DELV96124DJBX	96W	0-10V	10%	IP65	120-277V / 24V	UL Class 2	12.1" X 2.4" X 1.4"	Magnitude SOLIDrive electronic driver with built in junction box.
DMLE1922242UD	2X96W	MLV / ELV / 0-10V / TRIAC	1%	NEMA3R	120-277V / 24V	UL Class 2	5.04" X 10.94" X 1.81"	EMCOD MLE-UD electronic driver with wiring compartment.
DMLE2882242UD	3X96W	MLV / ELV / 0-10V / TRIAC	1%	NEMA3R	120-277V / 24V	UL Class 2	5.04" X 10.94" X 1.81"	EMCOD MLE-UD electronic driver with wiring compartment.

STANDALONE

Part No.	Wattage	Control	Dim Range	Rating	In / Out Voltage	Certification	Dimensions (Standalone)	Description
DELV30124D	30W	0-10V	10%	IP65	120-277V / 24V	UR Class 2	7.5" X 2.4" X 1.4"	Magnitude SOLIDrive electronic standalone driver. **UL listed enclosure provided by others.**
DELV60124D	60W	0-10V	10%	IP65	120-277V / 24V	UR Class 2	7.5" X 2.4" X 1.4"	Magnitude SOLIDrive electronic standalone driver. **UL listed enclosure provided by others.**
DELV96124D	96W	0-10V	10%	IP65	120-277V / 24V	UR Class 2	7.5" X 2.4" X 1.4"	Magnitude SOLIDrive electronic standalone driver. **UL listed enclosure provided by others.**

MAX FIXTURES PER DRIVER

Fixture Wattage	Driver Wattage 30W	60W	96W	2X96W	3X96W
3W	8	16	25	25+25	25+25+25

TARGETTI

JUPITER MINI

SPECIFICATION INFORMATION

JM _ _ _ _ _ _ _ / _ _ / _
1 2 3 4 5 6 7 8 9 10 11

Ex: JMRSPL12724SSLV / DMLE301242UD / 1US3176S

OPTIONAL (8) REQUIRED (9–10) OPTIONAL (11)

1 - PRODUCT CODE	2 - DRIVER	3 - OPTIC	4 - WATTAGE	5 - KELVIN	6 - VOLTAGE	7 - TRIM	8 - OPTICAL ACCESSORY
JM — JUPITER MINI	R — Remote Driver	SP — SP	L1 — 3W	27 — 2700K	24 — 24VDC	SS — Natural	__ — No Accessory
		FL — FL		30 — 3000K		BZ — Bronze PVD	LV[C,D] — Honeycomb Louver
		WF — WFL		35 — 3500K		BK — Black PVD	AS[C,D] — Asymmetric Louver
		DV — Direct View		40 — 4000K			

9 - POWER SUPPLY	10 - INSTALLATION	11 - INSTALLATION ACCESSORIES
Power Supply *See section for details*	2" Installation Sleeve *See section for details*	Sleeve mounting HUB *See section for details*
	3" Installation Sleeve *See section for details*	Installation J-box *See section for details*
	6" Installation Sleeve *See section for details*	
	9" Installation Sleeve *See section for details*	

[C] Not compatible with DV optic.
[D] Optical accessories are factory pre-installed integral to the fixture.

FINISHES



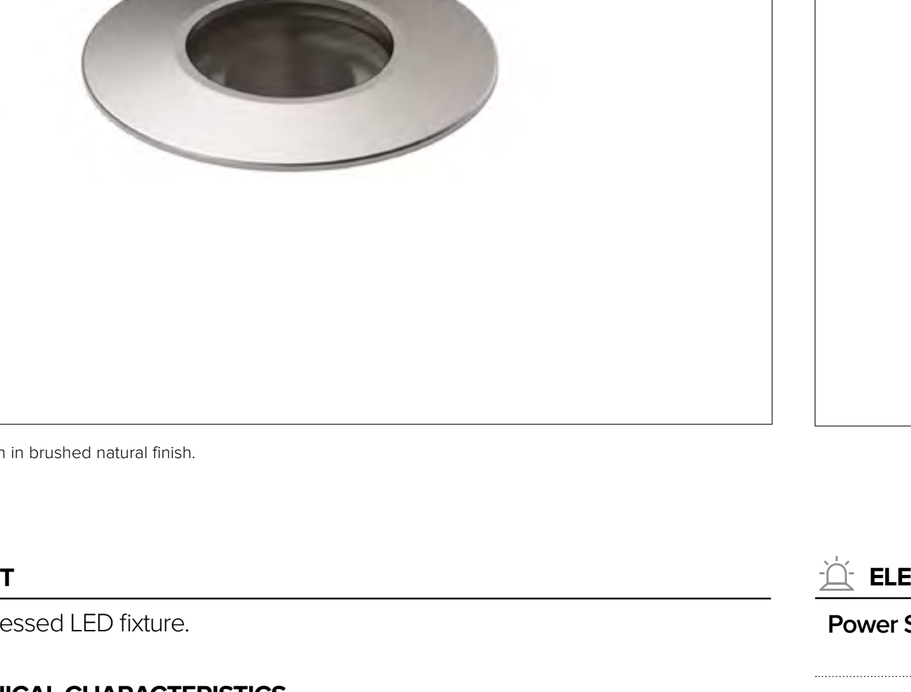
OPTIC VERSIONS

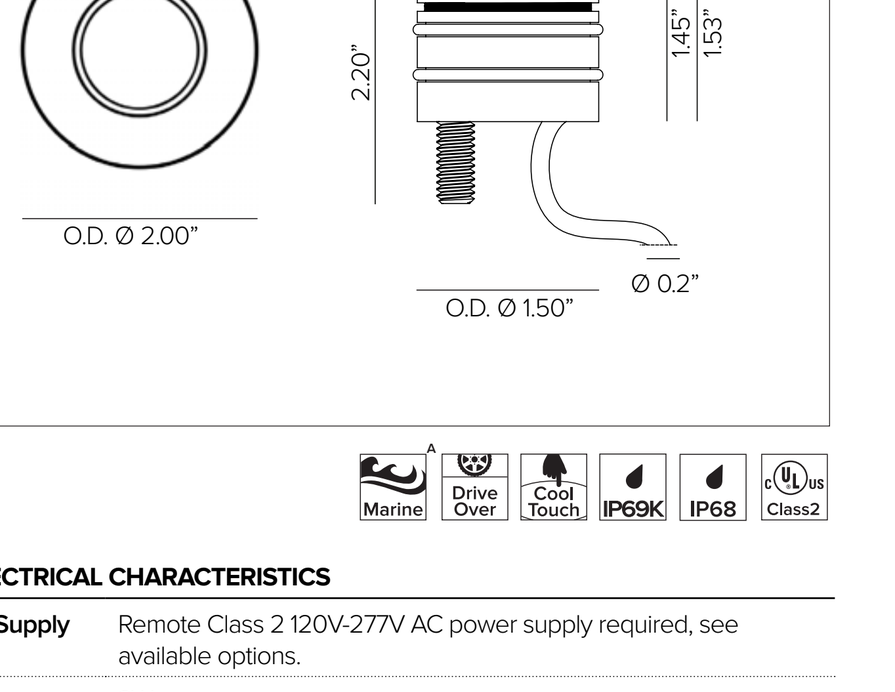


TARGETTI

JUPITER MINI

Professional Compact Inground LED Fixture





JUPITER MINI shown in brushed natural finish.

Marine | Drive Over | Cool Touch | IP69K | IP68 | cULus Class2

CONCEPT

Miniature recessed LED fixture.

MECHANICAL CHARACTERISTICS

Housing	2.00"Dia. X 1.50"H
Materials	Milled anodized aluminum marine grade cataphoresis[A] body with Passive cooling system. AISI316L stainless steel trim ring with beveled edge and extra clear glass lens.
Finish	Brushed Natural, Bronze PVD*, Black PVD* *Physical Vapor Deposition.
Power Connection	Pre-cabled with 2ft direct burial 18ga 2 conductor cable for connection to remote power supply.
Mounting	Semi-flush recessed ingrade / surface wall mounting installation sleeve required, see available options.
Weight	0.33lbs
Protection	IP68[B] / IP69K
Impact	IK10
Load	Resistant to static loads up to 4,496lbs in flush mounted cement and pavement installations.

CERTIFICATIONS

cULus Class 2 Wet Location Listed E479873.
Tested in accordance with LM-79-08.
Compliant for California installations.
RoHS3 EU 215/863

WARRANTY

5 year limited warranty
[A] Fixture body complete with marine grade cataphoresis suitable for use in marine grade environments. Stainless steel trim will need to be maintained and cleaned regularly to avoid mineral deposits. Not to be in direct contact with salt or corrosive agents for extended periods of time.
[B] Temporary immersion up to 24 hours at a max depth of 2 meters. Installation of fixture requires proper drainage to prevent any standing water. Should not be used for permanent submersion.

SUSTAINABILITY

Luminaire designed for disposal/recycling at end-of-life. Replaceable LED light source and control gear by a Targetti technician.

ELECTRICAL CHARACTERISTICS

Power Supply	Remote Class 2 120V-277V AC power supply required, see available options.
Wattage	3W
Voltage	24V DC

SOURCE

High efficiency LED Chip on Board.

TM30	CCT (Nominal)	CRI	Rf	Rg	SDCM
	2700K	90	92	99	2
	3000K	90	92	101	2
	3500K	90	90	98	2
	4000K	90	90	98	2

OPTIC

Precision optic system with PMMA lenses for the spot, flood and wide flood versions with a light cut system integrated into the front glass.

Beam		SP 19°	FL 24°	WFL 32°
Delivered Lumens	2700K	94Lm	88Lm	86Lm
Data represents max output version only, refer to photometry section for all fixture variations.	3000K	101Lm	95Lm	93Lm
	4000K	108Lm	102Lm	101Lm

For 3500K lumen values use multiplier of 1.02 from 3000K.

Efficacy	40Lm/W max. Refer to photometric graphs for specific values.
Lifetime	L80/B10 >100,000hrs at max Tq +25°C
Photobiological Classification	Low risk safety RG1

LIGHTING FIXTURE TYPE ZU2 | NTS | E-9.05 | 01

GRIFFIN SWINERTON

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MILLS CROSSING
10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670
Developed for
GRIFFIN | SWINERTON

Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Job Number	30911
Checked By	Checker
Scale	

LIGHTING FIXTURE CUTSHEETS

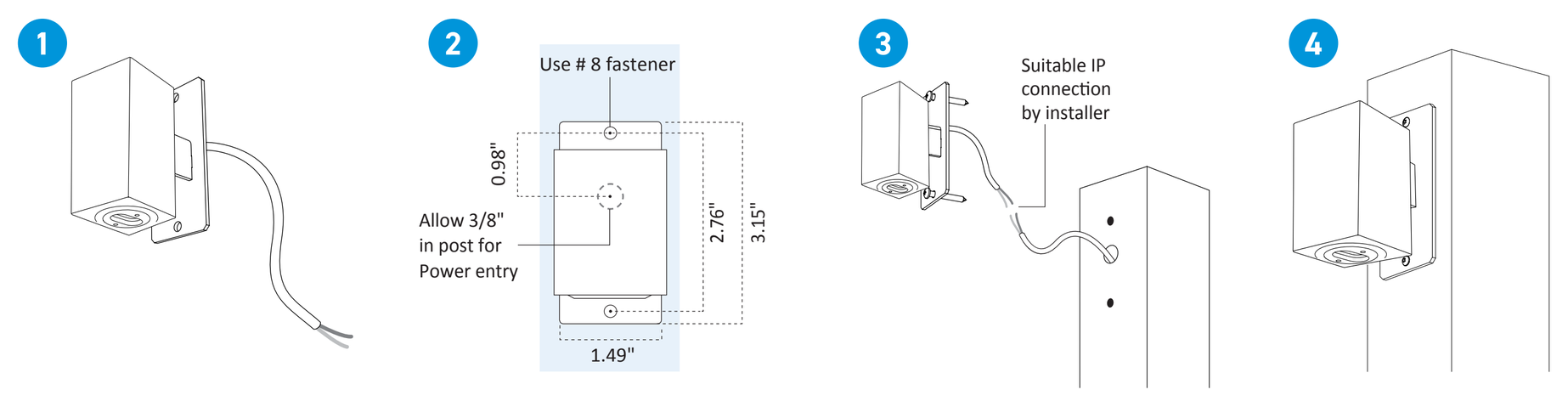
E9.14

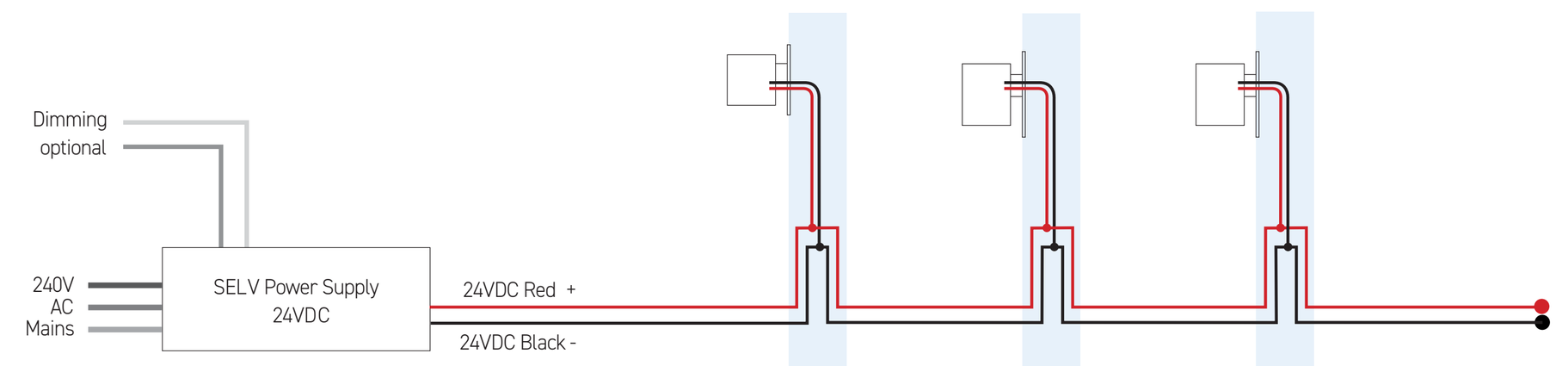
KLIK USA

2840 N Brookfield Rd, Suite 3
Brookfield, WI 53045 | PH: 262.505.5124
sales@klikusa.com | www.klikusa.com

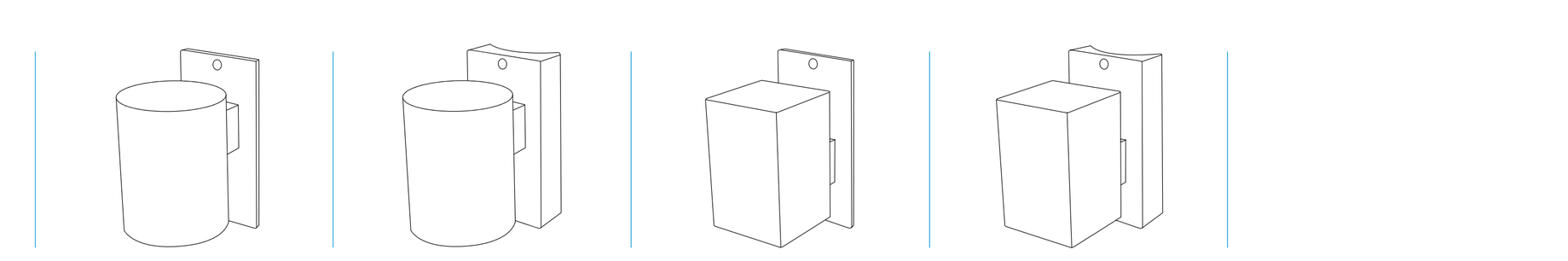
KLIK MISTIK™ 023 Rectangle

INSTALLATION INSTRUCTIONS Additional instructions may apply, consult factory. Hardware by others.





MISTIK OPTIONS



KLIK USA

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Brookfield, WI 53045 | PH: 262.505.5124
sales@klikusa.com | www.klikusa.com

KLIK MISTIK™ 023 Rectangle

SPECIFICATION TABLE Follow the steps to specify your fixture. Enter Product Code in field at top of page. Example: MKCY30KA500FL

Fixture Type	Color Temp [K]	Distribution	Output [W]	Optic	Lens Options	Housing Options	Mounting	Control
MKRC	22K 2200K	A Asymmetric	350 350mA 1.5W	- Flood [Std]	- Clear Lens [Std]	- 316 Brushed Stainless Steel	FL Flat Surface	- 0-10V Dim
	27K 2700K	S Symmetric	500 500mA 1.95W [Std]		FRS Opaque frost	DUL Dulux Colors - Request Guide	P38 1.5" OD Post	DMX1 DMX 1 Ch
	30K 3000K		700 700mA 2.7W		OTK Optical filter	RAL RAL #	P42 1.66" OD Post	DMX4 DMX 4 Ch
	35K 3500K						P48 1.90" OD Post	PH Phase Dim
	40K 4000K							
	AMB FWC Amber							
	PCA Phosphor converted Amber							
	R Red							
	G Green							
	B Blue							

LED PERFORMANCE	
LED:	Cree XT-E
CCT:	2700, 3000, 4000 *(others available)*
CRI:	80-85
Life:	80% at 50k hrs and 85°C
Binning:	3 MacAdam Steps
Warranty:	5 Year Warranty

Outputs based on 3000K			SYMMETRICAL	ASYMMETRICAL
W	mA	V	Delivered Lumens	
1.4	350	3	135	87
1.9	500	3	197	133
2.7	700	3	258	175

REMOTE MOUNTING DISTANCE CHART				
24 VDC 100W Driver	Approx. distance from driver to first LED at 32 fixtures			
Wire Size	10 AWG	12 AWG	14 AWG	16 AWG
Distance	525'	328'	213'	131'

Calculations based on 2' centers between pods. Increased spacing reduces number of pods per circuit.

PRIMARY DRIVER	Secondary LED Driver	Spacing	Maximum KLIK LEDpods™*
110 - 277 Primary Voltage Remotely Mounted Dimming Control 10" x 1.5" x 2"	700mA	24"	30
	500mA	24"	37
	350mA	24"	50

*Based on 16 AWG between LEDpods

REMOTE POWER SUPPLIES [PSUs]	
LP040WPRITRNDIMIP	Class 2; 40W; 0-10 Dim Constant Voltage Remote PSU [IP67 (Temp Submersion) Rated; -40°C ~ +85°C]
LP096WPRITRNDIM	Class 2, 96W, 0-10 Dim Constant Voltage Remote PSU [IP67 (Temp Submersion) Rated; -40°C ~ +80°C]
LP100WPRITRNDIM	Class 2, 96W, 0-10 Dim Constant Voltage Remote PSU [IP64 (Damp Location) Rated; -25°C ~ +40°C]
LPQZ96WUNV24VPH010	Class 2, 96W, Phase or 0-10 Dim Constant Voltage Remote PSU [IP66 (Wet Location) Rated; -40°C ~ +60°C]
LPQZ96WUNV24VDMX1CH	Class 2, 96W, 8-Bit DMX Dim Constant Voltage Remote PSU [IP66 (Wet Location) Rated; -40°C ~ +60°C]
LPQZ96WUNV24VDMX4CH	Class 2, 96W, 8-Bit DMX Dim Constant Voltage Remote PSU [IP66 (Wet Location) Rated; -40°C ~ +60°C]

REMOTE NEMA ENCLOSURES	
LPNEMA2RENCLJR	NEMA2 INDOOR enclosure for LP100WPRITRNDIM, 12 x 3.3 x 2
LPNEMA3RENCLJR	NEMA3R Drip Proof Enclosure, 4 x 4 x 12 [IP24 Equivalent]
LPNEMA3RXENCLSS	NEMA3 304 Lockable Stainless Steel Drip Proof Enclosure 4 x 4 x 12 [IP24 Equivalent]
LPNEMA4ENCLJR	NEMA4 Watertight Enclosure, 6 x 4 x 12 [IP66 Equivalent]; NEMA4X
LPNEMA4XENCLSSJR	NEMA4 304 Lockable Stainless Steel Watertight Enclosure 6 x 4 x 12 [IP66 Equivalent] NEMA4X
LPNEMA6PTRO	NEMA6 Watertight Enclosure Wiring Trough, 2 x 3 x 14 [IP68 Equivalent]

Additional driver & enclosure configurations available, including IP68 options
Please note the KLIK UL Listing requires purchase of a remote driver and enclosure.

KLIK USA

2840 N Brookfield Rd, Suite 3
Brookfield, WI 53045 | PH: 262.505.5124
sales@klikusa.com | www.klikusa.com

Project Name: ______ Location: ______
Specifier: ______ Rep Agency: ______
Fixture Type: ______ Product Code: ______

KLIK MISTIK™ 023 Rectangle

DESCRIPTION
A sleek, surface-mounted minimalist LED sconce that is discreet and easy to install. Suitable for a wide range of exterior and interior surfaces, including railing stanchions, posts, walls, awnings, canopies, and trellises. Offered in both asymmetric and symmetric designs with various lens options available.

HOUSING
The product features an IP65 and IK10 rated brushed 316 stainless steel body, designed with options for either a flat or curved mounting plate, ideal for variety of round posts or surfaces. It is also available in a range of powder-coated colors.

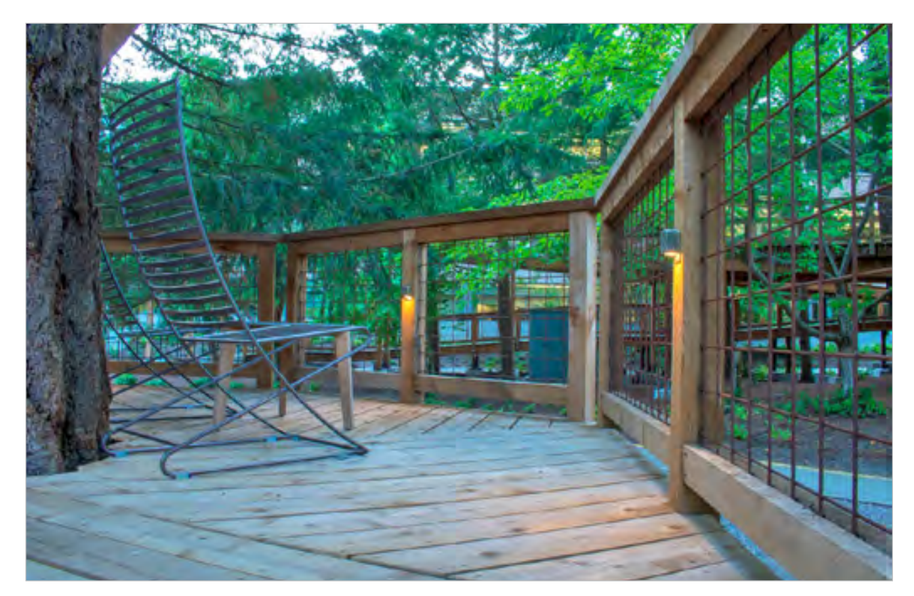
MOUNTING
Brushed 316 stainless steel mounting plate with either a flat or curved mounting surface plate.
- Allow 3/8" in post for power entry
- Can suit the following round post diameter sizes:
  Ø1.50" [38mm]
  Ø1.66" [42mm]
  Ø1.90" [48mm]

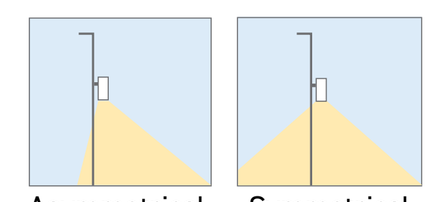
ELECTRICAL/LED DRIVER
- Input Voltage: 24 VDC
- Primary Driver: KLIK provided Class II, 110 - 277 VAC UL Listed Constant Voltage
- Secondary Driver: 350 - 700mA Constant Current (provided with fixture)
- Control: 0-10V, DMX [not individually addressable]
- Enclosures: [see details below]
- Wire connectors provided; factory pre-wire available, consult factory

LISTINGS
- ETL listed, UL 1598/CSA 22.2; CE
- cETL
- IP65 [wet location]
- *All IP rated luminaires tested to AS60529-2004 Degrees of protection provided by enclosures (IP Code)*
- IK08 or IK10 Impact Resistant
- Class 2 Device
- International Dark Sky Certified
  [Color temperature must be Amber or <3000K]

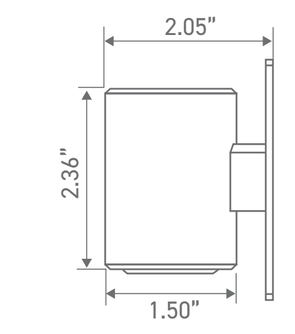


Post Diameter
Ø1.50" [38mm] Ø1.66" [42mm] Ø1.90" [48mm]





Asymmetrical 90° beam
Symmetrical 120° beam



ETL listed
UL 1598/CSA 22.2; CE

Weatherproof Rating:
IP65
Wet location rated

LED Operating Temp:
-40°F – 160°F

Impact resistance:
IK10

3G Vibration
per MIL-STD-810G

Wildlife friendly

BABA Compliant
[Add Prefix 'BA-' to fixture code]

International Dark Sky Association Certified Amber ≤ 3000K

* All IP rated luminaires tested to AS60529-2004 Degrees of protection provided by enclosures (IP Code)

MISTIK 028 R1.0 09.27.2024

LIGHTING FIXTURE TYPE ZW2 | NTS | E-9.06 | 03

Wall luminaire · Light emission on one side

BEGA

Application
This LED wall luminaire has light output in one direction. It is ideal for upward or downward lighting effects for interior and exterior locations. Arranged individually or in groups, this is a great design element for a host of lighting applications.

Materials
Clear safety glass with white ceramic coating
Marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
High temperature silicone gasket
Mechanically captive stainless steel fasteners
Silicone applied robotically to casting, plasma treated for increased adhesion

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 64

Weight: 3.1 lbs.

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30°C
LED module wattage	5.8W
System wattage	8.0W
Controllability	0-10V dimmable
Color rendering index	Ra > 90
Luminaire lumens	366 lm
LED service life (L70)	60000 hrs

LED color temperature
☐ 4000K (K4)
☐ 3500K (K35)
☐ 3000K (K3)
☐ 2700K (K27)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

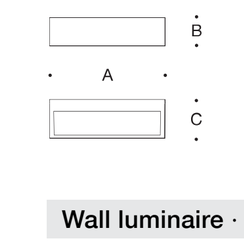
Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

Available colors
☐ Black (BLK) ☐ Bronze (BRZ)
☐ Silver (SLV) ☐ White (WHT)
☐ RAL: ☐ CUS:

Type:
BEGA Product:
Project:
Modified:

Available options
☐ CUS Custom finish
☐ MGU Marine grade undercoat
☐ RAL RAL finish

Included (available for pre-shipment)
☐ B19537 Narrow opening wiring box





Wall luminaire · Light emission on one side

	LED	A	B	C
B33329	5.8W	11 3/4	2 1/8	4 3/4

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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Updated 08/02/24

LIGHTING FIXTURE TYPE ZW1 | NTS | E-9.06 | 01

GRIFFIN SWINERTON

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MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA,CA 95670

Developed for
GRIFFIN | SWINERTON

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	08/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/10/2025

Revision	Date

Job Number	30911
Checked By	Checker
Scale	

LIGHTING FIXTURE CUTSHEETS

E9.15

GRIFFIN SWINERTON

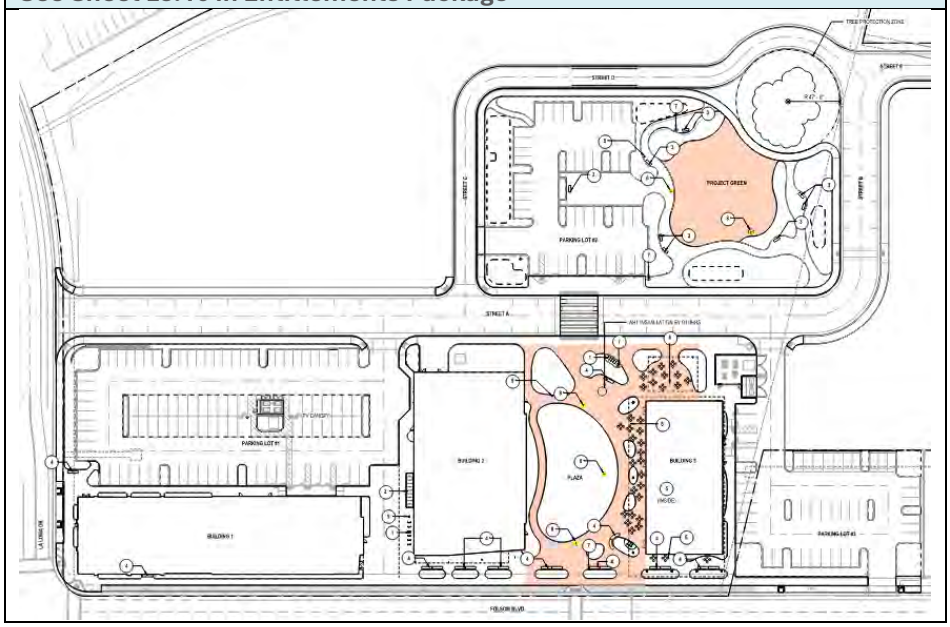
March 18, 2025

Mills Crossing

RE: Pedestrian Plan Exceptions Request

Mills Crossing is a City-owned, City-operated project that has been programmed and designed with years of input and feedback from the community, City staff, and City Council. The Mills Crossing Pedestrian Plan submitted as part of this entitlements package reflects the design intent for the public spaces established by City Council and takes into account operational input from City staff who will be responsible for maintaining the Project as healthy, clean, efficient, and safe public spaces.

FIGURE 1. MILLS CROSSING PEDESTRIAN PLAN
See Sheet L8.10 in Entitlements Package



Mills Crossing provides two pedestrian oriented spaces: (1) a 20,000 SF plaza and (2) an 8,400 SF project green as illustrated above. The pedestrian plan in some cases deviates from City code and this memo outlines the justification for these exceptions. At a high level, the open space and related pedestrian plan as part of Mills Crossing has been designed with the following guiding principles:

TABLE 1. MILLS CROSSING OPEN SPACE DESIGN PRINCIPLES		
1	**Design Intent per City Council Feedback and Approval**	Per Council guidance and community input, the public spaces are meant to promote a flexible array of gatherings, play, and events serving the public. As one of the City's few true transit-oriented site that calls for a greater degree of density than is typical throughout the City, the relatively compact open spaces are meant to provide an open air feel with ample greenery, lawns, and pathways that can be flexibly programmed for both small and large events (e.g., farmers markets, summer outdoor film series, daytime food and beverage oriented festivals, etc.) and community play and/or relaxation (e.g., blankets on lawns) unobstructed by permanent obstacles.

TABLE 1. MILLS CROSSING OPEN SPACE DESIGN PRINCIPLES		
2	**Promoting Healthy, Safe Public Interactions**	The Mills Crossing open spaces emphasize public health and safety in design, discouraging inappropriate uses of public space
3	**Operational Efficiency**	The open space must be operationally efficient, provided pedestrian amenities in reasonable quantities without creating overly costly, complex, and unessential features that would put a burden on City staff and departments that must maintain the open space to the highest standards of cleanliness and safety.

Table 2 below provides an explanation of the pedestrian plan elements provided and their quantities and also provides commentary and justification for exceptions to the Pedestrian Plan.

Table 2. Explanation of Pedestrian Plan Elements with Justifications for Exceptions

Pedestrian Plan Feature	Amount Provided	Justification
Bike Parking	37 bikes	Meets City code
Project Green – Permanent Seating	8 (80 linear feet)	The code calls for 280 linear feet of seating in this area. That amount of seating violates all three open space design principles in Table 1 above, and would dominate and provide unnecessary permanent obstructions within the amount of open space provided, essentially eliminating the utility of the green space for a place for gathering, events, and play. In our professional experience, the 8 benches provided contribute adequate and convenient seating distributed throughout the project green.
Plaza – Permanent Seating	19 (190 linear feet)	The code calls for 667 linear feet of seating in the plaza area. For the same reasons above, we believe this amount of seating would negatively impact the utility of the open space. The 19 permanent seating options shown in the plan clearly provide adequate and convenient seating while keeping with the open space design guidelines at Mills Crossing.
Plaza – Modular Tables & Chairs	35 Tables, 4 chairs/table (210 linear feet)	The code calls for 667 linear feet of seating in the plaza area. For the same reasons above, we believe this amount of seating would negatively impact the utility of the open space. The modular seating options shown in the plan clearly provide adequate and convenient seating while keeping with the open space design guidelines at Mills Crossing.
Drinking Fountain	3	Meets City code Please note: Planning staff indicated that a drinking foundation should by placed by Building 1, however through further

Pedestrian Plan Feature	Amount Provided	Justification
		discussion with Planning it was agreed that the Project Green was the preferred location for the 3rd drinking fountain.
Waste and Recycling Receptables	4	The code calls for a total of 16 trash receptables. City staff of the Mills Crossing planning team voiced concerns (and developer/design team agree) that this number of trash receptables would create unnecessary operational burdens for maintenance staff. From our professional experience, we have provided a reasonable 4 receptables in convenient locations in the plaza and project green.
Electrical Power Outlets	5	The code calls for a total of 28 electrical power outlets. City staff of the Mills Crossing planning team voiced concerned (and developer/design team agree) that this number of electrical power outlets is unnecessary and could pose safety concerns. From our professional experience in designing similar open spaces, we have provided 5 in reasonable and convenient locations in the plaza and project green that will serve the needs of the public spaces and the activities promoted by the City.

December 19, 2024

Mills Crossing

RE: Parking Lot 3 – Setback Exceptions

Mills Crossing is a City-owned, City-operated project that has been programmed and designed with years of input and feedback from the community, City staff, and City Council. The Mills Crossing Site Plan submitted as part of this entitlements package reflects the design intent for the public spaces established by City Council and takes into account operational input from City staff who will be responsible for maintaining the Project as healthy, clean, efficient, and safe public spaces.

Proposed Parking Lot 3 located on Folsom Lake College property will be developed as part of the Mills Crossing College as part of an agreement between the City of Rancho Cordova and Folsom Lake College. The parking lot abuts proposed parcels 3 & 7. Per the Folsom Boulevard Specific Plan, a 10'-0" setback is required at the rear property line abutting parcel 7; no side setbacks are required. Per Section 23.719.090 (C) (8), parking areas including spaces, and aisles shall not occupy the required setbacks. The project will require an exception to allow parking within the 10'-0" setback. This exception is critical to ensuring the project parking requirements are met.

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
On-Going Conditions				
1.	The approved entitlement is for a Specific Plan Amendment, Tentative Map, and Major Design Review Permit for Mills Crossing located at 10153 Folsom Boulevard (APN: 076-0020-019, 020, 021, & 022). The project shall be constructed and implemented consistently with the Project Plans (Exhibit A) as described in the City Council staff report dated April 21, 2025, and attached Project Plans (Exhibit A) with conditions herein (Exhibit B), for project number PLND-0524-0098.	Project Description	On-Going	Planning
2.	Applicant(s) agree to defend, indemnify and hold harmless with Counsel selected by the City of Rancho Cordova ("City") and its agents, officers, consultants, and employees ("City's Agents") from any and all claims, actions, suits, or proceedings against the City or the City's Agents to attack, set aside, void, or annul an approval by the City, or the City's Agents concerning the project (collectively "Claim"). The City shall promptly notify the Applicant of any Claim and the City shall cooperate fully in the defense. Nothing in this paragraph obligates the City to defend any Claim and the City is not required to pay or perform any settlement arising from any such Claim not defended by the City, unless the settlement is approved in writing by the City.	General	On-Going	Planning
3.	Any future alteration to the buildings, change in use, intensification of the site, or modification to the parking and landscaped area must be reviewed by the City to ensure compliance with all local, state, and federal	General	On-Going	Planning

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	regulations. Minor modifications that are found to be in substantial conformance with the approved plans such as colors, plant materials, or minor lot line adjustments, may be approved administratively. Major modifications shall be approved by the applicable decision-making body.			
4.	Applicant shall not carry a negative account balance with the City for the processing of the project. If a negative account balance occurs, it will be the Applicant's responsibility to pay the balance due, in order to avoid delays in the processing of future permits or recordation of maps. Please email the Finance Department at billings@cityofranchocordova.org for the status of your account with the City.	General	On-Going	Planning
5.	The Major Design Review permit approval is valid for a period of three (3) years from the date of City Council approval unless an extension is granted by the Community Development Director or the Development Agreement expiration date.	Expiration	On-Going	Planning
6.	The applicant shall comply with the Mills Crossing Final EIR Mitigation Monitoring Reporting Plan (MMRP).	Environmental	On-Going	Planning
7.	Signage is not approved with this permit. All signage shall comply with the City of Rancho Cordova Zoning Code.	Signage	On-Going	Planning
8.	Noise, odor, and vibration sources associated with construction, repair, remodeling, demolition, paving and/or grading of any real property must adhere to the	Noise, Odor, & Vibration	On-Going	Code Enforcement /Building/

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	development standards outlined within the City's Noise Element, RCMC 6.68 and RCMC 16.18.1407(F) and the Chapter 23.737 of City's Zoning Code.			Planning
9.	The removal and replanting of landscape not listed on the approved plan set must be consistent with RCMC 23.716.080 through 23.716.090 and reviewed by the Planning Division prior to the removal. All landscape care, maintenance, and tree pruning must adhere to RCMC 23.716.100 through 23.716.110.	Landscaping	On-Going	Planning
10.	The Project shall comply with all applicable requirements of the Mather/Mills Opportunity Site, Folsom Boulevard Specific Plan, and City Zoning Code. This includes all applicable conditions of approval, mitigation measures, and financial obligations included in the FBSP and related project approval documents, as appropriate.	General	On-Going	Planning
11.	The buildings and project site must be properly maintained, ensuring they remain free of fading, debris, or any other conditions that detract from their appearance. If deterioration occurs, affected materials or paint shall be promptly repaired or replaced with those of equivalent quality and in accordance with the original approval. All debris must be removed promptly.	Maintenance	On-Going	Planning
12.	Long-term bicycle parking shall be available for rent and shall have clearly defined rental periods with specified time limits for each space. Outdoor bicycle lockers where the user can apply a personal lock and retain control indefinitely are prohibited as part of this approval.	Bicycle Parking	On-Going	Planning

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
13.	Applicant shall be responsible for all damage to City streets associated with construction of the project and shall repair any damage as soon as possible.	Damage	On-Going	Public Works
14.	The applicant must call SacSewer to schedule an inspection of the public cleanout before backfilling. Call (916) 876-7526 for a public cleanout inspection.	Sewer	On-Going	SASD
15.	The Entitlement Submittal for the Commercial Mixed-Use (CMU) portions of the Mills Crossing Project for Major Design Review, Specific Plan Amendment and Tentative Subdivision Map parcels 1, 2, 3, 4 and 5 does not include residential units. Therefore, Quimby (CRPD) parkland dedication in-lieu fee requirements do not apply for these parcels. However, in the future if the development proposal(s) for the CMU parcels substantially changes from the currently proposed Mills Crossing project for parcels 1, 2, 3, 4 and/or 5, then Quimby (CRPD) parkland in-lieu fee requirements will be assessed according to the dedication amounts as required in City of Rancho Cordova Municipal code Chapter 23.313.040 and Chapter 22.40.035.	Parks	On-Going (Prior to approval of subsequent development applications)	CRPD/Planning
16.	The Entitlement Submittal for the Commercial Mixed-Use portions of the Mills Crossing Project for Major Design Review, Specific Plan Amendment and Tentative Subdivision Map parcels 1, 2, 3, 4 and 5 does not include residential units. Therefore, Quimby (CRPD) park impact fees do not apply for these parcels. However, in the future if the development proposal(s) for the CMU parcels substantially changes from the currently proposed Mills Crossing project for parcels 1, 2, 3, 4 and/or 5, then Quimby (CRPD) park	Parks	On-Going (Prior to approval of subsequent development applications or building permits)	CRPD/Planning

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	impact fee requirements will be assessed according to CRPD's 2014 Park Impact Fee Nexus Study or current Nexus Study adopted by CRPD's Board of Directors. The park impact fee amount shall be adjusted annually for inflation in accordance with the Nexus Study to the current year the building permit is issued.			
17.	Pursuant to Cordova Recreation and Park District's Ordinance Number 06/07-01, Applicant/future applicant shall complete and submit CRPD's Development Review application and deposit to CRPD for all reasonable costs incurred by CRPD associated with and necessary for the development and implementation of Quimby (CRPD) park(s) and recreational amenities approved by CRPD for Quimby credit to be constructed within the Project to service the residents of the Project; to negotiate and prepare any Agreements required between the Applicant/future applicant and CRPD to implement the Project, preparation of any environmental documents that may be required pursuant to the California Environmental Quality Act; to take all steps necessary to form a financing district to finance the cost of continuing maintenance of the CRPD park and recreational improvements constructed within the Project and/or to annex the Project to an existing financing district and for CRPD's participation in the design, inspection and acceptance of CRPD Park Sites to be dedicated to the District. Applicant/future applicant shall provide a deposit in the amount provided by a CRPD estimate at the time the Development Review application is submitted to CRPD. From time to time, Applicant/future applicant shall make additional advances/reimbursements to the District as set forth in	Parks	On-Going (Prior to approval of discretionary or non-discretionary planning reviews for projects proposed on parcels 6 and 7 of the Tentative Map)	CRPD/Planning

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	the Funding Agreement.			
18.	Public lower laterals must not be smaller than the upper laterals, sized according the California Plumbing Code requirements.	Sewer	On-Going	SASD
19.	SacSewer prohibits gates that prevent access within sewer easements unless the District standards for accessibility through gates are met.	Sewer	On-Going	SASD
20.	Any use of SacSewer sewer easements, which is not compatible or interferes with the construction, reconstruction, operation, maintenance, or repair of SacSewer sanitary sewer(s), must not be allowed. Each proposed use must be reviewed and approved in writing by the District Engineer prior to the use of the easement by the Grantor. This includes landscaping.	Sewer	On-Going	SASD
21.	Construction of a grease trap or a sand oil separator may be required. The applicant must verify with the applicable jurisdiction's building department.	Sewer	On-Going	SASD
22.	If the proposed trash enclosure will contain a drain to the sewer, it must be covered.	Sewer	On-Going	SASD
23.	The Sacramento Municipal Utility District (SMUD) has provided the following Conditions of Approval for this project: 1. SMUD has existing overhead 12kV facilities along El Caprice Dr and Folsom Blvd, and on site that will need to remain. The Applicant shall be responsible for maintaining all CalOSHA and State of California Public Utilities Commission General Order No. 95	Utilities	On-Going	SMUD

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	safety clearances during construction and upon building completion. If the required clearances cannot be maintained, the Applicant shall be responsible for the cost of relocation. 2. SMUD has existing underground 12kV facilities on the project site that will need to remain. The Applicant shall be responsible for maintaining all CalOSHA and State of California Public Utilities Commission General Order No. 128 safety clearances during construction and upon building completion. If the required clearances cannot be maintained, the Applicant shall be responsible for the cost of relocation. 3. Structural setbacks less than 14-feet shall require the Applicant to conduct a pre-engineering meeting with all utilities to ensure property clearances are maintained. 4. Any necessary future SMUD facilities located on the Applicant's property shall require a dedicated SMUD easement. This will be determined prior to SMUD performing work on the Applicant's property. 5. In the event the Applicant requires the relocation or removal of existing SMUD facilities on or adjacent to the subject property, the Applicant shall coordinate with SMUD. The Applicant shall be responsible for the cost of relocation or removal. 6. SMUD reserves the right to use any portion of its easements on or adjacent to the subject property that it reasonably needs and shall not be responsible for any damages to the developed property within said easement that unreasonably interferes with those needs.			

Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
7. The Applicant shall not place any building foundations within 5-feet of any SMUD trench to maintain adequate trench integrity. The Applicant shall verify specific clearance requirements for other utilities (e.g., Gas, Telephone, etc.). 8. In the event the City requires an Irrevocable Offer of Dedication (IOD) for future roadway improvements, the Applicant shall dedicate a 12.5-foot public utility easement (PUE) for overhead and/or underground facilities and appurtenances adjacent to the City's IOD. 9. The Applicant shall comply with SMUD siting requirements (e.g., panel size/location, clearances from SMUD equipment, transformer location, service conductors). Information regarding SMUD siting requirements can be found at: https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services 10. The Applicant shall provide separate SMUD service points to each parcel to the satisfaction of SMUD. 11. The Applicant shall locate, verify, and provide a drawing to SMUD identifying all electrical utility infrastructure for the existing structures. If necessary, any existing onsite electrical infrastructure that serves existing structures shall be relocated to the satisfaction of SMUD. 12. The Applicant shall dedicate a 12.5-foot public utility easement for overhead and/or underground facilities and appurtenances adjacent to all public street rights-of-ways. 13. The Applicant shall dedicate any private drive,			

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	ingress and egress easement, (and 10-feet adjacent thereto) as a public utility easement for (overhead and) underground facilities and appurtenances. All access roads shall meet minimum SMUD requirements for access roads. 14. The Applicant shall dedicate and provide all-weather vehicular access for service vehicles that are up to 26,000 pounds. At a minimum: (a) the drivable surface shall be 20-feet wide; and (b) all SMUD underground equipment and appurtenances shall be within 15-feet from the drivable surface. 15. Applicant will include phasing of development and order of planned construction upon submitting a new service application to SMUD for project phase(s) and/or road improvement backbone project(s).			
Prior to Submittal of Improvement Plans				
24.	For this project, SacSewer requires a Level 3 sewer study prior to the submittal of improvement plans for plan check to SacSewer. The sewer study shall demonstrate the quantity of discharge and any "flow through sewage" along with appropriate pipe sizes and related appurtenances from this subject and other upstream areas and shall be done in accordance with SacSewers' most recent "Minimum Sewer Study Requirements". The study shall be done on a no "Shed-Shift" basis unless approved by SacSewer in advance and in compliance with SacSewer Design Standards.	Sewer	Prior to Submittal of Improvement Plans	SASD

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
25.	All onsite sewer plans and offsite sewer plans must be submitted separately to SacSewer for review and approval.	Sewer	Prior to Submittal of Improvement Plans	SASD
Prior to Approval of Improvement Plans				
26.	Any vegetation damaged or destroyed by construction activities shall be replaced with like or comparable plant materials, and if damage occurs off-site, the replacement plants shall be approved by the property owner and the Planning Division, prior to occupancy approval in accordance with RCMC 23.716.080.	Landscaping	Prior to Approval of Improvement Plans	Planning
27.	**Drainage Study:** Applicant shall prepare and submit a project specific drainage study that includes but is not limited to: a pre- and post-project drainage analysis of the project impacts, identification of offsite project impacts or required offsite improvements, and identification of proposed connections to the City's Storm Drainage System with adequate supporting calculations. The drainage study shall conform to the requirements of the Sacramento City/County Drainage Manual (Volume 2), County of Sacramento Improvement Standards (Section 9), and all other applicable City standards.	Drainage	Prior to Approval of Improvement Plans	Public Works
28.	**Stormwater Quality- Post Construction** The improvement plans shall incorporate all applicable post construction stormwater quality measures; including source control, treatment control, low impact development, and full capture trash control measures into the site improvement plans in conformance with	Stormwater	Prior to Approval of Improvement Plans	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	the most recent version of the *Stormwater Quality Design Manual for the Sacramento Region*. In addition, a maintenance covenant is required for all proposed post construction stormwater quality measures, as detailed in Appendix B of the *Stormwater Quality Design Manual for the Sacramento Region.*			
29.	**Stormwater Quality– During Construction:** SWPPP – the applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) to be executed through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. These measures shall be consistent with the City's Improvement Standards and Land Grading and Erosion Control Ordinance. **Advisory Condition: Construction General Permit** The project applicant shall file a Notice of Intent (NOI) to obtain coverage under the *National Pollutant Discharge Elimination System (NPDES) General Permit For Storm Water Discharges Associated With Construction And Land Disturbance Activities* (Construction General Permit). Permits are issued by the State Water Resources Control Board.	Stormwater	Prior to Approval of Improvement Plans	Public Works
30.	The SWPPP for the site shall include a contingency plan for the implementation of a process to remove fine clay sediments prior to discharge to the City of Rancho Cordova's storm drain system and/or Waters of the State (e.g., creeks, rivers) to the satisfaction of the City of Rancho Cordova. A polymer treatment system or comparable process shall be incorporated in	Stormwater	Prior to Approval of Improvement Plans	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	the erosion and sediment control plan as part of the improvement plans submittal. This system shall be implemented by qualified professionals with training and proven experience in this field.			
31.	**Drainage System Design**: The applicant shall submit and obtain City approval of plans and specifications for the construction of public drainage improvements and all grading. The proposed drainage system shall be designed to accommodate runoff from the ultimate development and shall meet the City of Rancho Cordova's Improvement Standards, Construction Specifications, and Floodplain Management Ordinances in effect at the time of improvement plans approval.	Drainage	Prior to Approval of Improvement Plans	Public Works
32.	**100-year Detention:** The project is required to provide on-site detention of the 100-year flows because of constraints with the downstream system capacity and existing flooding risk. Hydraulic modeling shall be completed to demonstrate that runoff volumes in the post-project condition do not exceed the pre-project condition. Storage for the 100-year flows can be achieved using one large regional facility, or smaller distributed facilities. If mitigation for proposed privately-owned parcels will be included in a regional facility located in a public parcel, in lieu mitigation funding from the private parcels will be required.	Stormwater	Prior to Approval of Improvement Plans	Public Works
33.	All development within the City must comply with the City of Rancho Cordova's Floodplain Management Ordinance. All new structures shall be protected from the 100-year (1 percent) flood event. Certified pad	Flooding	Prior to Approval of Improvement Plans	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	elevations (certified by a registered Civil Engineer or licensed Land Surveyor) shall be set at least one and two tenths foot (1.2') above all sources of 100-year flooding.The overland release path must be shown on the improvement plans and the hydraulic computation must be provided to estimate the flow depths along the overland release paths.			
34.	Provide a permanent concrete stamp, or other permanently applied message to the satisfaction of the City not including paint, which reads “No Dumping-Flows to Creek” or other approved message at each storm drain inlet.	Dumping	Prior to Approval of Improvement Plans	Public Works
35.	All storm drain facilities within private lots shall be privately maintained and shall be clearly labeled as “private” in the improvement plans.	Storm Drain	Prior to Approval of Improvement Plans	Public Works
36.	**Fees:** Pay the drainage impact fees to the satisfaction of the City of Rancho Cordova’s Public Works Department.	Impact Fees	Prior to Approval of Improvement Plans	Public Works
37.	In cases where the roadway cross-sections are phased, extend all utilities beyond edge of pavement for future roadway build out.	Utilities	Prior to Approval of Improvement Plans	Public Works
38.	All landscape strips, medians, etc. that contain trees shall be designed to include continuous root barriers. Trees shall be appropriately sized for their proposed planters.	Landscaping	Prior to Approval of Improvement Plans	Public Works
39.	All landscape corridor walls shall be designed of masonry construction using graffiti resistant materials. Wall design and materials, including any portion of the	Landscaping	Prior to Approval of Improvement Plans	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	wall retaining soil shall include materials to prevent wall stains from seepage and shall be subject to City's approval and design standards.			
40.	The Quimby (CRPD) park site(s) shall be rough graded to a uniform elevation so there are no resulting excessive amounts of fill or depressions in accordance with the latest edition of the Park Site Criteria of the Cordova Recreation and Park District Design and Construction Standards Manual and pursuant to the improvement plans and specifications approved by the District. Rough grade to provide a uniformly graded site with no more than a two-foot grade change adjacent to the edges of the site.	Parks	Prior to approval of grading plans that include a Quimby (CRPD) park parcel	CRPD/Public Works
41.	Applicant/future applicant shall provide adequate drainage facilities to the boundary of the Quimby (CRPD) park site(s) at a depth sufficient to accept all drainage requirements for the improved park site(s). The District and the City shall jointly review and approve the drainage plans for the street frontages and utilities adjacent to the Quimby park site(s).	Parks	Prior to Approval of Improvement Plans	CRPD/Public Works
42.	All subdivision utilities (i.e. Water, Sewer, Storm Drain, Public Utilities, etc.) shall be brought into the Quimby (CRPD) park site(s) by the Applicant/future applicant at a location coordinated with the District and approved by the District's designated representative. The District and the City shall jointly review and approve the improvement plans for the street frontages and utilities adjacent to the park site. The District shall give written approval for all locations of utility service points of connection on all land to be dedicated or maintained by the District prior to the	Parks	Prior to Approval of Improvement Plans	CRPD/Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	approval of infrastructure construction documents.			
43.	When the Quimby (CRPD) park site abuts a land use other than a public street frontage or a school, the Applicant/future applicant shall construct a 6-foot high masonry wall or other approved fencing material along the common property line. The wall/fence shall be 6 feet high as measured above the grade of the abutting land use and shall not be constructed on the park site, but on the adjoining property.	Parks	Prior to Approval of Improvement Plans	CRPD/Public Works
44.	The Applicant/future applicant shall install signage on all Quimby (CRPD) park sites notifying the surrounding residential units of future park construction and identifying the park size, type, potential amenities and anticipated construction schedule. Signage details shall be included on the subdivision improvement plans. The District will have final approval of the sign design. The sign shall be maintained in good condition until the park construction is complete.	Parks	Prior to Approval of Improvement Plans	CRPD/Public Works
45.	Show on the plan how Fire Lanes will be marked. Fire Lane identification shall be provided along the required fire access roadway. Fire Lane identification shall be in accordance with the Sacramento Metro Fire Districts Fire Prevention Standard #3 and the California Vehicle Code. Vehicle parking is prohibited on any street less than 28 feet in width. Vehicle parking is permitted on both sides of streets 36 feet or more in width. Roadway widths shall be measured between the gutter-line or edge of pavement on opposite sides of the road. Identification of fire apparatus access roadways may be required on private roads.	Fire Lanes	Prior to Approval of Improvement Plans	Sac Metro Fire

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
46.	Provide a note on the plan that reads, "Fire access roadways shall be built to bear a minimum of 80,000 pounds and meet the Sacramento County Public Works Standards for roadways. A report, prepared by a registered geotechnical engineer, verifying the ability of the road to bear the required minimum weight, shall be submitted with any plan indicating construction of roadway. Verification of constructed roadway shall be provided by a registered geotechnical engineer prior to final of the project.	Fire Access	Prior to Approval of Improvement Plans	Sac Metro Fire
47.	Show the location of the required fire hydrants for this project on the improvement plans. Approved fire hydrants capable of providing the required fire flow for the protection of any and all structures shall be located along the fire apparatus access roadway. The required fire hydrants shall be installed and operational prior to any construction or on-site storage of combustible materials. The minimum required fire flow for the protection of commercial developments is 1,500 gallons per minute (gpm) at a pressure of 20 pounds per square inch (psi) for a two-hour duration.	Fire Hydrants	Prior to Approval of Improvement Plans	Sac Metro Fire
48.	Installation of a public cleanout is required at the right-of-way. These improvements must be shown on the plans.	Sewer	Prior to Approval of Improvement Plans	SASD
49.	The minimum size for public sewer mainlines is 8-inch diameter. Public sewer must be located within the right-of-way or a sewer easement. These improvements must be shown on the plans.	Sewer	Prior to Approval of Improvement Plans	SASD
50.	Abandonment of SacSewer assets per SacSewer	Sewer	Prior to Approval of	SASD

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	Standards Section 302.9 is required. The abandonment must be shown on the plans.		Improvement Plans	
51.	To obtain sewer service, construction of SacSewer sewer infrastructure will be required. Current SacSewer Standards and Specifications apply to any offsite or onsite public sewer construction or modification. These improvements must be shown on the plans. Field modifications to new or existing precast manhole bases are not allowed. SacSewer will require a lower lateral stub from the proposed manhole base to provide sewer service for the resultant future Parcel.	Sewer	Prior to Approval of Improvement Plans	SASD
52.	The proposed onsite sewer crossing parcel boundaries is prohibited.	Sewer	Prior to Approval of Improvement Plans	SASD
53.	SacSewer requires each building on each lot with a sewage source to have a separate connection to SacSewer's sewer system. If there is more than one building in any single parcel and the parcel is not proposed for split, then each building on that parcel must have a separate connection to a private onsite sewer line upstream of any connection to the SacSewer sewer. These improvements must be shown in the plans.	Sewer	Prior to Approval of Improvement Plans	SASD
54.	SacSewer Design Standards and Specifications require minimum 6-inch lower laterals for commercial and industrial buildings.	Sewer	Prior to Approval of Improvement Plans	SASD
55.	Sewer easements will be required to service this parcel. All public sewer easements will be dedicated to SacSewer in a form approved by the District Engineer. All public sewer easements will be at least 20 feet in	Sewer	Prior to Approval of Improvement Plans	SASD

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	width and will require continuous access for installation and maintenance. SacSewer will only provide maintenance in public rights-of-way and SacSewer dedicated sewer easements. No awning or overhang may encroach on the easement area. At minimum, an all-weather access road must be provided to all manholes.			
56.	Permanent structures, walls, signs and footings will not be permitted within the existing SacSewer easement area.	Sewer	Prior to Approval of Improvement Plans	SASD
57.	All manholes not within public right of way or sewer easement must be accessible with an all-weather access roads.	Sewer	Prior to Approval of Improvement Plans	SASD
58.	The alignment of all main lines and structures must provide a minimum of 1-foot vertical clearance and 5 feet horizontal clearance from all other utilities and improvements. Sewer is to be located at a minimum of 10 feet (measured horizontally) from any structure or footing. Show public sanitary sewer and water supply facilities in accordance with the Health and Safety Code.	Sewer	Prior to Approval of Improvement Plans	SASD
59.	If any proposed garbage enclosure will contain a drain to the sewer, the enclosure must have a roof.	Sewer	Prior to Approval of Improvement Plans	SASD
60.	Any landscaping within easement areas is limited to lawn or similar groundcovers, or plant species that are not environmentally protected and whose mature growth does not exceed five feet in height. When planting, place a root barrier system, such as trifluralin	Sewer	Prior to Approval of Improvement Plans	SASD

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	fabric, between the main lines or laterals and any trees or shrubs planted within the easement area.			
61.	The proposed density is greater than what was planned in SacSewer's Master Plan. SacSewer will be modeling the proposed density in the hydraulic model to determine if the downstream system is capacity constrained. If the results require upsizing the sewer system, this must be shown on the plans.	Sewer	Prior to Approval of Improvement Plans	SASD
Prior to Issuance of Building Permit				
62.	A building permit is required for the proposed project. The Applicant shall coordinate with the Building and Safety Division to obtain a building permit and meet all building code standards.	Building Permit	Prior to Issuance of Building Permits	Planning/Building
63.	Final building plans shall include an overall parking plan. The overall parking plan shall comply with RCMC Chapter 23.719 or adjustment criteria.	Parking	Prior to Issuance of Building Permits	Planning/ Building
64.	The applicant shall work with City staff to ensure that there are ample electrical outlets to serve future outdoor events.	Site Amenities	Prior to Issuance of Building Permits	Planning/Public Works
65.	The Project shall provide an accurate photometric plan showing foot-candle readings every 10 feet within the property and 10 feet beyond the property lines with the building permit submittal and shall also meet the following applicable requirements for Outdoor Lighting:	Outdoor Lighting	Prior to Issuance of Building Permits	Planning

Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
• **Nuisance Prevention:** All outdoor lighting shall be designed, located, installed, directed downward or toward structures, shielded, and maintained in order to prevent glare, light trespass, and light pollution. • **Maintenance:** Fixtures and lighting shall be maintained in good working order and in a manner that serves the original design intent. • **Shielding:** All outdoor lighting shall be constructed with full shielding and/or recessed to reduce light trespass to adjoining properties. Each fixture shall be directed downward and away from adjoining properties and public rights-of-way, so that no light fixture directly illuminates an area outside of the site. • **Levels of Illumination:** Parking lots, driveways, trash enclosures/areas, public phones, and group mailboxes shall be illuminated with a minimum maintained one foot-candle of light and an average not to exceed four foot-candles of light. • **Levels of Illumination:** Pedestrian walkways shall be illuminated with a minimum maintained one-half foot-candle of light and an average not to exceed two foot-candles of light. • **Levels of Illumination:** Entryways and exterior doors of non-residential structures shall be illuminated during the hours of darkness, with a minimum maintained one foot-candle of light, measured within a five-foot radius on each side of the door at ground level. • **Energy-Efficient Fixtures Required:** Outdoor lighting shall utilize energy-efficient (high pressure sodium, metal halide, low pressure			

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	sodium, hard-wired compact fluorescent, or other lighting technology that is of equal or greater efficiency) fixtures and lamps. All new outdoor lighting fixtures shall be energy-efficient with a rated average bulb life of not less than 10,000 hours.			
66.	All trash enclosures and refuse areas shall comply with zoning code and all service provider standards regarding amount, design, and access based upon the project's estimated need and waste pickup schedules. Trash enclosures should try to incorporate the same architectural treatments, materials and colors as the main building in order to properly screen them from view. All enclosures shall be locked when not in use.	Architectural	Prior to Issuance of Building Permits	Planning/ Building
67.	Utility areas, electrical, and gas meters shall be architecturally screened from view.	Architectural	Prior to Issuance of Building Permits	Planning/ Building/ Public Works
68.	Rooftop equipment (HVAC, meters, refrigeration equipment, plumbing lines, ductwork and transformers), shall not extend above the building parapet and shall be screened from view on all sides with materials architecturally compatible with the main structure. Screening details shall be shown on the Building Plans and submitted for review and approval by the Planning Division, prior to the issuance of Building Permits and installed prior to occupancy approval.	Architectural	Prior to Issuance of Building Permits	Planning
69.	Construction plans must include all windows and final architectural element details to be reviewed and approved by the Planning Division. This includes all building fixtures, exterior lighting, walkway lighting,	Architectural	Prior to Issuance of Building Permits	Planning

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	parking lot lighting, and streetlights on the Site, Utility, Landscape, and Building Plans, prior to the issuance of any permits. The height and style of fixtures shall be shown. Energy-saving fixtures shall be used and noted on the plans and all illumination shall be installed in a manner that is glare shielded and directed away from adjacent properties and rights-of-way.			
70.	A detailed pedestrian plan must be reviewed and approved by the Community Development Director prior to issuance of building permits. This plan shall show all pedestrian areas and include square footage of all areas, seating types and amounts, amenities (i.e. fountains, signs, art), pathway material and color, designated circulation space versus congregational space, and other features vital to the function of the pedestrian space. Specifically, this plan shall provide design details for gathering spaces adjacent to the commercial pads and will be consistent with the standards outlined in Zoning Code 23.722 for pedestrian-orientated spaces.	Pedestrian Spaces	Prior to Issuance of Building Permits	Planning
71.	Bicycle Parking (short and long term) shall be installed in accordance with the approved plans. All parking shall be located near main entrances and not impede onsite automobile and pedestrian access. The final design and location will be reviewed and approved by the Planning Division.	Bicycle Parking	Prior to Issuance of Building Permits	Planning
72.	A reciprocal parking access agreement shall be finalized and recorded between the City of Rancho Cordova and Folsom Lake College for the use of Parking Lot 3 for the Mills Crossing project.	Parking	Prior to Issuance of Building Permits	Planning

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
73.	Additional reciprocal parking access agreements shall be recorded between the City of Rancho Cordova and surrounding properties for supplemental parking for the Mills Crossing project.	Parking	Prior to Issuance of Building Permits	Planning
74.	A final landscape plan shall be submitted to the Planning Division in conjunction with improvement plan and or building permit submittal and approved by the Planning Division and Public Works Department prior to issuance of permits and/or any installation of landscape materials RCMC 23.716.020. The final landscape planting and irrigation plan shall be prepared by a registered licensed landscape architect and include the following items per RCMC 22.180.060: • Planting plan to scale that indicate slope • Irrigation Plan • Soils Test • Water Use Calculations • Irrigation Schedule • Permeability test for LID facilities' locations Soil media specifications (LID features)	Landscaping	Prior to Issuance of Building Permits	Planning/Public Works
75.	Applicant shall complete improvement plans to the satisfaction of the Public Works Department. Improvement plans shall include, but shall not be limited to: • All onsite civil improvements • Civil plan shall include an ADA access plan. • All facilities, including but not limited to, sidewalk, driveways, etc. shall be upgraded to meet current ADA requirements and City Standards. Remove and replace all existing sidewalk, curb, and gutter on La Loma Drive and Folsom Blvd. Widen limits of La Loma Drive sidewalk south of proposed	Improvement Plans	Prior to Issuance of Building Permits	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	Stree A to 7-feet • Remove and relocate guy wire and utility pole adjacent to pedestrian crossing on Folsom Blvd. • Remove abandoned driveways on frontage of La Loma Dr. and Folsom Blvd. and replace with curb, gutter, and sidewalk. • Utility laterals • Public improvement plans shall clearly delineate all transitions to existing improvements • Provide curbs, gutters, and sidewalk for Streets A, B, C, D, and E, with exception of sidewalks for Parcel 6 and Parcel 7, to be deferred until Parcel 6 and Parcel 7 are proposed for development. • All improvements to be designed and constructed to the satisfaction of the Public Works Department. • Street Lighting shall conform to all City improvement standards, and necessary easements shall be granted to accommodate those standards. • Underground overhead utilities at eastern property line bordering Los Rios Community College. Prior to approval of the improvement plans an undergrounding plan (include as part of package going to Council) shall be provided for Public Works review and approval. The plan shall include, but is not limited to, all facilities to be removed and any additional facilities required in order to accommodate the undergrounding • Widen pedestrian crosswalk on Folsom Blvd, beginning from light rail. • Slurry seal limits of development impacted by utility cuts in pavement (Residential - Type 1 Slurry, Arterials – Type 2)			

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	Compete installation of all improvements shown on the improvement plan to satisfaction of the City prior to occupancy			
76.	Secure City of Rancho Cordova Public Works Department approval of final grading plans, as required by City Ordinance	Grading Plans	Prior to Issuance of Building Permits	Public Works
77.	Prior to issuance of the first building permit within a TM phase: All streets and improvements shown on the TM phasing plan, all streets necessary for access to the proposed homes, associated improvements included in the approved improvement plans, and other infrastructure as necessary for adequate public access and use shall be substantially complete to the satisfaction of the Public Works Department. Prior to first occupancy all streets and improvements shown on the TM phasing plan shall be fully constructed and completed to the satisfaction of the City Engineer. At the discretion of the Public Works Department, the final lift of asphalt only (e.g. upper approximately 1.5 inches of asphalt) may be deferred to prior to the first occupancy. The structural section shall be designed to accommodate construction traffic and loads until such time that the finish lift of asphalt concrete is installed.	Infrastructure	Prior to Issuance of First Building Permit within a TM Phase	Public Works
78.	Property Owner/Applicant shall participate in or provide a funding mechanism for maintenance services for the fair share of existing and all new public improvements associated with the project including, but not limited to, streets, bridges/culverts, traffic signals, traffic signs, striping and legends, ITS operations, street lights and safety lights, and public frontage and median landscape improvements. This	Public Improvements	Prior to Issuance of Building Permits	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	may be accomplished through annexation to the City's Communities Facilities District No. 2008-1 (Street Lighting and Road Maintenance). All costs associated with the annexation shall be borne by the Property Owner/Applicant through payment of the annexation costs of the CFD annexation in the amount of $5,000 per annexation. Contact Dalia Fadl at (916) 851-8718 with regard to the process to satisfy this condition of approval.			
79.	The Applicant/future applicant shall pay a Quimby (CRPD) park development impact fee per Single Family dwelling unit and an equivalency amount for other dwelling unit types. Quimby (CRPD) park impact fee requirements will be assessed according to CRPD's 2014 Park Impact Fee Nexus Study or current Nexus Study adopted by CRPD's Board of Directors. The park impact fee amount shall be adjusted annually for inflation in accordance with the Nexus Study to the current year the building permit is issued.	Parks	Prior to Issuance of Building Permits	CRPD/Community Development
80.	Show the design for a fire access roadway of not less than 20-feet of unobstructed width, 13-feet, 6-inches of vertical clearance, and turning radii of 25 feet inside and 50 feet outside dimension on the improvement plans. The access roadway shall extend to within 150 feet of all portions of the exterior walls of the first story of any proposed building. The use of turf-block or grass-crete or similar alternate road surfaces is not approved for installation in fire apparatus access roadways.	Fire Access	Prior to Issuance of Building Permits	Sac Metro Fire
81.	Show the design for a minimum of 2 remote fire access roadways. Remote fire access roadways shall	Fire Access	Prior to Issuance of Building Permits	Sac Metro Fire

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	be spaced a distance apart equal to not less than one-half of the maximum diagonal dimension of the property or areas to be served. A minimum of 2 remote access roadways shall be provided for in any of the following conditions: a. A single building in excess of 62,000 sq. ft. b. Multiple buildings within a single parcel where the total combined square footage is in excess of 62,000 sq. ft. c. Developments of one-and two-family dwellings in excess of 39 dwelling units. d. Multi-family dwellings in excess of 39 units.			
82.	Show the design for aerial apparatus access for buildings 30 feet or greater. Aerial apparatus access shall be a minimum 26-feet in width, located 14 to 33-feet from the building as determined by building height, and located on two intersecting sides of the building (as determined by the Fire Code official).	Aerial Access	Prior to Issuance of Building Permits	Sac Metro Fire
83.	Show the design for an approved fire apparatus turnaround. The fire apparatus turnaround shall conform to Sacramento Metro Fire Districts, Fire Prevention Standard #3. The fire access turn-around shall be located within 50 feet of the end of the access roadway.	Fire Turnaround	Prior to Issuance of Building Permits	Sac Metro Fire
84.	The owner must contact Permit Services Unit at PermitServices@sacsewer.com or by phone at (916) 876-6100 to determine if SacSewer impact Fees are due. Fees are to be paid prior to the issuance of building permits.	Sewer	Prior to Issuance of Building Permits	SASD

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
Prior to Final Inspection				
85.	Vents, gutters, downspouts, flashing, electrical conduits, etc., shall be painted to match the color of the adjacent surface, unless otherwise approved by the Planning Division.	Architectural	Prior to Final Inspection	Planning
86.	Final murals and art installations, as identified by placeholders in the project plans (Exhibit A), shall be completed in accordance with the City's final art installation plan, as determined by City staff.	Art	Prior to Final Inspection	Planning
87.	During and upon completion of the installation of the landscaping for the project, the project landscape architect/designer shall certify that the installed landscape complies with the approved plans. Certification shall be accomplished by completion of site visits at key installation milestones. Key milestones at a minimum shall include: rough grade, soil amendment verification, Plant material inspection, irrigation coverage test underdrain installation (as applicable) and final installation. Certification shall include signed site observation reports, photographs and documentation verifying implementation of soil report recommendations. Failure to submit complete and accurate documentation to the Planning Department will delay final approval/occupancy of the project.	Landscaping	Prior to Final Building Inspection of the First Unit	Public Works
88.	Install public onsite and offsite improvements per the approved Public Works plans and to the satisfaction of the Public Works Department. Improvement plans shall include, but shall not be limited to, all streets,	Site Improvements	Prior to Final Building Inspection of the First Unit	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	water, sewer, storm drain, lighting, signage and striping, and other associated facilities for all streets and other public areas depicted on the tentative map or tentative map phase. Design datum shall be NAD-83.			
89.	Upon completion of the installation of the landscaping, the designer shall certify that the landscape complies with all city water conserving landscape requirements. Certification shall be accomplished by completion of a certificate of compliance on a form approved by the director of the city public works department. Failure to submit a complete and accurate certificate of compliance will delay final approval of the project and/or discontinue water service per RCMC 22.180.090. Upon receipt of the certificate of compliance and site inspection from City staff, the landscaping performance bond will be released.	Landscaping	Prior to Final Building Inspection	Public Works
90.	Record drawings of grading and improvement plans (1 full size and 1 half size hard copy), as well as a compact disc containing said plans in AutoCAD and pdf format, and a GIS shape file, or equivalent to the satisfaction of the City Engineer shall be submitted and approved by the Public Works Department.	Record Drawings	Prior to Final Building Inspection	Public Works
91.	Applicant/Owner shall repair and replace all right-of-way damages caused by the construction of the building to the satisfaction of the Public Works Department. Damages include, but are not limited to: pavement, sidewalks, curbs, and gutters.	Damage	Prior to Final Inspection/Occupancy	Public Works
92.	Approved numbers or addresses shall be placed on all new or existing buildings in such a position as to be	Addressing	Prior to Final Inspection	Sac Metro Fire

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	easily read from the street or road fronting the property. The minimum size of the numbers shall not be less than six (6) inches and shall be mounted immediately adjacent to a light source and shall also contrast with their background.			
Prior to Recordation of the Final Map				
93.	The Tentative Parcel Map approval is valid for three years from the date of City Council approval, unless an extension of time is subsequently approved per Government Code Section 66452.6(e), unless extended by the terms of a Development Agreement.	Tentative Map	Three years, commencing with the date of approval.	Planning/ Public Works
94.	**Updated language June 2018** Property Owner/Applicant shall participate in or provide a funding mechanism for maintenance services for the project's stormwater drainage and flood protection system. This may be accomplished through annexation to the City's Stormwater Utility Fee District, ***SWUII,*** or other financial mechanism as may be proposed and provided by the Property Owner for the same purpose of providing a funding mechanism to fund the operation and maintenance of the Project's stormwater drainage and flood protection system. Costs associated with the annexation shall be borne by the Property Owner/Applicant through payment of the annexation costs in the amount of $7,000 per annexation. Contact Dalia Fadl at (916) 851-8718 with regard to the process to satisfy this condition of approval.	Stormwater	The annexation shall occur prior to the recordation of any final map. The annual fee commences when a building permit is issued.	Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
95.	A note shall be placed on the final map stating that "Reciprocal access and parking between parcels shown hereon shall be granted/reserved prior to the sale and/or reconveyance of said parcels" related to the use of Parcel 3 and Los Rios Folsom Lake Community College property.	Reciprocal Access	Prior to Recordation of Final Map	Public Works
96.	Dedicate public utility easements, for the installation and maintenance of water, gas, sewer, drainage facilities, traffic control devices and dry utilities as shown on the tentative map.	Utilities Dedication	Prior to Recordation of Final Map	Public Works
97.	Future residential development proposals for Tentative Map parcels 6 and 7 will be evaluated for required Quimby parkland dedication requirements based on the dedication amounts as required in City of Rancho Cordova Municipal code Chapter 23.313.040 and Chapter 22.40.035. The Applicant/future applicant shall provide the CRPD-approved Quimby Parkland as real land or Quimby in-lieu fees or a combination of both as mutually agreed upon between the City of Rancho Cordova and CRPD during the entitlement approval process. If real land is dedicated, dedicate land through an irrevocable deed of dedication in accordance with the final map, Development Agreement between the City and the Applicant/future applicant and the Park Development Agreement between the Park District and the Applicant/future applicant.	Parks	Pay Quimby in-lieu fees directly to CRPD prior to recordation of the first Final Small Lot Map(s) for Tentative Map parcels 6 and 7. If parcel 6 or 7 is not further subdivided, then Quimby in-lieu fees will be paid prior to issuance of the first building permit on the parcel. Dedicate real land through an irrevocable deed of dedication within 30 days of filing the Small Lot Final Map with the park in it	CRPD/ Public Works/ Planning
98.	If there is Quimby Parkland to be dedicated to CRPD in the project, the Applicant/future applicant shall enter into a Park Development Agreement (Park DA) with	Parks	Prior to recordation of the first Small Lot Final Map on parcels 6 and 7 of the approved	CRPD/Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	the Cordova Recreation and Park District (the District). All costs to prepare the Park DA shall be borne by the Applicant/future applicant. The Park DA shall include, but not be limited to, all of the following; A. The Applicant's/future applicant's obligation to dedicate land or the payment of in lieu fees or both for Quimby (CRPD) park purposes; B. The Applicant's/future applicant's obligation to construct all necessary street frontage improvements abutting the dedicated park site(s) including, but not limited to, vertical curb, gutter, sidewalk, gutter, street paving, utilities (water, sewer, electrical, storm drain, phone, gas) and street lights; C. All property to be transferred to the District shall be free and clear of any past or future taxes or assessments, any liens or encumbrances. Any structures, walls, fences, wells, or storage tanks must be removed in accordance with all applicable laws and regulations prior to acceptance of any grant deeds or easements; D. The design and improvement of all CRPD parks within the project. All plans and specifications shall be prepared by a licensed landscape architect with all subconsultants found to be mutually acceptable to the District and the Applicant/future applicant. E. The timing of construction of all CRPD parks; F. The credits and reimbursement to which		Tentative Map or, if parcel 6 or 7 is not further subdivided, then prior to issuance of the first building permit on the parcel	

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	the landowner/applicant is entitled in connection with the construction of such CRPD park improvements. G. A funding mechanism for the on-going maintenance of CRPD park landscaping and associated facilities. All costs of forming the maintenance mechanism or annexation into an existing maintenance mechanism shall be borne by the Applicant/future applicant; H. A landscape architect of record shall be retained by the Applicant/future applicant, at the Applicant's/future applicant's expense, throughout the construction process to review the construction as it occurs and attend construction meetings on a weekly basis; I. The landscape architect of record shall be required to authorize all changes to the approved improvement plans in coordination with the District. J. The landscape architect of record and all appropriate subconsultants shall provide as-constructed plans and certify that the project has been constructed per the approved plans, as amended.			
99.	If Quimby parkland is dedicated in this project, the Applicant/future applicant shall work with District to annex the real property within the Project to Cordova Recreation & Park District's Community Facilities District No. 2018-01 ("CFD") formed under the provisions of the Mello-Roos Community Facilities Act of 1982 (Government Code Section 53311, et seq.) for	Parks	Prior to recordation of the first Final Map on parcels 6 and/or 7 of the Tentative Map	CRPD/Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
	the purpose of funding developments' fair share of the cost of maintaining the neighborhood parks, adjacent street frontage Improvements, and the Community Parks utilized by the project residents. All costs associated with annexation into the CFD shall be borne by the Property Owner/Applicant.			
100.	The District shall provide, and the Applicant/future applicant shall deliver to City Public Works a certificate from the Cordova Recreation and Parks District stating that all fees as required by the District have been paid and a Park Development Agreement (if required) has been executed.	Parks	Prior to recordation of any phase of any Final Map for parcels 6 and 7 of the Tentative Map or if parcel 6 or 7 is not further subdivided, then prior to issuance of the first building permit on the parcel	CRPD/Public Works
101.	All real property to be transferred to the Cordova Recreation and Park District for Quimby park purposes, shall be appropriately zoned for parks.	Parks	Prior to recordation of a map division on parcels 6 and/or 7 of the Tentative Map that contains the Quimby parkland parcel(s)	CRPD/ Public Works/ Planning
102.	If the proposed project will provide Quimby (CRPD) parkland dedication, the Applicant/future applicant shall record a Covenant for Active Park Uses notifying all future property owners that a future public park(s) is located within the proposed subdivision, and that the public park may include recreational and sport facilities (such as basketball courts, playground equipment and picnic shelters) that may generate vehicular and pedestrian traffic and noise impacts during various times, including but not limited to evening and nighttime hours and that the public park may include nighttime sports lighting that may generate lighting impacts during evening and nighttime hours.	Parks	Prior to recordation of amap division on parcels 6 and/or 7 of the Tentative map that contains the Quimby (CRPD) parkland parcel(s)	CRPD/Public Works

	Conditions of Approval	Category	Timing/ Implementation	Enforcement/ Monitoring
Advisory				
103.	Any gates shall be installed in accordance with The County Emergency Access Gates and Barriers Standard. Plan submittal is required prior to installation.	Gates	Advisory	Sac Metro Fire
104.	Subsequent applications, including time extensions, may be subject to additional SMFD Fire Conditions beyond those listed above. Fire conditions will only be added when significant life safety issues require remediation.	General	Advisory	Sac Metro Fire

CITY OF RANCHO CORDOVA

ORDINANCE NO. XX-2025

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA, STATE OF CALIFORNIA, AMENDING THE FOLSOM BOULEVARD SPECIFIC PLAN CHAPTER 5 OPPORTUNITY SITES

THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA DOES ORDAIN AS FOLLOWS:

Section 1. Purpose and Declarations.

WHEREAS, the Folsom Boulevard Specific Plan provides the goals, policies, development standards, and design guidelines of future development in the Folsom Boulevard Specific Plan area; and

WHEREAS, the Mather Mills Opportunity Area is identified in the Folsom Boulevard Specific Plan (FBSP) as a priority location for compact, urban, and pedestrian-oriented development; and

WHEREAS, the Mills Crossing ("Project") is located within the Mather Mills Opportunity Site and includes subdivision of 9.85 acres to develop community-commercial buildings, public open space, and surface parking. The project includes three buildings designed for multiple uses, including office space, community flex space, health services, event space, and a flexible theater. The Project is located at 10153 Folsom Boulevard, between La Loma Drive and Paseo Drive/Mather Field Road; and

WHEREAS, the Ordinance would amend Chapter 5 "Opportunity Sites" rezone a portion of the Mather Mills Opportunity Site from Residential Mixed-Use (FB-RMU) to High Density Residential (FB-HDR), Medium Density Residential (FB-MDR), and Commercial Mixed-Use (FB-CMU) for the Project; and

WHEREAS, on April 21, 2025, the City Council held a properly noticed public hearing for this Ordinance and considered all oral and written testimony; and

WHEREAS, the public hearing was noticed in accordance with the requirements set forth in Government Code section 65090 and 65091.

NOW THERFORE, **THE CITY COUNCIL OF THE CITY OF RANCHO CORDOVA DOES ORDAIN AS FOLLOWS:**

Section 2: Findings. This Ordinance is adopted pursuant to the following findings:

A. **CEQA Compliance** In compliance with the California Environmental Quality Act ("CEQA"), on April 21, 2025, by Resolution, the City certified the Mills Crossing Project EIR (State Clearinghouse #2023010102), adopted environmental findings pursuant to CEQA guidelines Section 15091, and adopted a mitigation monitoring program for the Mills Crossing project.

B. **Finding:** The proposed Specific Plan is consistent with the goals, policies, and objectives of the General Plan, development agreement, or other implementation instrument.

Evidence: The Mills Crossing Specific Plan Amendment remains consistent with the General Plan by ensuring that the proposed land use changes from Residential Mixed-Use (RMU) to Commercial Mixed-Use (CMU), High-Density Residential (HDR), and Medium-Density Residential (MDR continue to align with the City's vision for Folsom Boulevard as a mixed-use corridor. The amendment continues to uphold the General Plan's emphasis on transit-oriented development by retaining a mix of land uses that support walkability, access to public transportation, and economic investment. The shift to CMU continues to promote commercial and residential integration. The introduction of HDR and MDR is consistent with the General Plan's housing goals, ensuring a range of housing options that contribute to housing supply, affordability, and density near transit. Additionally, the proposed changes will utilize infrastructure and public services, to maintain alignment with the City's sustainable growth objectives. The amendment preserves key General Plan policies related to economic development, urban design, and community connectivity, ensuring that Mills Crossing remains a catalyst for revitalization and long-term investment along Folsom Boulevard.

C. Finding: The proposed Specific Plan will not adversely affect surrounding properties.

Evidence: The Specific Plan Amendment will not adversely affect surrounding properties as it maintains a mix of uses that are compatible with existing and planned development along Folsom Boulevard. The amendment aligns with the City's land use goals while ensuring an appropriate interface with adjacent properties. The proposed land uses support walkability and transit accessibility, and the project includes buffering, landscaping, and site design measures to minimize potential impacts. Compliance with zoning, infrastructure requirements, and development standards will further ensure that the project functions within the surrounding area without adverse effects.

Section 3. Amendments to the Folsom Boulevard Specific Plan

The City Council hereby adopts the amendments to the Folsom Boulevard Specific Plan, as shown and incorporated in Exhibit A to this Ordinance.

Section 4. Severability

If any provision of this Ordinance or the application thereof to any person or circumstance, is held invalid, the remainder of the Ordinance, including the application of such part or provision to other persons or circumstances shall not be affected thereby and shall continue in full force and effect. To this end, provisions of this Ordinance are severable. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase hereof irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses, or phrases be held unconstitutional, invalid or unenforceable.

Section 5. Effective Date

Within fifteen (15) days after adoption, a Summary of this Ordinance shall be published once in the Grapevine Independent, or the Sacramento Bee, a newspaper of general circulation printed

and published in Sacramento County and circulated in the City of Rancho Cordova, in accordance with Government Code Section 36933. This Ordinance shall take effect and be enforced thirty (30) days after its adoption.

PASSED AND ADOPTED by the City Council of the City of Rancho Cordova on the ___ day of _____ 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Siri Pulipati, Mayor

ATTEST:

_____
Stacy Leitner, CMC
City Clerk

City of Rancho Cordova

Folsom Boulevard Specific Plan Amendment

Note to Reader: Only those sections and/or subsections listed within this document are being amended. Unless otherwise indicated, all sections and subsections prior to and after the amended section and/or subsection shall remain, unchanged.







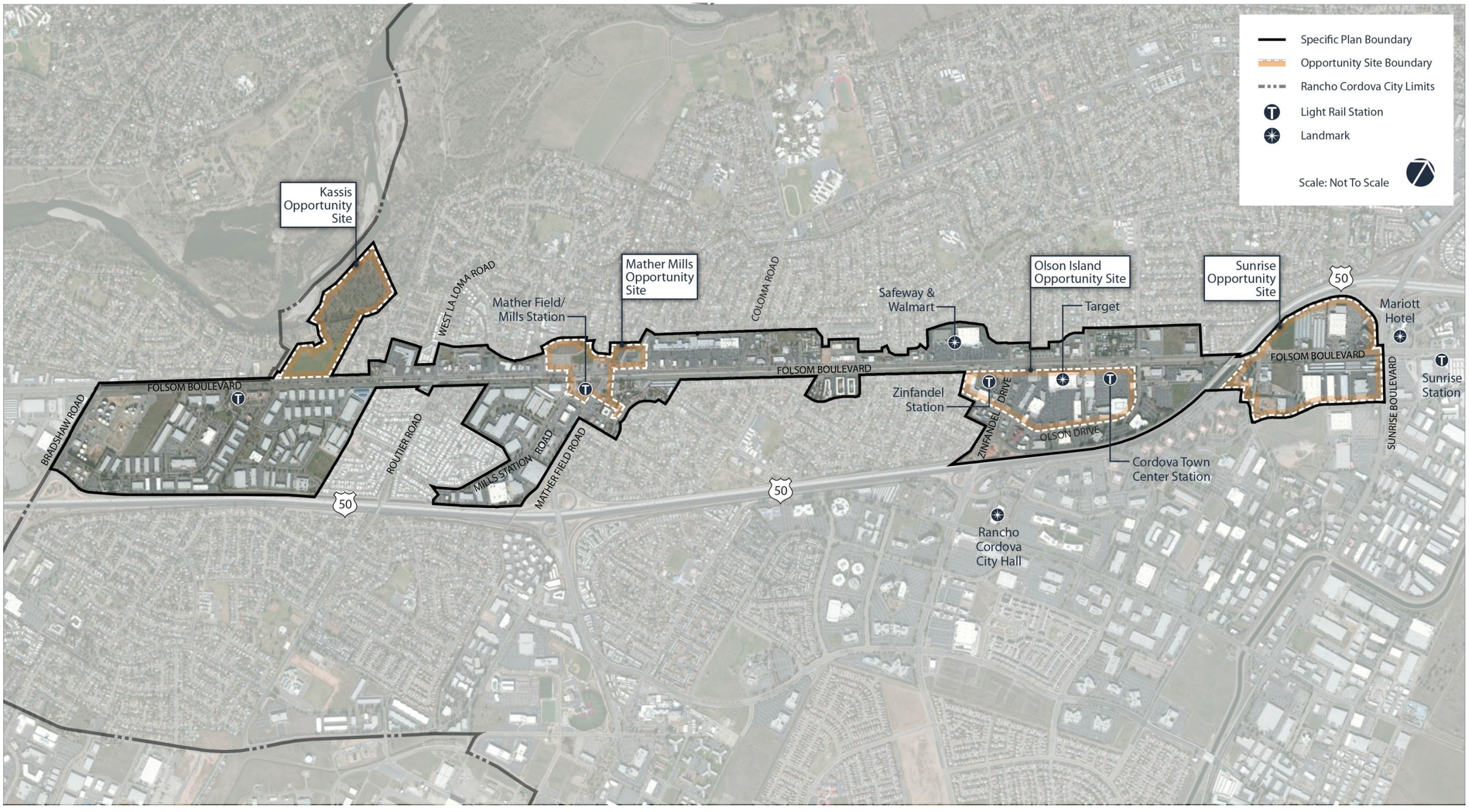
A. Introduction

As described in Chapter 2, the land use framework establishes an organizing structure for where and how growth within the plan area will occur. The land use framework identifies four sites with the greatest opportunity for new development and redevelopment. This chapter describes those areas as being vibrant destinations and hubs of activity along Folsom Boulevard. The opportunity sites designate locations where the City will concentrate resources (e.g., economic development incentives, public investment, facilities, outreach, coordination) and community assets (e.g., public gathering places, events, activities) with the goal of catalyzing significant private investment in these areas. The four opportunity sites are shown in Figure 5-1 and include:

1) Kassis Opportunity Site
2) Mather Mills Opportunity Site
3) Olson Island Opportunity Site
4) Sunrise Opportunity Site

Each opportunity site shown in Figure 5-1 has a distinct character and unique mix of uses. This chapter describes and illustrates each opportunity site with text and a collection of inspired idea images to communicate the vision and desires for each site. To achieve the desired development and design character unique to each opportunity site, an additional set of customized development standards is established in this chapter for each of the four sites. These special standards supplement those standards for the land use districts identified in Chapter 4 (Development Standards) and apply only to major new development. If there are differences in the additional development standards for any opportunity site of this chapter and corresponding standards in Chapter 4 (Table 4-1) for each district, the additional development standards identified in this chapter prevail.

Figure 5-1 Opportunity Sites



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B. Kassis Opportunity Site

1. Description

The Kassis property is designated Folsom Boulevard Residential Mixed Use in recognition of its suitability for residential development and its setting within a predominantly residential district. The site does have potential for employment oriented uses (both retail/commercial and office) that resulted in the flexible mixed use designation.

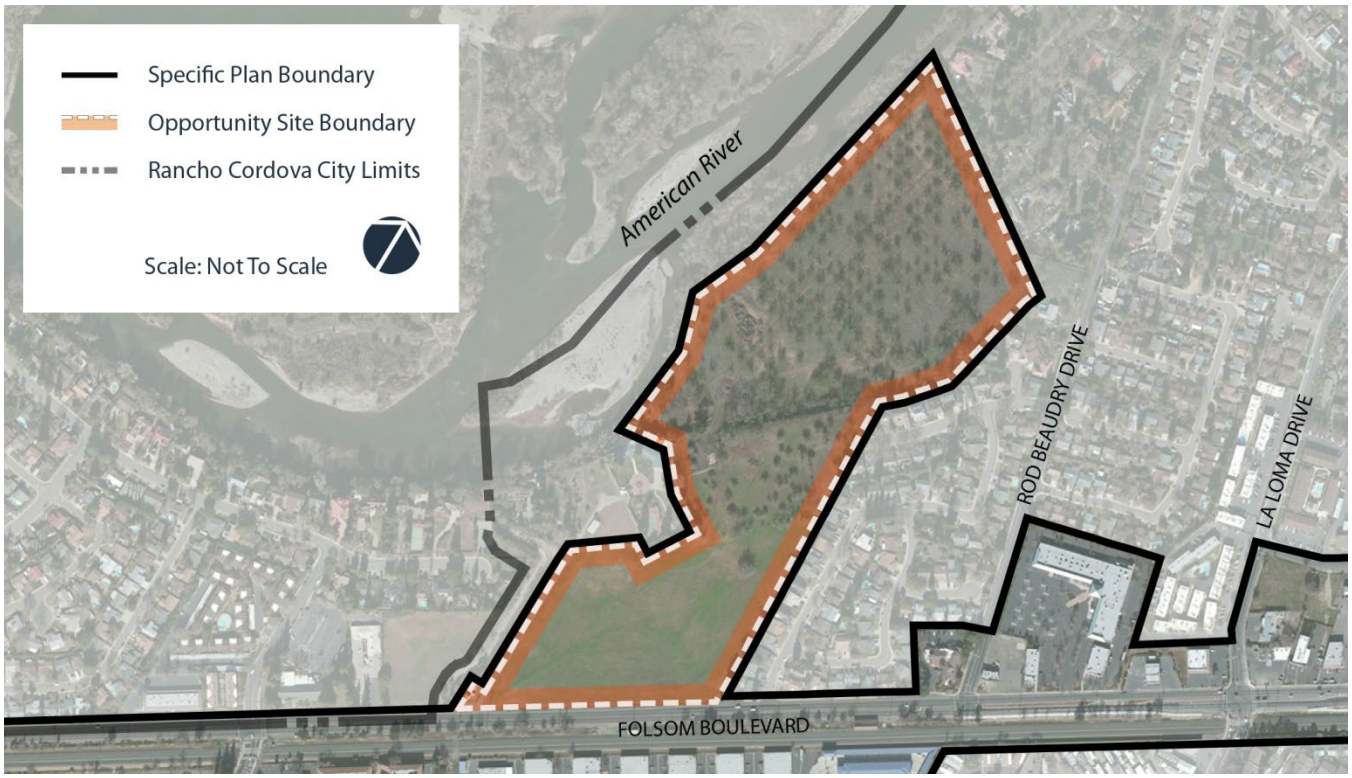
The total area of the Kassis property exceeds 42 acres, although a small portion of the property is excluded from the Folsom Boulevard Specific Plan. The area excluded does not fall along existing property lines. In the future, the boundary of the Specific Plan and open space may need to be adjusted to be consistent with the parcel map. This site is surrounded on three sides by residentially zoned lands (RD-20 and RD-5 to the west, RD-5 to the east and RD-2 to the north) and bordered by Folsom Boulevard on the south. A project with a substantial residential component would be complimentary to the surrounding existing uses.

Based upon the property size (it is among a very few parcels on Folsom Boulevard with a significant area of undeveloped land) and its proximity to the planned Horn Road Light Rail Station, this property was designated within the City's General Plan Housing Element to include at least 10 acres of High Density Residential.

Beyond the residential development potential for this site, a retail/commercial or office component could compliment neighboring residents by providing nearby retail and employment opportunities while taking advantage of direct access to Folsom Boulevard and close proximity to the future Light Rail Station.

The Kassis Opportunity Site will be characterized by a suburban and primarily residential environment with limited nonresidential development along Folsom Boulevard. The site will feature a large residential component, including apartments, condominiums, townhouses, and compact single-family homes. At least 10 acres of the site will be developed at a minimum of 24 dwelling units per acre to meet the city's housing requirements. To the extent feasible, new residential streets and sidewalks will connect to the existing streets and cul-de-sacs as well as to the American River Parkway. Architectural features such as balconies, porches, and stoops will animate the interface between buildings and the sidewalk. Primarily neighborhood-serving retail shops and services, restaurants, sports and recreational uses, medical clinics, and/or offices will front the corridor, but not in a conventional strip form. Instead, nonresidential buildings will locate close to the street frontage (existing and future streets) to define, connect, and activate the sidewalk. Courtyards, community gardens, and central greens will provide opportunities for residents to congregate and socialize.

2. Site Location Map



3. Inspired Ideas Imagery for Kassis Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Kassis Opportunity Site. These images are intended to guide and inspire private developers to create quality development with a sense of place.


Small-lot single-family homes


Cluster homes


Garden condominiums


Porch


Townhomes


Apartments


Offices over shops


Office/medical



Offices over restaurant or retail


Courtyard


Community garden


Central green

4. Additional Development Standards for Kassis Opportunity Site

Additional development standards are established for major new development projects within the Kassis Opportunity Site. These additional standards address the unique potential of the location, implement relevant goals, policies, and provisions of the General Plan, and ensure consistency with other City-adopted plans. Specifically, additional development standards for this site include housing density, building orientation, public gathering places, parking, access, and site furnishings and wayfinding to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements
- Citywide Design Guidelines

These standards supplement the development standards for the underlying land use. Properties within the Kassis Opportunity Site are designated FB-RMU (residential mixed-use) to reflect the predominant surrounding residential land use and the future Horn Road light rail station. Where the development standards in Table 5-1 deviate from the development standards in Table 4-1, the standards in Table 5-1 apply.

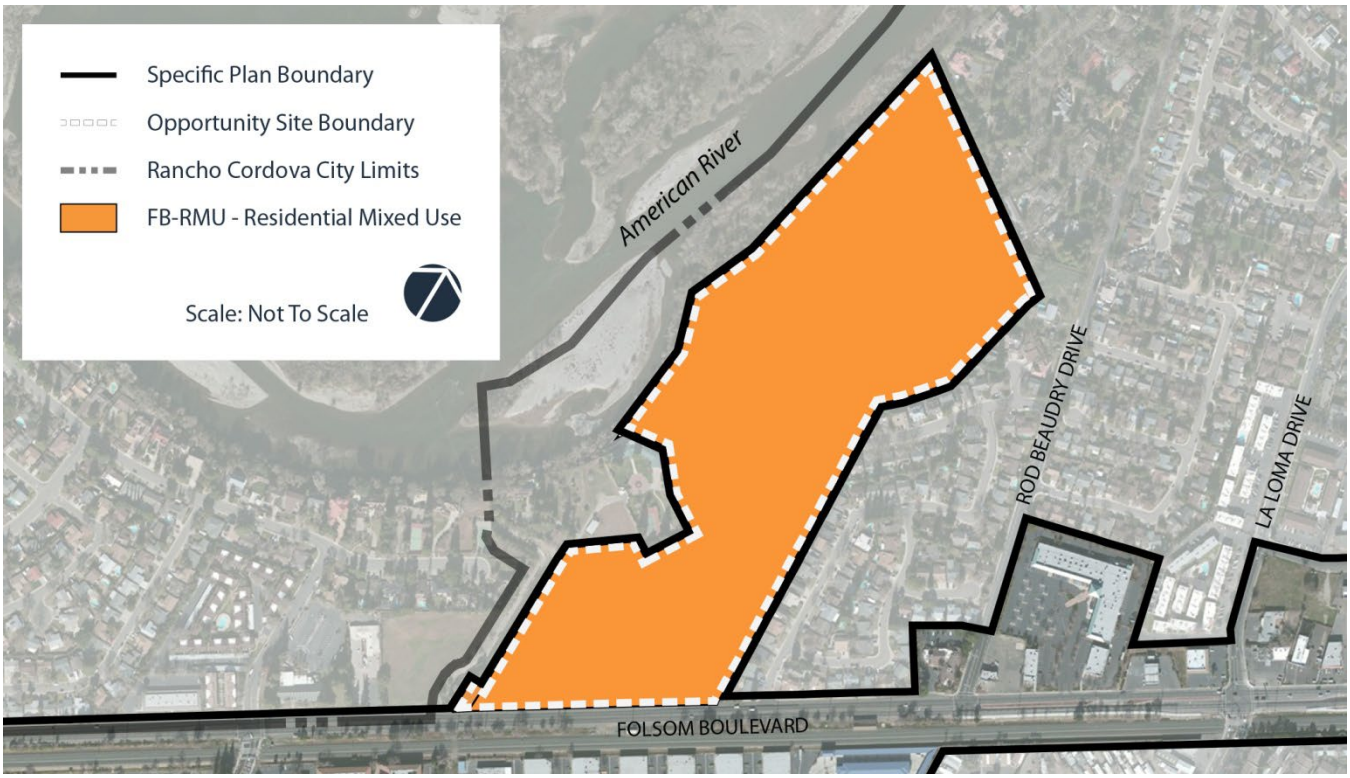


Table 5-1 Kassis Opportunity Site: Additional Development Standards

Standard	Site-wide (FB-RMU)
Density	6.1–40 du/acre At least 10 acres shall be developed at a minimum of 24 du/acre.
Building Orientation	All nonresidential primary building entrances must face a public street or public gathering place.
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.
Parking	For residential developments with over 20 residential units, commercial, and mixed-use developments, private surface parking lots are not permitted in the front setback. Locate on-site parking to the rear, side, or internal to the block and provide access to parking through alleys and driveways.
Access	To the greatest extent feasible, connect new development, via streets, sidewalks, and pathways, to existing cul-de-sacs and local streets and to the American River Parkway.
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.

C. Mather Mills Opportunity Site

1. Description

The Mather Mills Opportunity Site includes numerous parcels located in close proximity to the Mather Mills Light Rail Station. Proposed land use designations within this Site include Residential, Commercial and Office/Industrial Mixed Use districts. Located adjacent to the Mather Mills Station and at the intersection of Mather Field Road and Folsom Boulevard, this Site presents unique opportunities for future development. These geographic attributes were likely a significant factor in the decision to locate the planned Los Rios Community College Campus at Folsom Boulevard and Paseo Drive.

The majority of development potential within this Site is located on the north side of Folsom Boulevard, both to the west and to the east of Paseo Drive. West of Paseo Drive includes approximately 12 acres proposed as Commercial Mixed Use (FB-CMU) and Residential Mixed Use (FB-RMU). This area will contain the future Los Rios Community College campus (land designated as FB-CMU). The balance of this area is designated FB-RMU in recognition of the wide range of development potential presented by the site. As with other sites within the FBSP that are designated FB-RMU or Medium Density Residential (FB-MDR), the size of this site provides special opportunities to accommodate a well-designed high density residential project. While this site also presents opportunities for commercial development, existing uses along the northern boundary of the site are residential. It is anticipated that higher density residential development along the northern boundary of this site will provide an effective transition between existing residential and future commercial uses.

While the FB-RMU designation requires that a minimum of 50 percent of finished floor area of development on the site must be residential, the FB-RMU designation also allows a substantial non-residential component that will compliment both the on-site residential and the adjacent college campus. The City recognizes that the timing of various types of development can be unpredictable and has therefore modified requirements for the timing of development. Under previous regulations the residential component would have been required to be constructed before the commercial component could begin construction. This requirement has been modified to allow commercial development to proceed in an FB-RMU site as long as it can be demonstrated that the site retains available capacity to meet the FB- RMU residential requirements.

Lands within this Opportunity Site located to the east of Paseo Drive have been designated FB-CMU in recognition of several factors, including: the Los Rios Community College District has acquired a portion of these lands and will be developing parking required for the college along the northern boundary of this area; there are several existing and active commercial uses located in this area; and, the parcelization and fragmented ownership in this area will make developing a larger and well integrated project challenging.

The Mather Mills Opportunity Site will be characterized by a compact, urban, and walkable environment. This site possesses two key assets that will shape new development within this area: the Mather Mills Light Rail Station and the future Los Rios Community College. This opportunity site is envisioned to support transit-oriented uses, such as a mix of educational, residential, retail, and service activities, both vertically and horizontally. Higher-density residential uses, including two- to four-story condominiums, townhomes, and student apartments, will locate here to provide housing in close proximity to the light rail station and the college. Small-scale retail and commercial services, such as bookstores, cafés, restaurants, pubs, entertainment venues, personal services, and office supply and reproduction services, will support the needs of residents and college students. Uses adjacent to the college will be designed to have a positive interface with the college. A safe and convenient pedestrian and bicycle network will connect destinations within the opportunity site. A variety of public spaces, such as outdoor dining and plazas, will invite residents, workers, and students to gather and participate in a vibrant community life. Social events will be organized in these public places, such as farmers markets and food truck fairs, to activate these spaces on weekends and evenings.

2. Site Location Map



3. Inspired Ideas Imagery for Mather Mills Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Mather Mills Opportunity Site. These images are intended to guide and inspire private developers to create active urban places within this opportunity site.



Illustration of Los Rios College



Residential units over commercial



Townhomes, apartments & condominiums



College-serving uses, such as a bookstore



Campus services



Restaurant



Student-serving uses, such as a bike hub and repair shop



Events, such as food truck fairs



Events, such as a farmers market



Public gathering spaces with seating



Outdoor dining/café seating



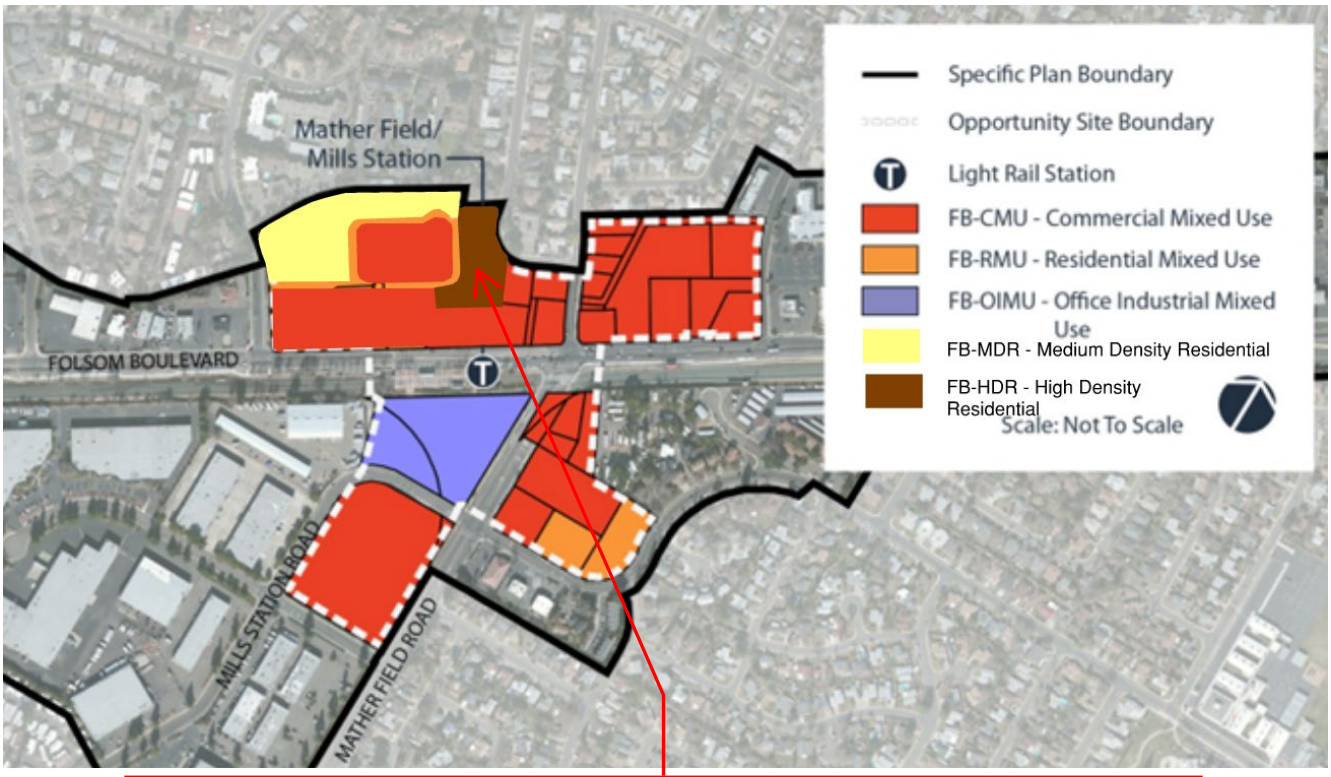
Plaza

4. Additional Development Standards for Mather Mills Opportunity Site

Additional development standards are established for major new development projects within the Mather Mills Opportunity Site. These standards address the unique attributes of the location, implement relevant goals, policies, and provisions of the General Plan, and ensure consistency with other City-adopted plans. Specifically, housing density, floor area ratio, building setbacks and height, pedestrian shelter, bicycle amenities, building orientation, drive-through design, public gathering places, parking, and site furnishings and wayfinding have been included to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements, including special provisions for transit-oriented development
- Citywide Design Guidelines

Properties within the Mather Mills Opportunity Site are designated FB-RMU (residential mixed-use), FB-HDR (high density residential), FB-MDR (medium density residential), FB-CMU (commercial mixed-use), or FB-OIMU (office industrial mixed-use), to be compatible with existing surrounding uses while maximizing future potential uses. In addition, any properties (or portions thereof) located within a quarter mile of the light rail stop may develop consistent with the citywide TOD Overlay District standards in the Zoning Code. Where the development standards in Table 5-2 deviate from the development standards in Table 4-1, the standards in Table 5-2 apply to qualifying major projects. For FB-MDR and FB-HDR zoning designations within the Mather Mills Opportunity Site, please refer to the MDR and HDR development standards outlined in Table 4-1.



Imagery to be more accurately updated once Specific Plan Amendment is approved. Refer to the end of this document for detailed rezoning exhibits.

Table 5-2 Mather Mills Opportunity Site: Additional Development Standards

Standard	FB-RMU	FB-CMU	FB-OIMU
Density	6.1–40 du/acre	10–40 du/acre	n/a
Floor Area Ratio	No minimum No maximum	0.3 minimum No maximum	0.25 minimum No maximum
Front Setback Standards	Along the north side of Folsom Boulevard and along Paseo Drive, there is no minimum front setback. The maximum shall be no more than 10 feet, except where there is outdoor dining, a plaza, a building entry, or a courtyard between the building and the street. Exceptions can be granted for building façades with garage access.		
Primary Building Height	65 feet /4 stories maximum[1]	No maximum[2]	65 feet/4 stories maximum
Awnings/ Canopies	Awnings, canopies, recesses, or similar pedestrian shelters shall be provided along at least 30% of the building's ground-floor level along the frontage with primary building entrance and where the building abuts a plaza or other public gathering space.		
Bicycle Amenities	Establish common area bicycle facilities to encourage students to use alternative forms of transportation. For example, provide additional bike racks and lockers or other secured bicycle parking areas, shower facilities, and a bike repair kiosk.		
Building Orientation	For properties fronting along Folsom Boulevard, primary building entrances shall be oriented to a public street, a private street designed as an on-site main street, or a public gathering place.		
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.		
Parking Access & Location	For nonresidential or mixed-use developments, private surface parking lots are not permitted in the required front setback area. Additionally, parking shall not be located between the street and the building façade with the primary entrance. Rather, on-site parking shall be located to the rear, side, or internal to the block and provide access to parking through alleys and driveways. Finally, parking areas on corner lots shall not be located adjacent to intersections.		
Parking Ratio	The number of vehicle parking spaces provided shall not exceed 150% of the minimum parking ratio.		
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.		

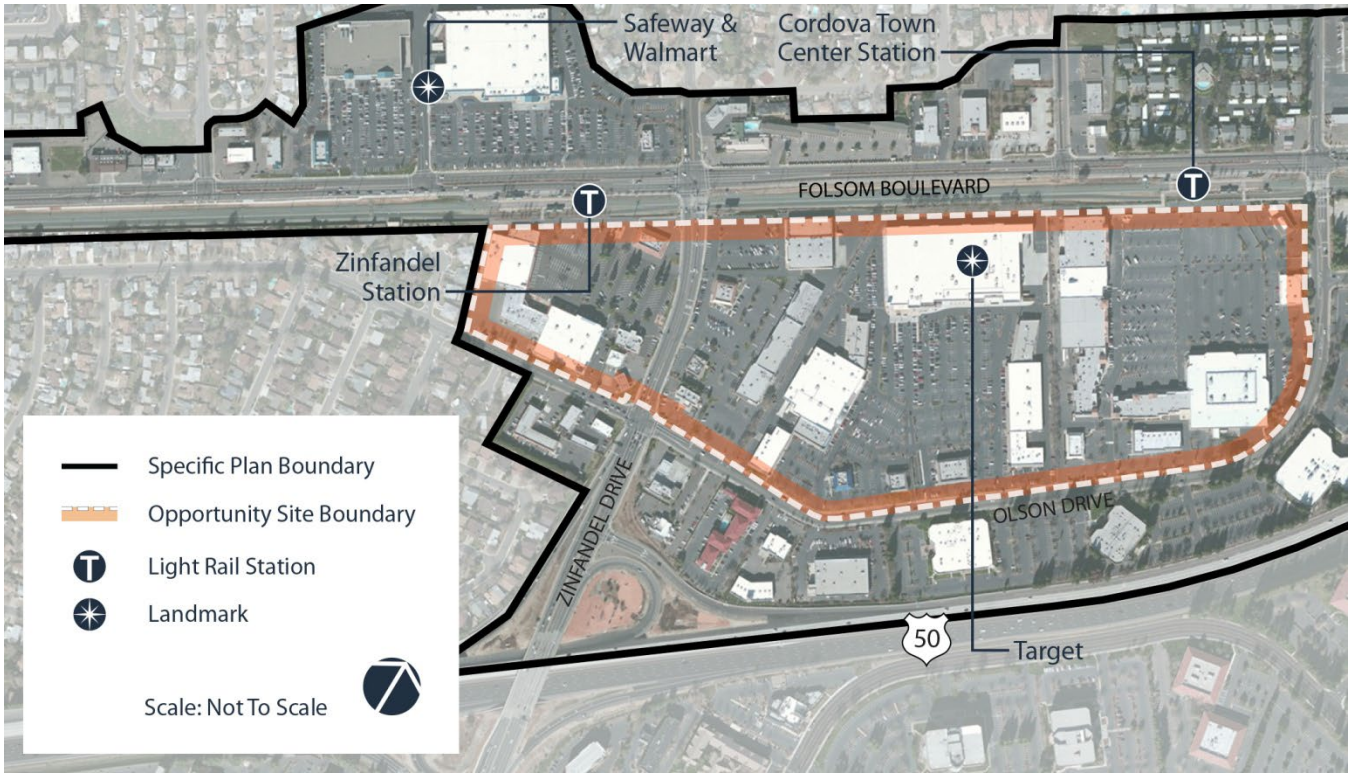
1. *No maximum height or number of stories for vertical mixed-use integration where residential use is located above nonresidential. Note #2 below also applies. Defer to TOD Overlay if applicable.*
2. *While there is no height maximum, the regulations of the Federal Aviation Administration (FAA) limit the height of structures to between 150 and 350 feet based on location. See the Safety Element of the General Plan for more information. FAA approval is required for all structures over 150 feet in height. Defer to TOD Overlay if applicable.*

D. Olson Island Opportunity Site

1. Description

Olson Island is currently a retail commercial center serving the community and the region. It is a shopping destination where people come and have an extended stay to shop, eat, drink, and socialize. This area is envisioned to mature into an environment designed so that visitors can park once and then walk to a variety of different businesses and public gathering places. Access and circulation to and throughout the site needs to be improved with limited access driveways that resemble urban main streets, and better pedestrian access to and from the transit stop and throughout the entire commercial hub. A mix of new and expanded retail, office, and entertainment uses are encouraged, with both horizontal and vertical integration. The area will continue to be home to a wide range of large national retailers and small independent businesses. A future international marketplace will capitalize on the synergy of established uses that reflect the diversity of the community (for example, KP International Market). Small-scale civic uses such as a satellite library or community center could strengthen this area as a hub of activity for the entire city. Vibrant public seating or gathering spaces and a variety of social activities could bring residents, workers, and visitors to this central gathering place in the city.

2. Site Location Map



3. Inspired Ideas Imagery for Olson Island Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Olson Island Opportunity Site. These images are intended to guide and inspire private developers to create successful commercial projects and a variety of active public spaces.



Large retail



Restaurants & outdoor dining


Large retail


Offices over shops and restaurants


On-site main street



Small civic/institutional use



International marketplace


International marketplace



International marketplace


Plaza


Outdoor dining/café seating



Paseo

4. Additional Development Standards for Olson Island Opportunity Site

Additional development standards are established for major projects within the Olson Island Opportunity Site. These additional development standards address unique site opportunities, implement relevant goals, policies, and provisions of the General Plan, and ensure consistency with other City-adopted plans. Specifically, building height, housing density, floor area ratio, building setbacks, pedestrian shelter, bicycle amenities, drive-through design, on-site main street, public gathering places, site furnishings, pedestrian circulation, wayfinding, and traffic calming have been listed to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements, including special provisions for the downtown and transit-oriented development
- Citywide Design Guidelines
- Main Street Standards

These standards supplement the development standards for the underlying land use districts and apply to all properties within this opportunity site. All properties within the Olson Island Opportunity Site are designated FB-CMU (commercial mixed-use) to reflect its historic and future commercial use. In addition, any properties (or portions thereof) located within a quarter mile of the light rail stop may develop consistent with the citywide TOD Overlay District standards in the Zoning Code. Where the development standards in Table 5-3 deviate from the development standards in Table 4-1, the standards in Table 5-3 apply to qualifying major projects.

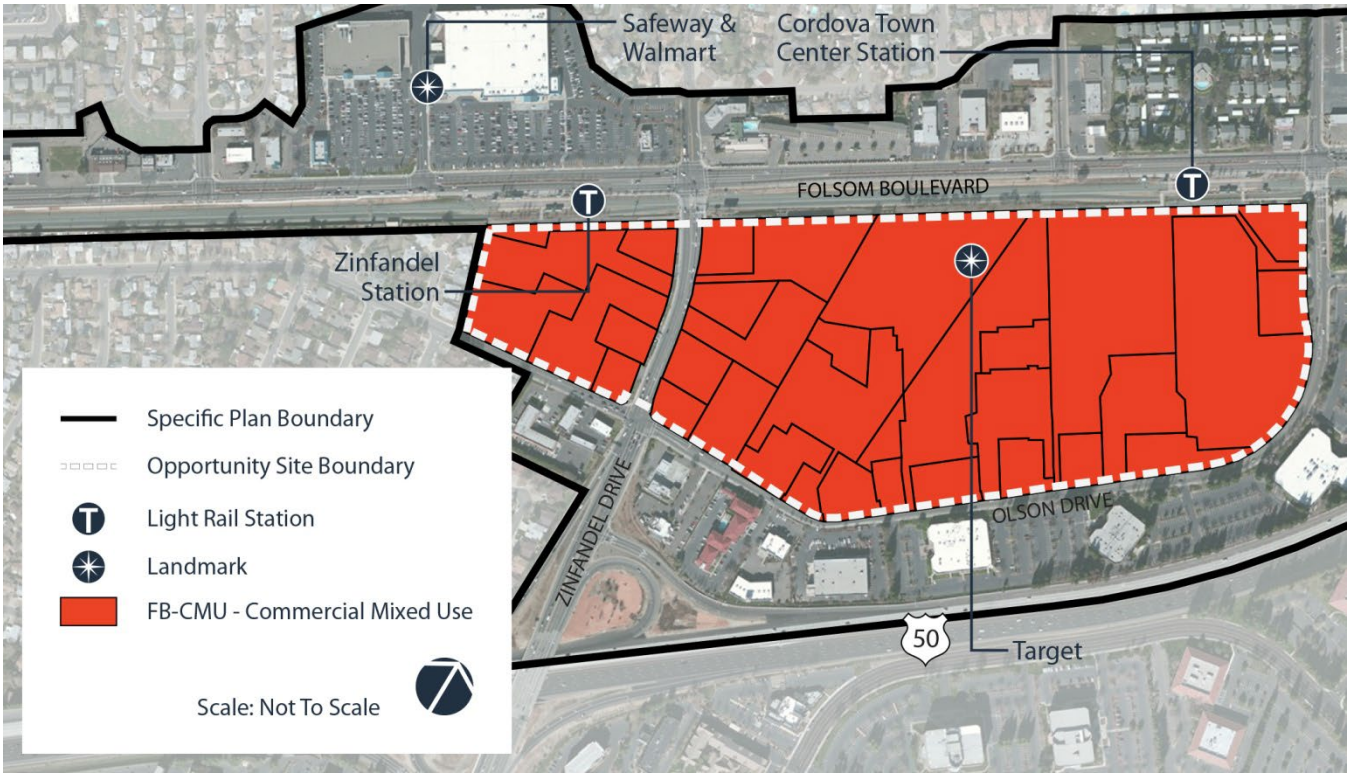


Table 5-3 Olson Island Opportunity Site: Additional Development Standards

Standard	Site-wide (FB-CMU)
Building Height	No maximum
Density	10–40 du/acre
Floor Area Ratio	0.25 minimum No maximum
Front and Street Side Setback Standards	New buildings on property abutting Olson Drive and Zinfandel Drive have no minimum front setback requirement and a maximum front setback requirement of 20 feet. Improvements and expansions to existing buildings, and new buildings that don't abut Olson or Zinfandel drives, will have no minimum or maximum setback requirements.
Drive-Through Design	Drive-Through Aisles. The minimum standards for drive-through aisles are as follows: Drive-through aisles shall have a minimum 11-foot interior radius at curves and a minimum 12-foot width. Drive-up windows and remote tellers shall provide at least 180 feet of stacking space for each facility, as measured from the service window or unit to the entry point into the drive-up lane. Non-food and/or non-beverage businesses may reduce the stacking space to a minimum of 60 feet. Each drive-through entrance/exit shall be at least 50 feet from an intersection of public rights-of-way, measured at the closest intersecting curbs, and at least 25 feet from the curb cut on an adjacent property. Exceptions may be granted by the designated approving authority when drive-though pull-out spaces are provided. Each entrance to an aisle and the direction of traffic flow shall be clearly designated by signs and pavement markings. Each drive-through aisle shall be separated from the circulation routes necessary for ingress or egress from the property or from access to a parking space. Landscaping of the Drive-Through Aisle. Landscaping shall be as follows: A 5-foot-wide planter shall be provided between the drive-through aisle and the parking area that includes shade trees consistent with those used in the parking area. An average 3-foot-tall planter with low shrubs that screens the drive-through aisles from the abutting public right-of-way shall be used to minimize the visual impact of readerboard signs and directional signs. At no time shall this landscape barrier be pruned in a manner that allows the vehicle headlights from the drive-through lane to be visible from abutting street rights-of-way. Plantings should also be designed to discourage potential safety issues. Pedestrian Access and Crossings. Pedestrian access shall be provided from each abutting street to the primary entrance with a continuous 4-foot-wide sidewalk or delineated walkway. Pedestrian walkways should not intersect the drive-through drive aisles, but where they do, the walkways shall have clear visibility and shall be delineated by textured and colored paving.

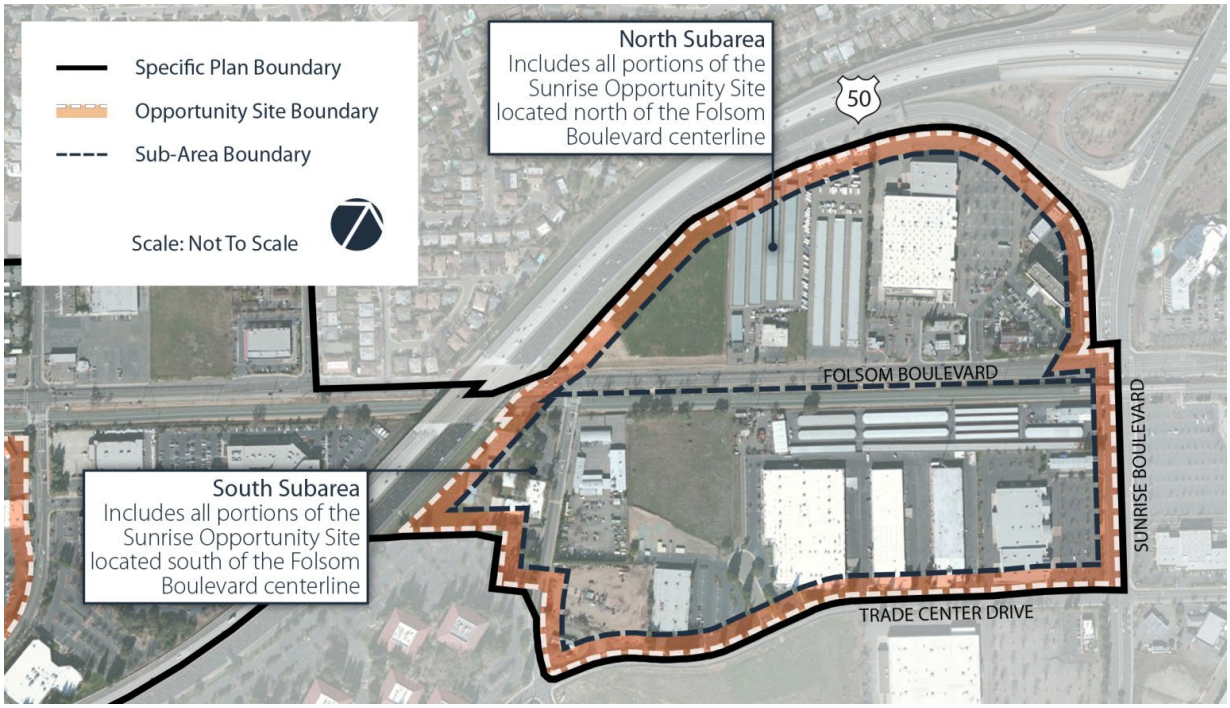
Standard	Site-wide (FB-CMU)
On-Site Main Street	The Olson Island Opportunity Site will include a project-wide on-site main street to improve circulation throughout the opportunity site. See illustration below. The on-site main street shall be located to create a walkable environment by fronting buildings along the street and internal circulation routes and shall be designed as follows: • Narrow travel lane • Limited driveway curb cuts • Wide sidewalks • Optional on-street parking • Buildings close to street frontage • Building frontages detailed with architectural elements 
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.
Traffic Calming	New development shall take into consideration traffic calming improvements (e.g., controlled turning movements, speed reduction measures) to maximize safety.

E. Sunrise Opportunity Site

1. Description

The Sunrise Opportunity Site is characterized by two distinct areas, one north of Folsom Boulevard and one south of the boulevard. The area to the north, referred to as the "north subarea," will be home to a future convention center and supporting uses, such as hotels, restaurants, and meeting spaces. This area also allows retail and office uses that support a convention center. The north subarea is a prime location for a performing arts and entertainment center/complex. Multistory buildings are encouraged in this area. A walkable and bikable campus-like setting will host a variety of public gathering places for visitors to eat, relax, and socialize. This area is intended to implement the General Plan Convention Overlay Area and will be a special place in the city that is entertaining, vibrant, and inviting to tourists, visitors, and residents alike. The area to the south, referred to as the "south subarea," will expand on the current concentration of building supply, construction, furnishing, and materials businesses with the intention of becoming a building trade center with interior design showrooms and outdoor demonstration gardens. This area also has potential for a trades building or "make it" business as a collaborative retail and/or work space for the concentration for building materials businesses in the area. Other office and industrial uses will continue to thrive in this area. The south subarea will be more auto-oriented in nature with larger roads, developments, and parking and loading areas.

2. Site Location Map



3. Inspired Ideas Imagery for Sunrise Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Sunrise Opportunity Site. These images are intended to guide and inspire private developers to vibrant destination places within the opportunity site.

a) Sunrise North Subarea

 Convention center	 Performing arts center	 Hotel
 Restaurants with outdoor dining	 Offices over retail service and cafe	 Plaza

b) Sunrise South Subarea



Interior design showroom



Building supply, construction & materials



Specialized building supplier



Light industrial



Office building



Employee break area

4. Additional Development Standards for Sunrise Opportunity Site

Additional development standards are established for major new development projects within the Sunrise Opportunity Site. These standards address unique locational opportunities and implement relevant goals, policies, and provisions of the General Plan, while ensuring consistency with other City-adopted plans. Specifically, including housing density, floor area ratio, building height, public gathering places, site furnishings, and wayfinding will help to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements, including special provisions for the convention district overlay
- Citywide Design Guidelines

Properties within the Sunrise Opportunity Site are designated FB-CMU (commercial mixed-use) or FB-OIMU (office industrial mixed-use) to reflect both existing and neighboring uses. Land use designations are shown on the map below. Where the development standards in Table 5-4 deviate from the development standards in Table 4-1, the standards in Table 5-4 apply.

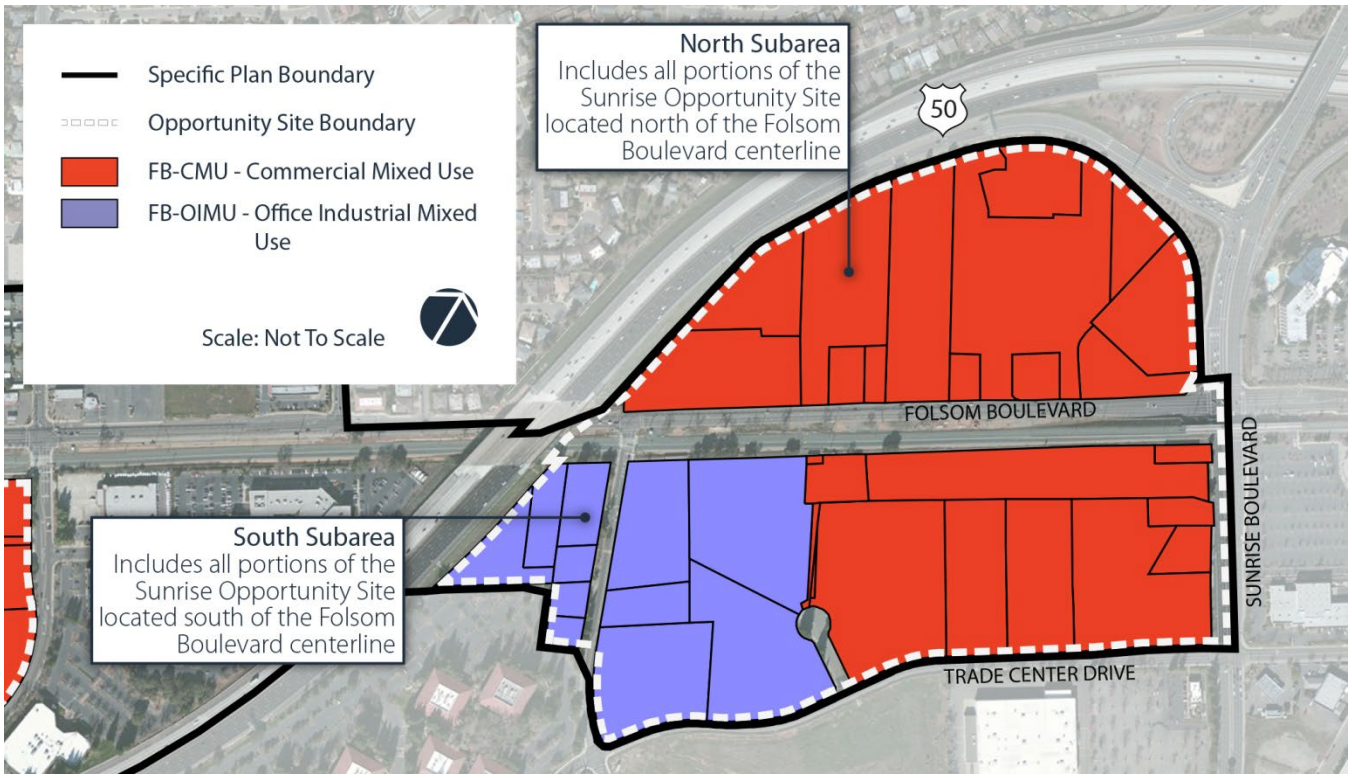


Table 5-4 Sunrise Opportunity Site: Additional Development Standards

Standard	FB-OIMU –North Subarea	FB-OIMU – South Subarea	FB-CMU – South Subarea
Density	n/a	n/a	10–40 du/acre
Floor Area Ratio	0.25 minimum No maximum	No minimum No maximum	0.2 minimum No maximum
Primary Building Height	No maximum	65 feet	65 feet
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.		
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.		

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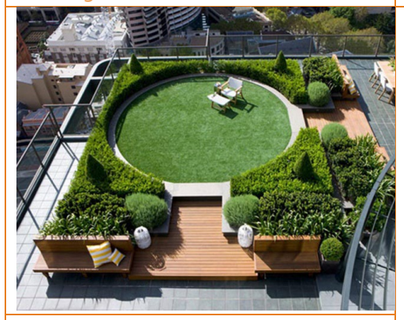
F. Menu of Public Gathering Place Types

Table 5-5 Menu of Public Gathering Places

					
Amphitheatre – small	Amphitheatre – large	Courtyard – small commercial	Courtyard – large residential	Outdoor dining – small area	Paseo
					
Building entry space	Central green – commercial	Courtyard – large commercial	Employee break area	Outdoor dining – large area	Plaza – small
					
Central green – residential	Community garden	Courtyard – small residential	On-site main street	Parklet	Plaza – large
					
Rooftop garden					

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10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670

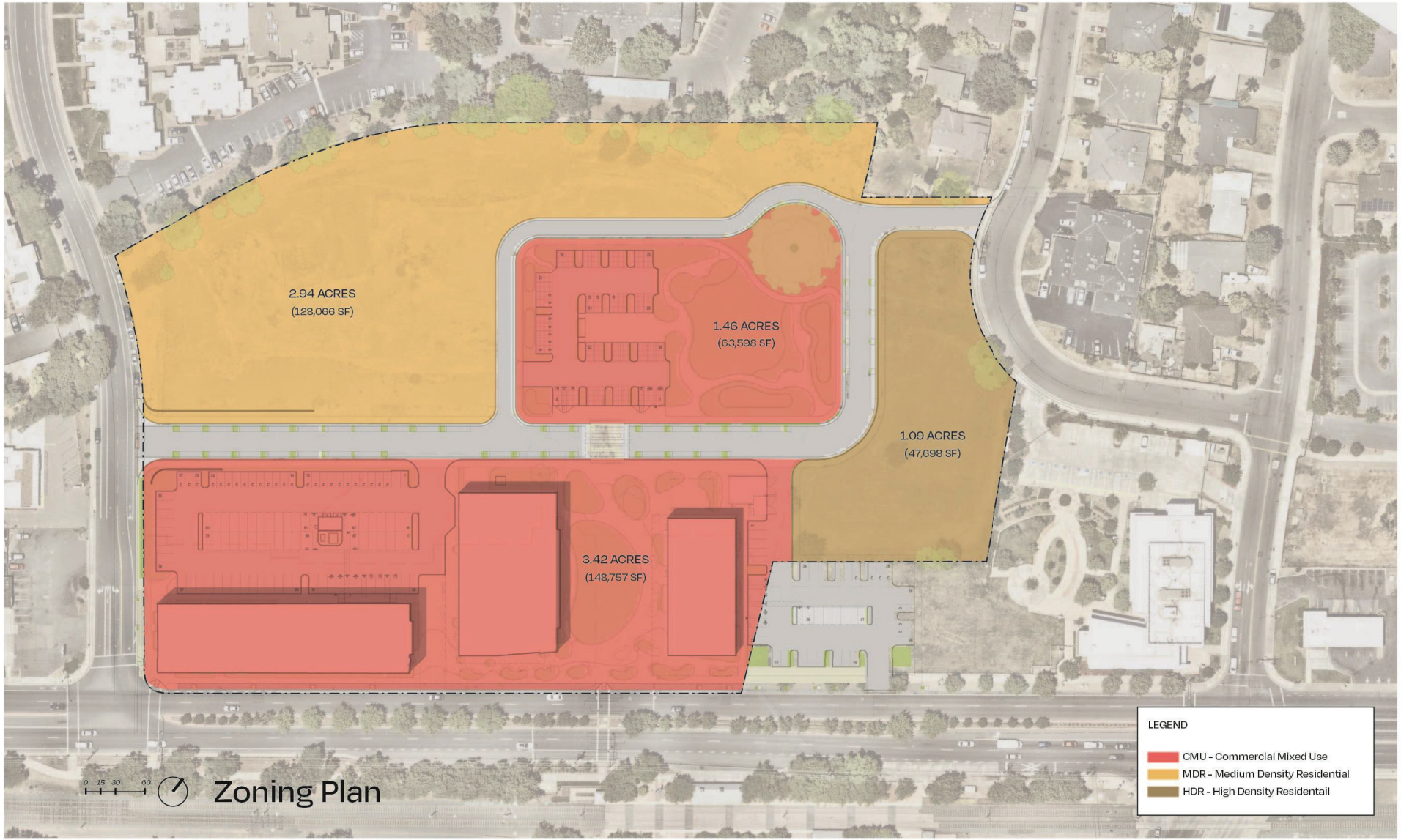
Developed for
GRIFFIN | SWINERTON

Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	06/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/11/2025

Job Number	30911
Checked By	Checker
Scale	

EXISTING
ZONING PLAN



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RANCHO CORDOVA, CA 95670

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Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	06/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/11/2025

Job Number	30911
Checked By	Checker
Scale	

PROPOSED
ZONING PLAN

City of Rancho Cordova

Folsom Boulevard Specific Plan Amendment

Track Changes

Note to Reader: Only those sections and/or subsections listed within this document are being amended. Unless otherwise indicated, all sections and subsections prior to and after the amended section and/or subsection shall remain, unchanged.







OPPORTUNITY SITES

A. Introduction

As described in Chapter 2, the land use framework establishes an organizing structure for where and how growth within the plan area will occur. The land use framework identifies four sites with the greatest opportunity for new development and redevelopment. This chapter describes those areas as being vibrant destinations and hubs of activity along Folsom Boulevard. The opportunity sites designate locations where the City will concentrate resources (e.g., economic development incentives, public investment, facilities, outreach, coordination) and community assets (e.g., public gathering places, events, activities) with the goal of catalyzing significant private investment in these areas. The four opportunity sites are shown in Figure 5-1 and include:

1) Kassis Opportunity Site
2) Mather Mills Opportunity Site
3) Olson Island Opportunity Site
4) Sunrise Opportunity Site

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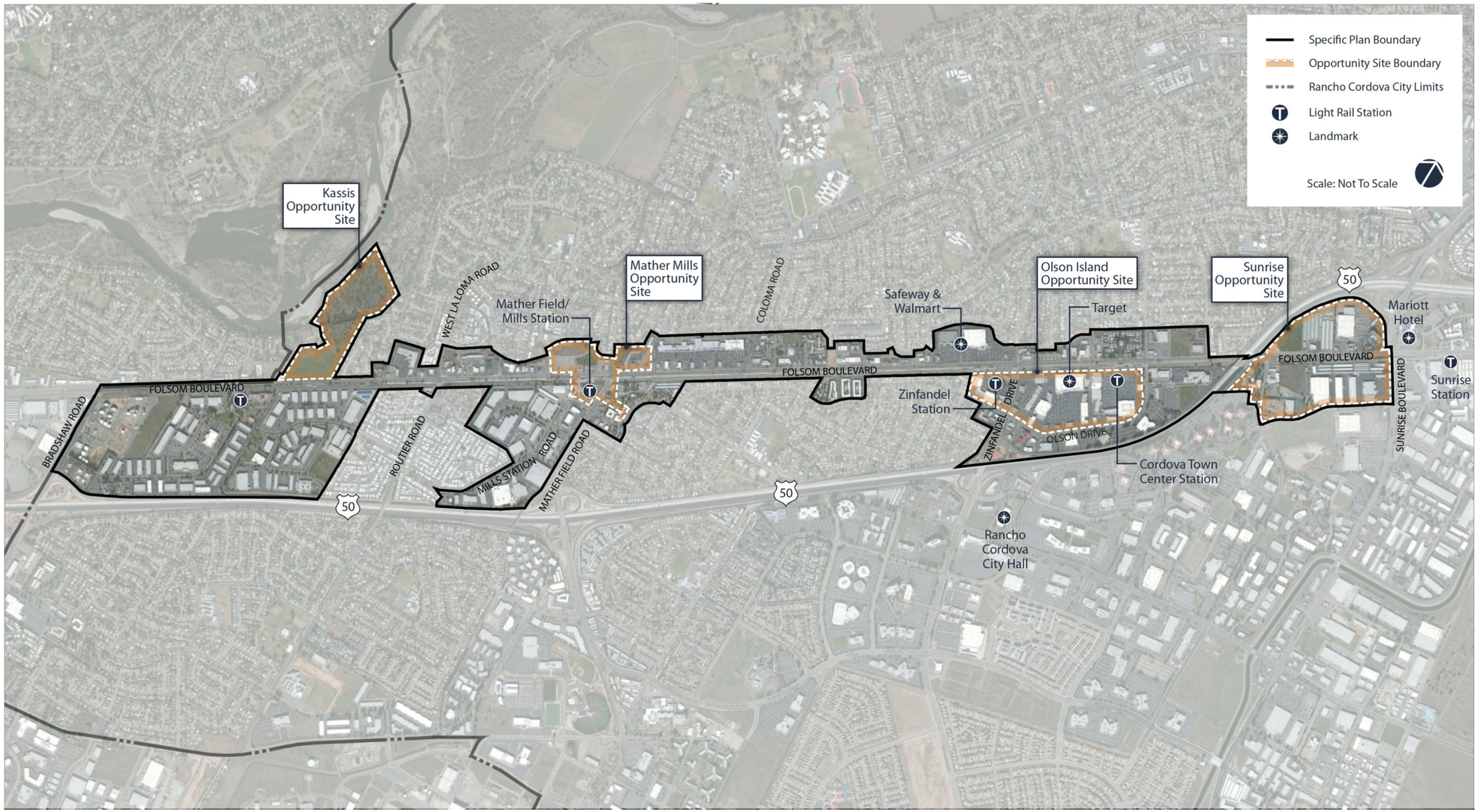
Each opportunity site shown in Figure 5-1 has a distinct character and unique mix of uses. This chapter describes and illustrates each opportunity site with text and a collection of inspired idea images to communicate the vision and desires for each site. To achieve the desired development and design character unique to each opportunity site, an additional set of customized development standards is established in this chapter for each of the four sites. These special standards supplement those standards for the land use districts identified in Chapter 4 (Development Standards) and apply only to major new development. If there are differences in the additional development standards for any opportunity site of this chapter and corresponding standards in Chapter 4 (Table 4-1) for each district, the additional development standards identified in this chapter prevail.

Figure 5-1 Opportunity Sites



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B. Kassis Opportunity Site

1. Description

The Kassis property is designated Folsom Boulevard Residential Mixed Use in recognition of its suitability for residential development and its setting within a predominantly residential district. The site does have potential for employment oriented uses (both retail/commercial and office) that resulted in the flexible mixed use designation.

The total area of the Kassis property exceeds 42 acres, although a small portion of the property is excluded from the Folsom Boulevard Specific Plan. The area excluded does not fall along existing property lines. In the future, the boundary of the Specific Plan and open space may need to be adjusted to be consistent with the parcel map. This site is surrounded on three sides by residentially zoned lands (RD-20 and RD-5 to the west, RD-5 to the east and RD-2 to the north) and bordered by Folsom Boulevard on the south. A project with a substantial residential component would be complimentary to the surrounding existing uses.

Based upon the property size (it is among a very few parcels on Folsom Boulevard with a significant area of undeveloped land) and its proximity to the planned Horn Road Light Rail Station, this property was designated within the City's General Plan Housing Element to include at least 10 acres of High Density Residential.

Beyond the residential development potential for this site, a retail/commercial or office component could compliment neighboring residents by providing nearby retail and employment opportunities while taking advantage of direct access to Folsom Boulevard and close proximity to the future Light Rail Station.

The Kassis Opportunity Site will be characterized by a suburban and primarily residential environment with limited nonresidential development along Folsom Boulevard. The site will feature a large residential component, including apartments, condominiums, townhouses, and compact single-family homes. At least 10 acres of the site will be developed at a minimum of 24 dwelling units per acre to meet the city's housing requirements. To the extent feasible, new residential streets and sidewalks will connect to the existing streets and cul-de-sacs as well as to the American River Parkway. Architectural features such as balconies, porches, and stoops will animate the interface between buildings and the sidewalk. Primarily neighborhood-serving retail shops and services, restaurants, sports and recreational uses, medical clinics, and/or offices will front the corridor, but not in a conventional strip form. Instead, nonresidential buildings will locate close to the street frontage (existing and future streets) to define, connect, and activate the sidewalk. Courtyards, community gardens, and central greens will provide opportunities for residents to congregate and socialize.

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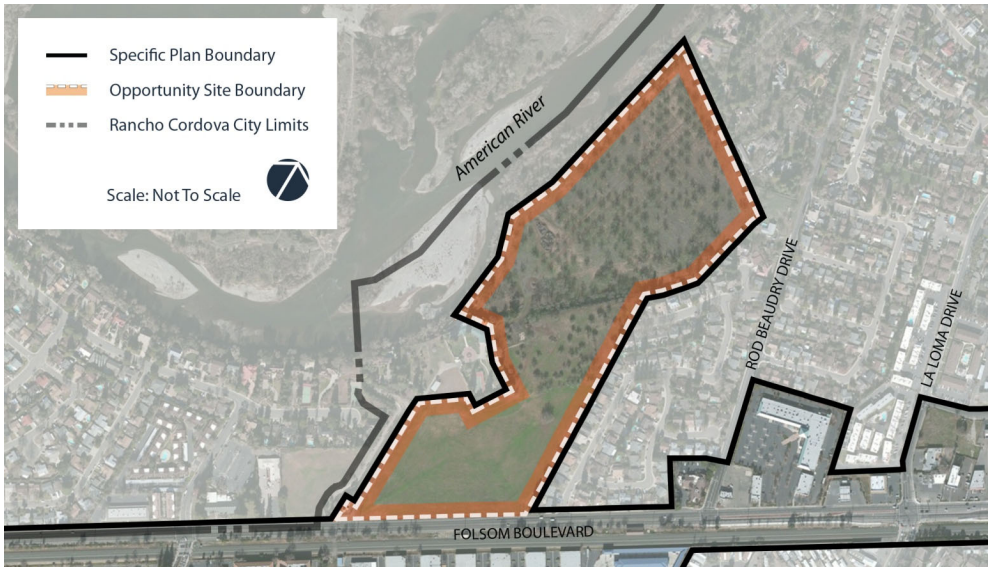
2. Site Location Map



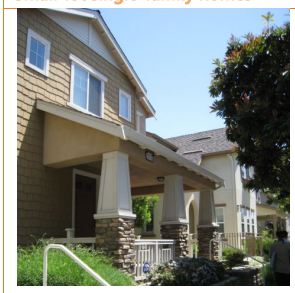
3. Inspired Ideas Imagery for Kassis Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Kassis Opportunity Site. These images are intended to guide and inspire private developers to create quality development with a sense of place.


Small-lot single-family homes


Cluster homes


Garden condominiums


Porch


Townhomes


Apartments

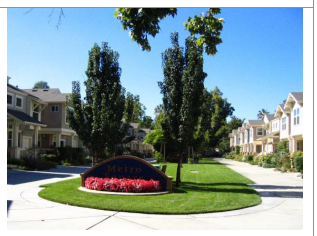

Offices over shops


Office/medical


Offices over restaurant or retail


Courtyard


Community garden


Central green

4. Additional Development Standards for Kassis Opportunity Site

Additional development standards are established for major new development projects within the Kassis Opportunity Site. These additional standards address the unique potential of the location, implement relevant goals, policies, and provisions of the General Plan, and ensure consistency with other City-adopted plans. Specifically, additional development standards for this site include housing density, building orientation, public gathering places, parking, access, and site furnishings and wayfinding to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements
- Citywide Design Guidelines

These standards supplement the development standards for the underlying land use. Properties within the Kassis Opportunity Site are designated FB-RMU (residential mixed-use) to reflect the predominant surrounding residential land use and the future Horn Road light rail station. Where the development standards in Table 5-1 deviate from the development standards in Table 4-1, the standards in Table 5-1 apply.

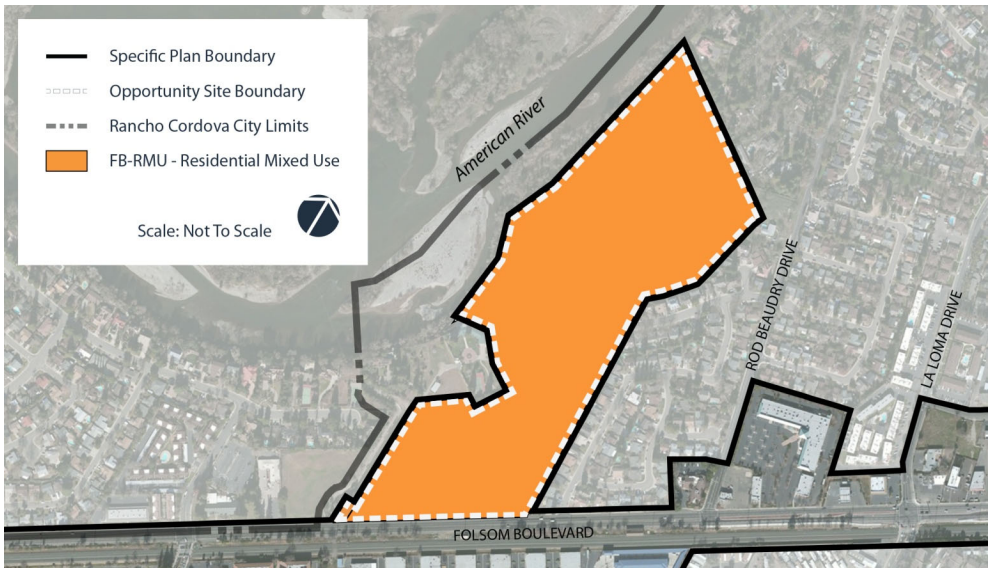


Table 5-1 Kassis Opportunity Site: Additional Development Standards

Standard	Site-wide (FB-RMU)
Density	6.1–40 du/acre At least 10 acres shall be developed at a minimum of 24 du/acre.
Building Orientation	All nonresidential primary building entrances must face a public street or public gathering place.
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.
Parking	For residential developments with over 20 residential units, commercial, and mixed-use developments, private surface parking lots are not permitted in the front setback. Locate on-site parking to the rear, side, or internal to the block and provide access to parking through alleys and driveways.
Access	To the greatest extent feasible, connect new development, via streets, sidewalks, and pathways, to existing cul-de-sacs and local streets and to the American River Parkway.
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.

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C. Mather Mills Opportunity Site

1. Description

The Mather Mills Opportunity Site includes numerous parcels located in close proximity to the Mather Mills Light Rail Station. Proposed land use designations within this Site include Residential, Commercial and Office/Industrial Mixed Use districts. Located adjacent to the Mather Mills Station and at the intersection of Mather Field Road and Folsom Boulevard, this Site presents unique opportunities for future development. These geographic attributes were likely a significant factor in the decision to locate the planned Los Rios Community College Campus at Folsom Boulevard and Paseo Drive.

The majority of development potential within this Site is located on the north side of Folsom Boulevard, both to the west and to the east of Paseo Drive. West of Paseo Drive includes approximately 12 acres proposed as Commercial Mixed Use (FB-CMU) and Residential Mixed Use (FB-RMU). This area will contain the future Los Rios Community College campus (land designated as FB-CMU). The balance of this area is designated FB-RMU in recognition of the wide range of development potential presented by the site. As with other sites within the FBSP that are designated FB-RMU or Medium Density Residential (FB-MDR), the size of this site provides special opportunities to accommodate a well-designed high density residential project. While this site also presents opportunities for commercial development, existing uses along the northern boundary of the site are residential. It is anticipated that higher density residential development along the northern boundary of this site will provide an effective transition between existing residential and future commercial uses.

While the FB-RMU designation requires that a minimum of 50 percent of finished floor area of development on the site must be residential, the FB-RMU designation also allows a substantial non-residential component that will compliment both the on-site residential and the adjacent college campus. The City recognizes that the timing of various types of development can be unpredictable and has therefore modified requirements for the timing of development. Under previous regulations the residential component would have been required to be constructed before the commercial component could begin construction. This requirement has been modified to allow commercial development to proceed in an FB-RMU site as long as it can be demonstrated that the site retains available capacity to meet the FB- RMU residential requirements.

Lands within this Opportunity Site located to the east of Paseo Drive have been designated FB-CMU in recognition of several factors, including: the Los Rios Community College District has acquired a portion of these lands and will be developing parking required for the college along the northern boundary of this area; there are several existing and active commercial uses located in this area; and, the parcelization and fragmented ownership in this area will make developing a larger and well integrated project challenging.

The Mather Mills Opportunity Site will be characterized by a compact, urban, and walkable environment. This site possesses two key assets that will shape new development within this area: the Mather Mills Light Rail Station and the future Los Rios Community College. This opportunity site is envisioned to support transit-oriented uses, such as a mix of educational, residential, retail, and service activities, both vertically and horizontally. Higher-density residential uses, including two- to four-story condominiums, townhomes, and student apartments, will locate here to provide housing in close proximity to the light rail station and the college. Small-scale retail and commercial services, such as bookstores, cafés, restaurants, pubs, entertainment venues, personal services, and office supply and reproduction services, will support the needs of residents and college students. Uses adjacent to the college will be designed to have a positive interface with the college. A safe and convenient pedestrian and bicycle network will connect destinations within the opportunity site. A variety of public spaces, such as outdoor dining and plazas, will invite residents, workers, and students to gather and participate in a vibrant community life. Social events will be organized in these public places, such as farmers markets and food truck fairs, to activate these spaces on weekends and evenings.

2. Site Location Map



3. Inspired Ideas Imagery for Mather Mills Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Mather Mills Opportunity Site. These images are intended to guide and inspire private developers to create active urban places within this opportunity site.



Illustration of Los Rios College



Residential units over commercial



Townhomes, apartments & condominiums



College-serving uses, such as a bookstore



Campus services



Restaurant



Student-serving uses, such as a bike hub and repair shop



Events, such as food truck fairs



Events, such as a farmers market



Public gathering spaces with seating



Outdoor dining/café seating



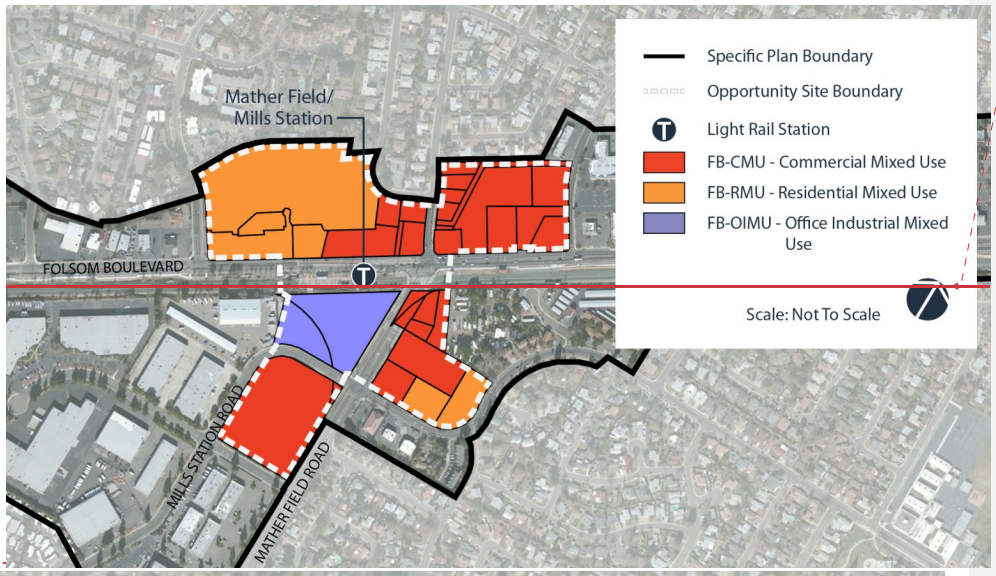
Plaza

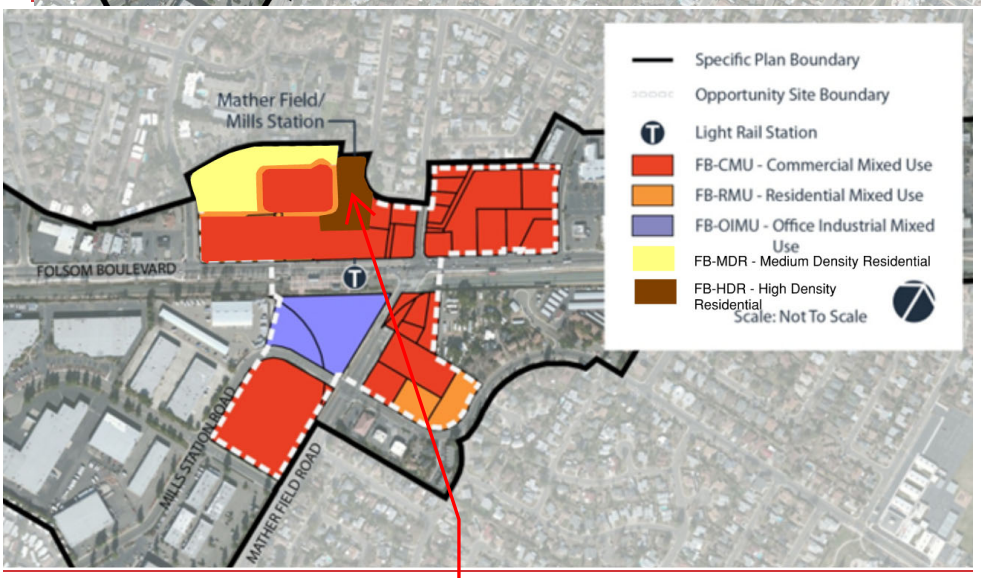
4. Additional Development Standards for Mather Mills Opportunity Site

Additional development standards are established for major new development projects within the Mather Mills Opportunity Site. These standards address the unique attributes of the location, implement relevant goals, policies, and provisions of the General Plan, and ensure consistency with other City-adopted plans. Specifically, housing density, floor area ratio, building setbacks and height, pedestrian shelter, bicycle amenities, building orientation, drive-through design, public gathering places, parking, and site furnishings and wayfinding have been included to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements, including special provisions for transit-oriented development
- Citywide Design Guidelines

Properties within the Mather Mills Opportunity Site are designated FB-RMU (residential mixed-use), FB-HDR (high density residential), FB-MDR (medium density residential), FB-CMU (commercial mixed-use), or FB-OIMU (office industrial mixed-use), to be compatible with existing surrounding uses while maximizing future potential uses. In addition, any properties (or portions thereof) located within a quarter mile of the light rail stop may develop consistent with the citywide TOD Overlay District standards in the Zoning Code. Where the development standards in Table 5-2 deviate from the development standards in Table 4-1, the standards in Table 5-2 apply to qualifying major projects. For FB-MDR and FB-HDR zoning designations within the Mather Mills Opportunity Site, please refer to the MDR and HDR development standards outlined in Table 4-1.





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Imagery to be more accurately updated once Specific Plan Amendment is approved. Refer to the end of this document for detailed rezoning exhibits.

Table 5-2 Mather Mills Opportunity Site: Additional Development Standards

Standard	FB-RMU	FB-CMU	FB-OIMU
Density	6.1–40 du/acre	10–40 du/acre	n/a
Floor Area Ratio	No minimum No maximum	0.3 minimum No maximum	0.25 minimum No maximum
Front Setback Standards	Along the north side of Folsom Boulevard and along Paseo Drive, there is no minimum front setback. The maximum shall be no more than 10 feet, except where there is outdoor dining, a plaza, a building entry, or a courtyard between the building and the street. Exceptions can be granted for building façades with garage access.		
Primary Building Height	65 feet /4 stories maximum[1]	No maximum[2]	65 feet/4 stories maximum
Awnings/ Canopies	Awnings, canopies, recesses, or similar pedestrian shelters shall be provided along at least 30% of the building's ground-floor level along the frontage with primary building entrance and where the building abuts a plaza or other public gathering space.		
Bicycle Amenities	Establish common area bicycle facilities to encourage students to use alternative forms of transportation. For example, provide additional bike racks and lockers or other secured bicycle parking areas, shower facilities, and a bike repair kiosk.		
Building Orientation	For properties fronting along Folsom Boulevard, primary building entrances shall be oriented to a public street, a private street designed as an on-site main street, or a public gathering place.		
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.		
Parking Access & Location	For nonresidential or mixed-use developments, private surface parking lots are not permitted in the required front setback area. Additionally, parking shall not be located between the street and the building façade with the primary entrance. Rather, on-site parking shall be located to the rear, side, or internal to the block and provide access to parking through alleys and driveways. Finally, parking areas on corner lots shall not be located adjacent to intersections.		
Parking Ratio	The number of vehicle parking spaces provided shall not exceed 150% of the minimum parking ratio.		
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.		

1. *No maximum height or number of stories for vertical mixed-use integration where residential use is located above nonresidential. Note #2 below also applies. Defer to TOD Overlay if applicable.*
2. *While there is no height maximum, the regulations of the Federal Aviation Administration (FAA) limit the height of structures to between 150 and 350 feet based on location. See the Safety Element of the General Plan for more information. FAA approval is required for all structures over 150 feet in height. Defer to TOD Overlay if applicable.*

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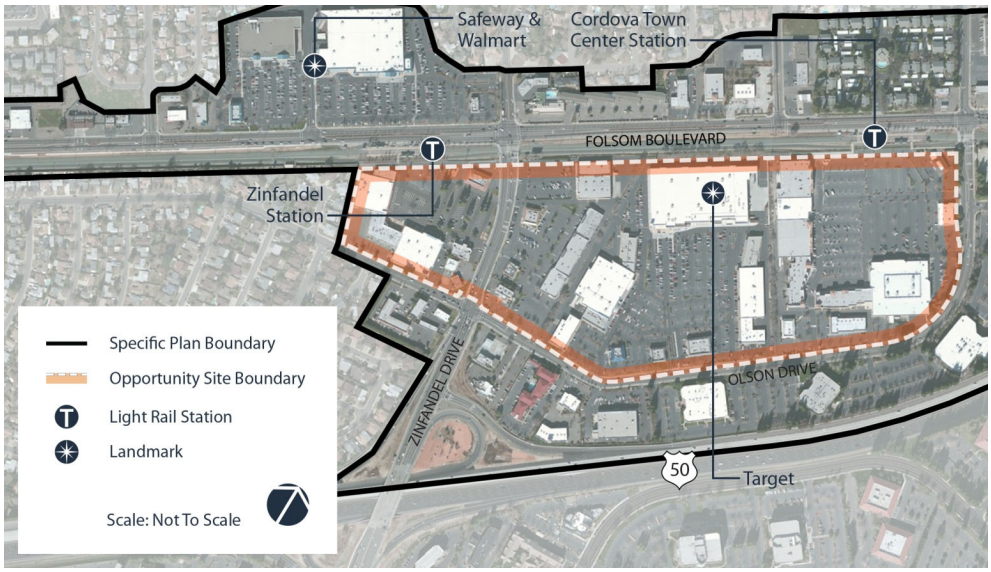
D. Olson Island Opportunity Site

1. Description

Olson Island is currently a retail commercial center serving the community and the region. It is a shopping destination where people come and have an extended stay to shop, eat, drink, and socialize. This area is envisioned to mature into an environment designed so that visitors can park once and then walk to a variety of different businesses and public gathering places. Access and circulation to and throughout the site needs to be improved with limited access driveways that resemble urban main streets, and better pedestrian access to and from the transit stop and throughout the entire commercial hub. A mix of new and expanded retail, office, and entertainment uses are encouraged, with both horizontal and vertical integration. The area will continue to be home to a wide range of large national retailers and small independent businesses. A future international marketplace will capitalize on the synergy of established uses that reflect the diversity of the community (for example, KP International Market). Small-scale civic uses such as a satellite library or community center could strengthen this area as a hub of activity for the entire city. Vibrant public seating or gathering spaces and a variety of social activities could bring residents, workers, and visitors to this central gathering place in the city.

2. Site Location Map



3. Inspired Ideas Imagery for Olson Island Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Olson Island Opportunity Site. These images are intended to guide and inspire private developers to create successful commercial projects and a variety of active public spaces.



Large retail

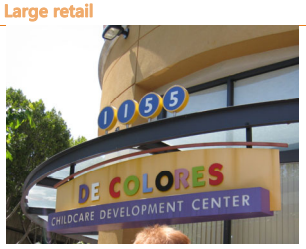


Restaurants & outdoor dining


Large retail


Offices over shops and restaurants


On-site main street



Small civic/institutional use



International marketplace


International marketplace



International marketplace


Plaza


Outdoor dining/café seating


Paseo

4. Additional Development Standards for Olson Island Opportunity Site

Additional development standards are established for major projects within the Olson Island Opportunity Site. These additional development standards address unique site opportunities, implement relevant goals, policies, and provisions of the General Plan, and ensure consistency with other City-adopted plans. Specifically, building height, housing density, floor area ratio, building setbacks, pedestrian shelter, bicycle amenities, drive-through design, on-site main street, public gathering places, site furnishings, pedestrian circulation, wayfinding, and traffic calming have been listed to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements, including special provisions for the downtown and transit-oriented development
- Citywide Design Guidelines
- Main Street Standards

These standards supplement the development standards for the underlying land use districts and apply to all properties within this opportunity site. All properties within the Olson Island Opportunity Site are designated FB-CMU (commercial mixed-use) to reflect its historic and future commercial use. In addition, any properties (or portions thereof) located within a quarter mile of the light rail stop may develop consistent with the citywide TOD Overlay District standards in the Zoning Code. Where the development standards in Table 5-3 deviate from the development standards in Table 4-1, the standards in Table 5-3 apply to qualifying major projects.

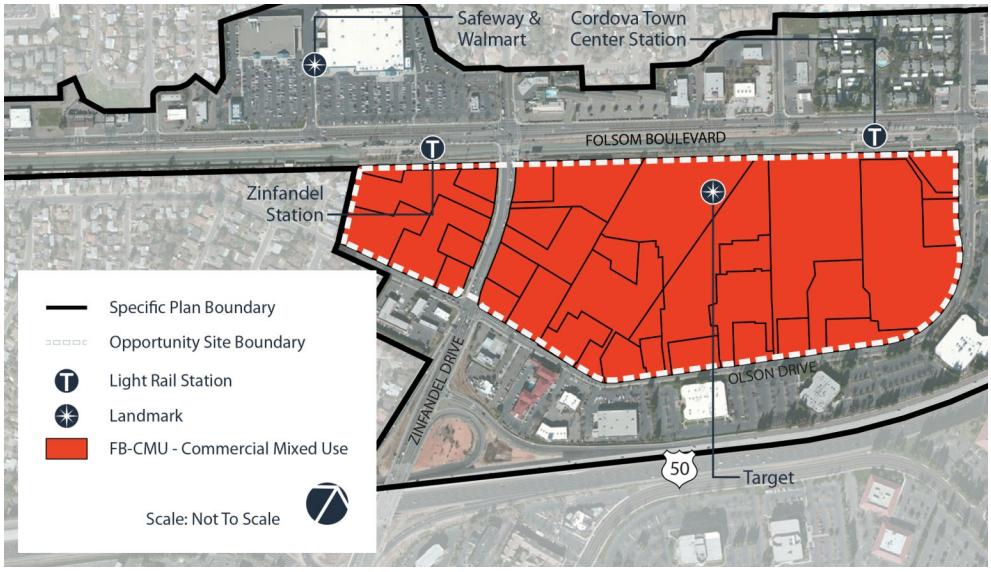
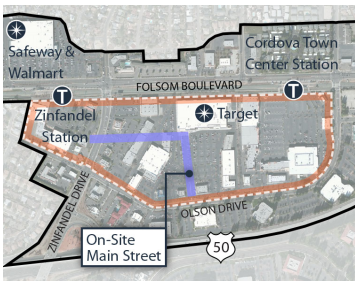


Table 5-3 Olson Island Opportunity Site: Additional Development Standards

Standard	Site-wide (FB-CMU)
Building Height	No maximum
Density	10–40 du/acre
Floor Area Ratio	0.25 minimum No maximum
Front and Street Side Setback Standards	New buildings on property abutting Olson Drive and Zinfandel Drive have no minimum front setback requirement and a maximum front setback requirement of 20 feet. Improvements and expansions to existing buildings, and new buildings that don't abut Olson or Zinfandel drives, will have no minimum or maximum setback requirements.
Drive-Through Design	Drive-Through Aisles. The minimum standards for drive-through aisles are as follows: Drive-through aisles shall have a minimum 11-foot interior radius at curves and a minimum 12-foot width. Drive-up windows and remote tellers shall provide at least 180 feet of stacking space for each facility, as measured from the service window or unit to the entry point into the drive-up lane. Non-food and/or non-beverage businesses may reduce the stacking space to a minimum of 60 feet. Each drive-through entrance/exit shall be at least 50 feet from an intersection of public rights-of-way, measured at the closest intersecting curbs, and at least 25 feet from the curb cut on an adjacent property. Exceptions may be granted by the designated approving authority when drive-though pull-out spaces are provided. Each entrance to an aisle and the direction of traffic flow shall be clearly designated by signs and pavement markings. Each drive-through aisle shall be separated from the circulation routes necessary for ingress or egress from the property or from access to a parking space. Landscaping of the Drive-Through Aisle. Landscaping shall be as follows: A 5-foot-wide planter shall be provided between the drive-through aisle and the parking area that includes shade trees consistent with those used in the parking area. An average 3-foot-tall planter with low shrubs that screens the drive-through aisles from the abutting public right-of-way shall be used to minimize the visual impact of readerboard signs and directional signs. At no time shall this landscape barrier be pruned in a manner that allows the vehicle headlights from the drive-through lane to be visible from abutting street rights-of-way. Plantings should also be designed to discourage potential safety issues. Pedestrian Access and Crossings. Pedestrian access shall be provided from each abutting street to the primary entrance with a continuous 4-foot-wide sidewalk or delineated walkway. Pedestrian walkways should not intersect the drive-through drive aisles, but where they do, the walkways shall have clear visibility and shall be delineated by textured and colored paving.

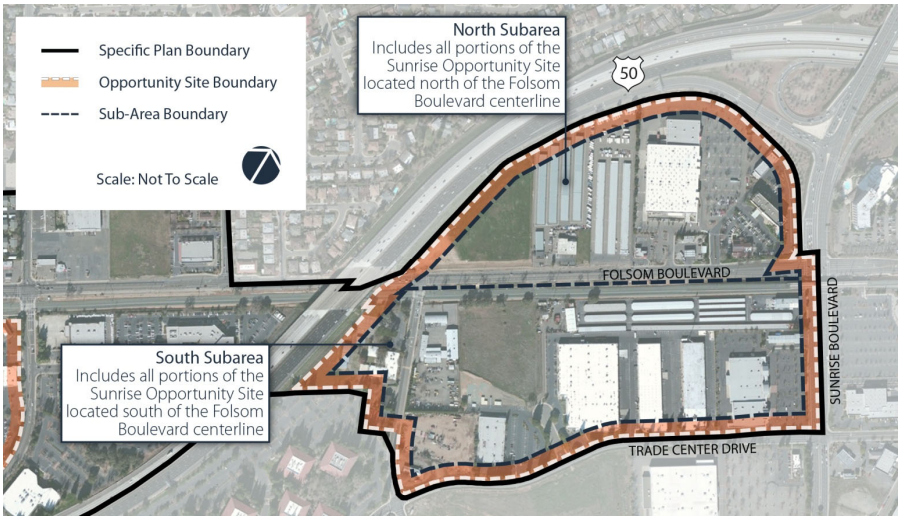
Standard	Site-wide (FB-CMU)
On-Site Main Street	The Olson Island Opportunity Site will include a project-wide on-site main street to improve circulation throughout the opportunity site. See illustration below. The on-site main street shall be located to create a walkable environment by fronting buildings along the street and internal circulation routes and shall be designed as follows: • Narrow travel lane • Limited driveway curb cuts • Wide sidewalks • Optional on-street parking • Buildings close to street frontage • Building frontages detailed with architectural elements 
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.
Traffic Calming	New development shall take into consideration traffic calming improvements (e.g., controlled turning movements, speed reduction measures) to maximize safety.

E. Sunrise Opportunity Site

1. Description

The Sunrise Opportunity Site is characterized by two distinct areas, one north of Folsom Boulevard and one south of the boulevard. The area to the north, referred to as the "north subarea," will be home to a future convention center and supporting uses, such as hotels, restaurants, and meeting spaces. This area also allows retail and office uses that support a convention center. The north subarea is a prime location for a performing arts and entertainment center/complex. Multistory buildings are encouraged in this area. A walkable and bikable campus-like setting will host a variety of public gathering places for visitors to eat, relax, and socialize. This area is intended to implement the General Plan Convention Overlay Area and will be a special place in the city that is entertaining, vibrant, and inviting to tourists, visitors, and residents alike. The area to the south, referred to as the "south subarea," will expand on the current concentration of building supply, construction, furnishing, and materials businesses with the intention of becoming a building trade center with interior design showrooms and outdoor demonstration gardens. This area also has potential for a trades building or "make it" business as a collaborative retail and/or work space for the concentration for building materials businesses in the area. Other office and industrial uses will continue to thrive in this area. The south subarea will be more auto-oriented in nature with larger roads, developments, and parking and loading areas.

2. Site Location Map



3. Inspired Ideas Imagery for Sunrise Opportunity Site

The following images represent the preferred land uses, development patterns, and public gathering places for the Sunrise Opportunity Site. These images are intended to guide and inspire private developers to vibrant destination places within the opportunity site.

a) Sunrise North Subarea



Convention center



Performing arts center



Hotel



Restaurants with outdoor dining



Offices over retail service and cafe



Plaza

b) Sunrise South Subarea


Interior design showroom



Building supply, construction & materials



Specialized building supplier


Light industrial


Office building


Employee break area

4. Additional Development Standards for Sunrise Opportunity Site

Additional development standards are established for major new development projects within the Sunrise Opportunity Site. These standards address unique locational opportunities and implement relevant goals, policies, and provisions of the General Plan, while ensuring consistency with other City-adopted plans. Specifically, including housing density, floor area ratio, building height, public gathering places, site furnishings, and wayfinding will help to implement or ensure consistency with the following plans:

- General Plan Land Use, Housing, and Urban Design elements, including special provisions for the convention district overlay
- Citywide Design Guidelines

Properties within the Sunrise Opportunity Site are designated FB-CMU (commercial mixed-use) or FB-OIMU (office industrial mixed-use) to reflect both existing and neighboring uses. Land use designations are shown on the map below. Where the development standards in Table 5-4 deviate from the development standards in Table 4-1, the standards in Table 5-4 apply.

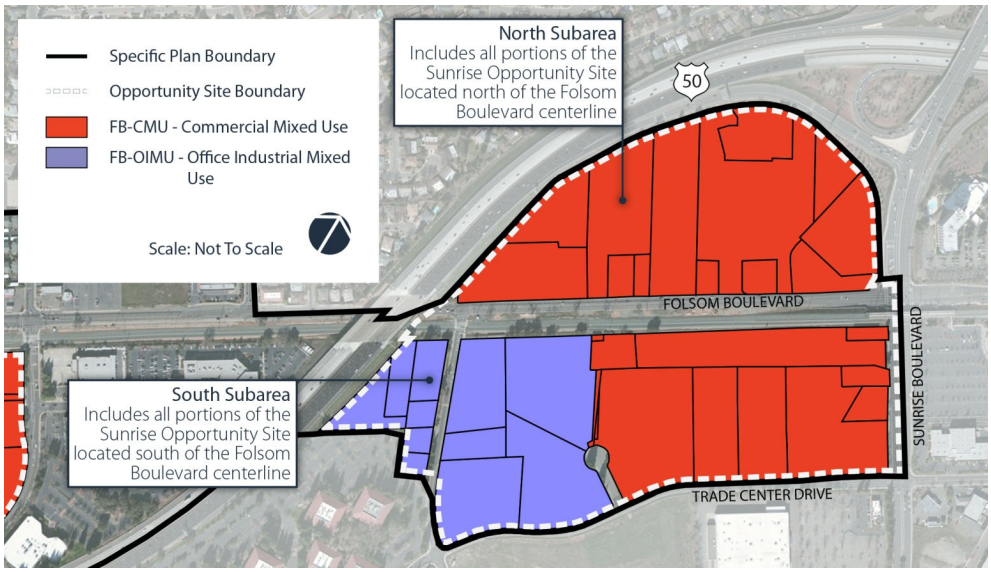


Table 5-4 Sunrise Opportunity Site: Additional Development Standards

Standard	FB-OIMU –North Subarea	FB-OIMU – South Subarea	FB-CMU – South Subarea
Density	n/a	n/a	10–40 du/acre
Floor Area Ratio	0.25 minimum No maximum	No minimum No maximum	0.2 minimum No maximum
Primary Building Height	No maximum	65 feet	65 feet
Public Gathering Places	All major projects shall contribute some form of public gathering place (or portion thereof) as shown in Table 5-5.		
Site Furnishings & Wayfinding	For integrated developments, the City encourages uniform site furnishings and wayfinding improvements throughout the project.		

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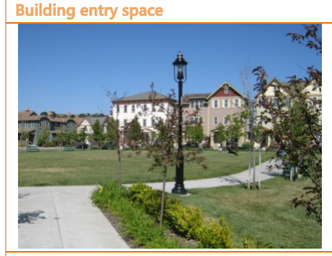
F. Menu of Public Gathering Place Types

Table 5-5 Menu of Public Gathering Places

 Amphitheatre – small	 Amphitheatre – large	 Courtyard – small commercial	 Courtyard – large residential	 Outdoor dining – small area	 Paseo
 Building entry space	 Central green – commercial	 Courtyard – large commercial	 Employee break area	 Outdoor dining – large area	 Plaza – small
 Central green – residential	 Community garden	 Courtyard – small residential	 On-site main street	 Parklet	 Plaza – large
 Rooftop garden					

Chapter 5

Opportunity Sites

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MILLS CROSSING

10179 FOLSOM BLVD
RANCHO CORDOVA, CA 95670

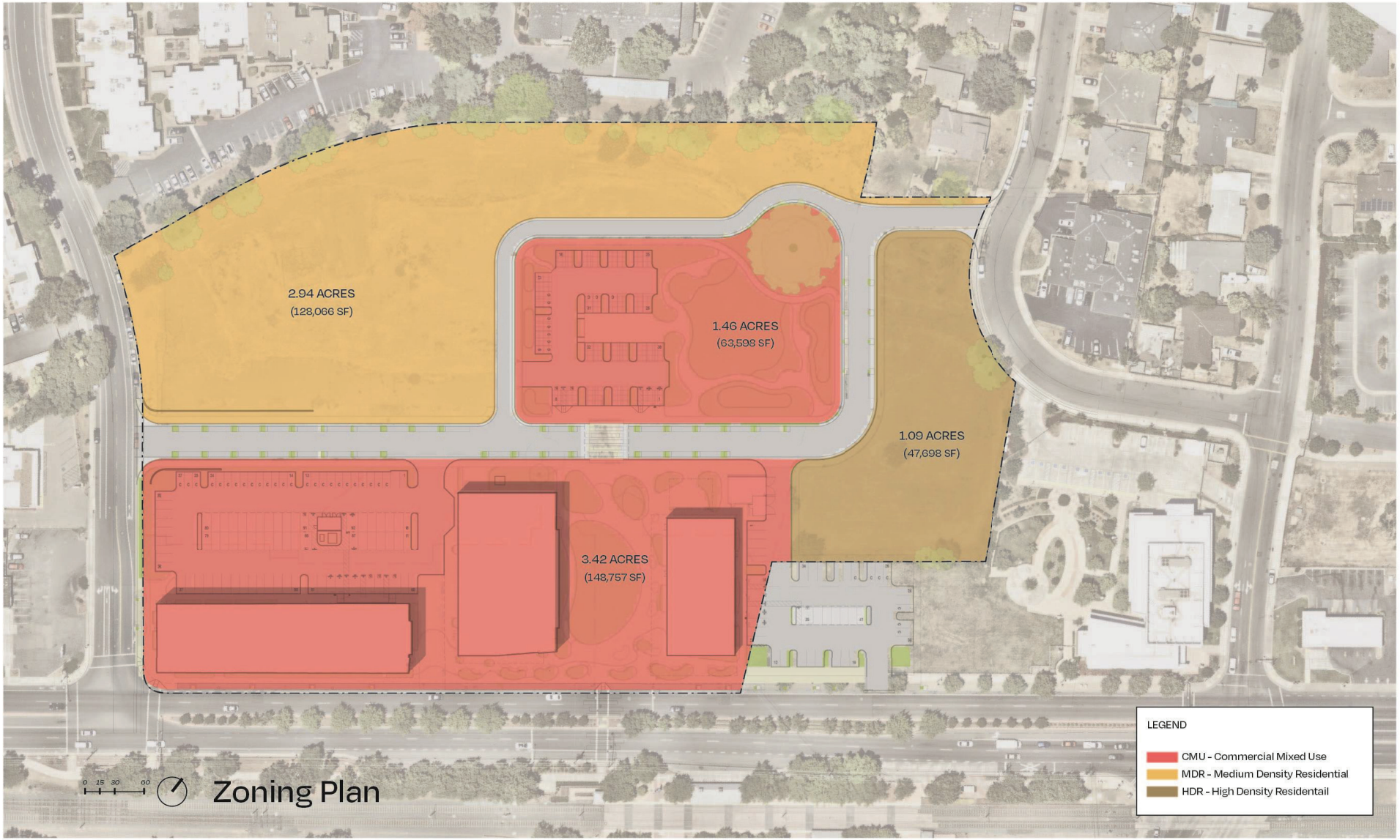
Developed for
GRIFFIN | SWINERTON

Revision	Date

Submittal	Date
ENTITLEMENT SUBMITTAL #1	05/09/2024
ENTITLEMENT SUBMITTAL #2	06/23/2024
ENTITLEMENT SUBMITTAL #3	12/19/2024
ENTITLEMENT SUBMITTAL #4	02/11/2025

Job Number	30911
Checked By	Checker
Scale	

EXISTING
ZONING PLAN



GRIFFIN SWINERTON

LPA

ARCHITECTURE ENGINEERING INTERIOR DESIGN
LANDSCAPE ARCHITECTURE PLANNING

949-261-1001 Office

LPADesignStudios.com

5301 California Avenue, Suite 100
Irvine, California 92617

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PROPOSED
ZONING PLAN

Name of Organization: City of Rancho Cordova **Phone:** 916-851-8757 **Email:** sheisler@cityofranchocordova.org

Project Location: 10179 Folsom Blvd, Rancho Cordova, CA 95670

Instructions: Explain how stakeholders (e.g., community-based organizations [CBOs], members of the target population, residents, civic leaders, and frontline staff) have been meaningfully involved in the visioning and development of this project

Community Engagement Tracking Form

	Date	Event Type	# of Participants	Target Group	Event Description	Objectives/Purpose	Post-Event Report Out Provided (y/n)	Follow-Up Needed (y/n)	Status of Follow-Up	Supporting Documents/Materials
1	5/15/2018	City Council Work Session	25	City Council	Visioning Meeting #1	develop vision	y	n		Presentation slides
2	8/14/2018	City Council Work Session	20	City Residents	Visioning Meeting #2	select location	y	n		Presentation slides
3	12/11/2018	City Council Work Session	30	City Residents	Visioning Meeting #3	hone vision	y	n		Presentation slides
4	4/30/2019	City Council Work Session	25	City Residents	Visioning Meeting #4	arts discussion	y	n		Presentation slides
5	12/10/2019	City Council Work Session	100	City Residents	Developer Selection Finalist Panel	meet the developer finalists	y	n		Developer Presentations
6	7/20/2020	City Council Meeting	30	City Council	Developer Selection	select development partner	y	n		Staff Report, Presentation
7	11/16/2020-11/30/2020	Online Survey	275	City Residents	Online Survey	resident feedback on vision	y	y	complete	Survey Responses Report
8	12/15/2020	City Council Meeting	40	City Residents	Preliminary Development Alternatives Discussion	discuss development alternatives/themes	y	n		Staff Report, Presentation
9	3/23/2021	City Council Meeting	50	City Residents	Preferred Alternative Discussion	discuss final development alternatives	y	n		Staff Report, Presentation
10	4/27/2021	City Council Meeting	75	City Residents	Preferred Alternative Selection	select one development alternative	y	y	complete	Staff Report, 2 Site Plans
11	7/7/2021	Community Meeting	55	City Residents	Community Discussion	community discussion on the selected development alternative	y	n		Presentation slides
12	7/15/2021	Community Meeting	35	City Residents	Community Discussion	community discussion on the selected development alternative	y	n		Presentation slides
13	7/19/2021	City Council Meeting	30	City Residents	Preliminary Design Discussion	modifications to the preferred alternative	y	n		Staff Report, Presentation
14	10/9/2021	Coffee with the Mayor	7	City Residents	Informal Community Meeting	resident feedback on modified development alternative	y	n		event notes
15	10/11/2021	Coffee with the Mayor	6	City Residents	Informal Community Meeting	resident feedback on modified development alternative	y	n		event notes
16	10/12/2021	Coffee with the Mayor	14	City Residents	Informal Community Meeting	resident feedback on modified development alternative	y	n		event notes
17	10/15/2021	Coffee with the Mayor	3	City Residents	Informal Community Meeting	resident feedback on modified development alternative	y	n		event notes
18	10/15/2021	Coffee with the Mayor	10	City Residents	Informal Community Meeting	resident feedback on modified development alternative	y	n		event notes
19	10/16/2021	Coffee with the Mayor	2	City Residents	Informal Community Meeting	resident feedback on modified development alternative	y	n		event notes
20	12/6/2021	City Council Meeting	25	City Council	Direction to Move Forward with a Development Agreement	finalize the selected development alternative	y	y	complete	Staff Report, Presentation
21	1/6/2022	Focus Group Meeting	4	City Residents	Discussion with Community Leaders	prepare for additional community meetings	n	n		N/A
22	2/25/2022	Focus Group Meeting	4	City Residents	Discussion with Community Leaders	prepare for additional community meetings	n	n		N/A
23	3/3/2022	Community Meeting	15	City Residents	Community Meeting	further explain the selected development alternative	y	n		Presentation slides
24	3/4/2022	Community Meeting	10	City Residents	Community Meeting	further explain the selected development alternative	y	n		Presentation slides
25	7/18/2022	City Council Meeting	20			discussion & direction to move into the Predevelopment phase				
26	10/17/2022	City Council Meeting	15			discussion and direction to begin CEQA review				
27	1/19/2023	Community Meeting	15			community CEQA scoping meeting				

28	2/21/2023	City Council Meeting	15			discussion on project next steps and 2023 outreach plan				
29	3/9/2023	Focus Group Meeting	20			Arts focused meeting to determine creative space needs				
30	3/10/2023	Focus Group Meeting	20			Arts focused meeting to determine creative space needs				
31	4/7/2023	Online Survey	25			Arts focused online survey to determine creative space needs				
32	4/19/2023	Community workshop	20			city hall				
33	4/20/2023	Community workshop	25			MACC				
34	4/29/2023	Pop-up workshop	1000			Kids Day in the Park				
35	5/4/2023	Pop-up workshop	200			Good Neighbor Day				
36	5/13/2023	Pop-up workshop	500			I Fest				
37	5/17/2023	Community Design Charrette	100			Community feedback on the design of various project elements				
38	6/22/2023	Pop-up workshop	75			Business Expo				
39	3/18/2024	City Council Meeting	25			Receive feedback on initial building designs				
40	5/2/2024	SACOG LUNR Committee Presentation	30			Present the project to regional elected officials				
41	5/22/2024	Planning Commission Meeting	25			Receive feedback on initial building designs				
42	8/22/2024	Arts Stakeholder Meeting	1			Receive feedback on Arts Building design and functions				
43	10/29/2024	Arts Stakeholder Meeting	5			Receive feedback on Arts Building design and functions				
44	11/7/2024	Arts Stakeholder Meeting	1			Receive feedback on Arts Building design and functions				
45	11/7/2024	Arts Stakeholder Meeting	5			Receive feedback on Arts Building design and functions				
46	11/8/2024	Arts Stakeholder Meeting	1			Receive feedback on Arts Building design and functions				
47	11/13/2024	Arts Stakeholder Meeting	1			Receive feedback on Arts Building design and functions				
48	2/11/2025	City Council Work Session	50			Receive feedback on near-final building designs, site plan, and programming				

Mills Crossing

Specific Plan Amendment, Tentative Subdivision Map, and Major Design Review; Project No. PLND-0524-0098

Chance Finley-Ross, Associate Planner

April 21, 2025



RANCHO CORDOVA CALIFORNIA

CityofRanchoCordova.org

Project Request

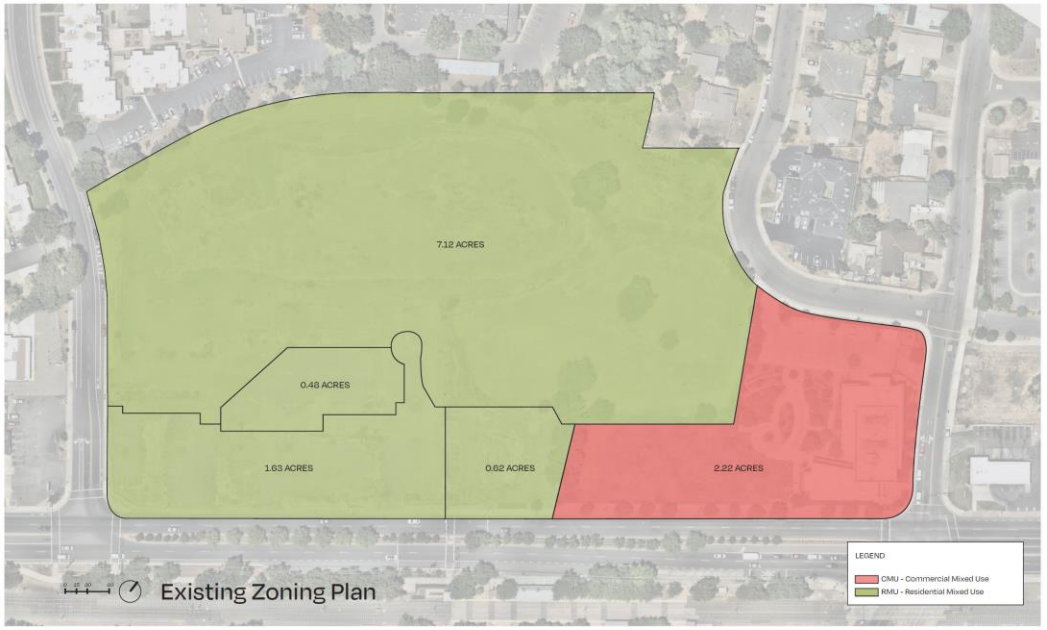
- In May 2024, the City submitted an application for the Mills Crossing project, which included plans for the following:
  - Rezone of a portion of the Folsom Boulevard Specific Plan's Mather Mills Opportunity Site
  - Subdivision of the existing property into seven (7) new parcels
  - Construction of three community commercial buildings and associated site improvements
- The proposed plans require a Specific Plan Amendment, Major Design Review, and Tentative Subdivision Map, per the City's Zoning Code

Project Location

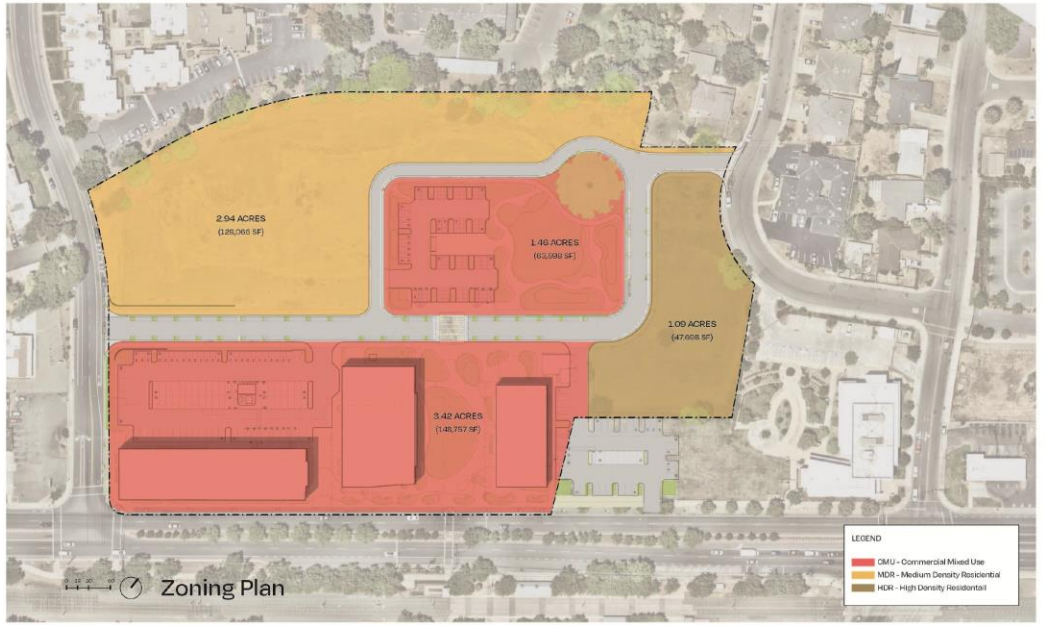


Specific Plan Amendment

Existing Zoning

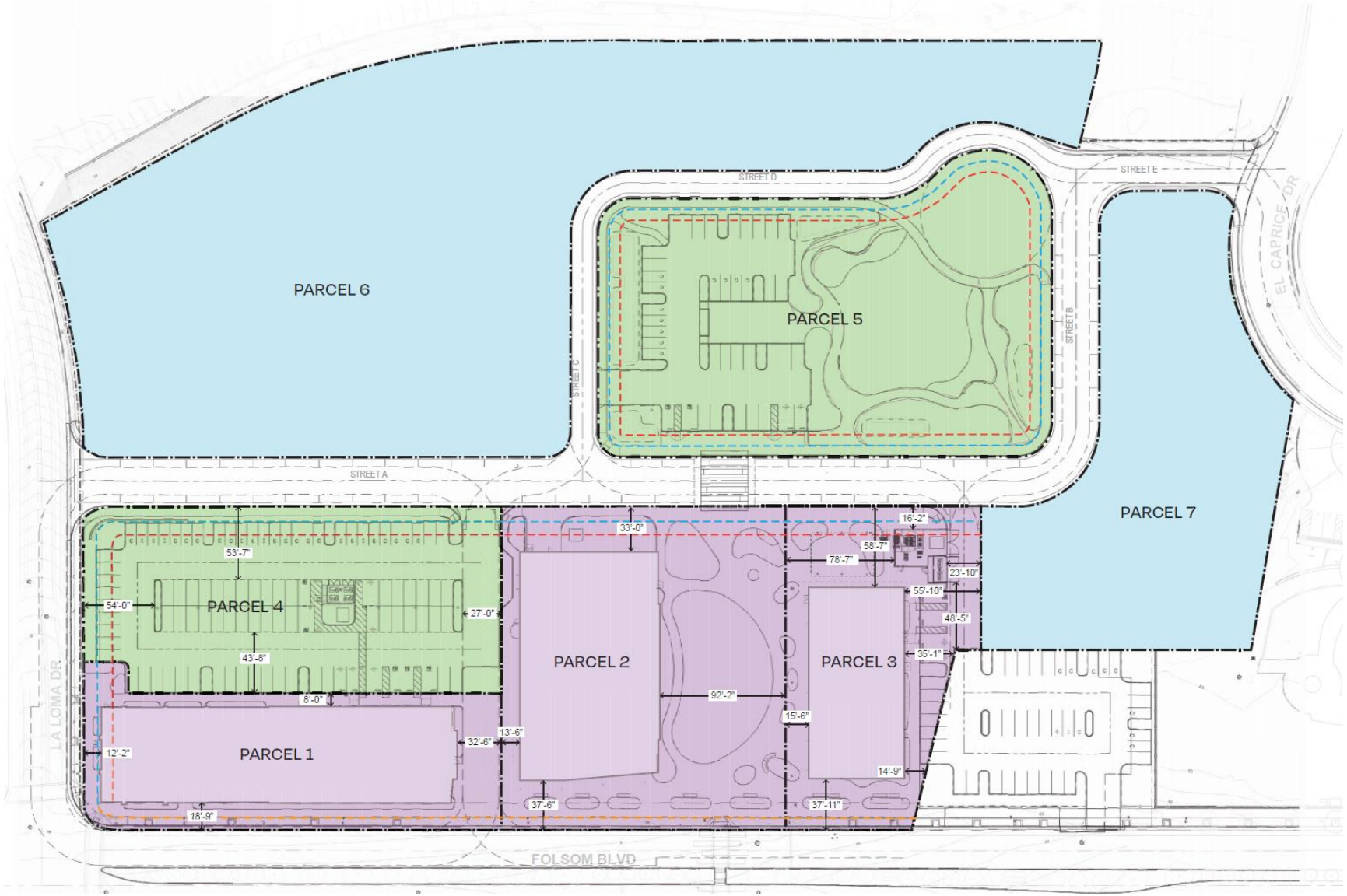


Proposed Zoning



- Chapter 23.152 of the City's Zoning Code requires the approval of a Specific Plan Amendment for any changes to a Specific Plan document
- The Specific Plan Amendment proposes re-designating the site from Residential Mixed-Use (RMU) to Commercial Mixed-Use (CMU), High Density Residential (HDR), and Medium Density Residential (MDR)
- Aligns with the Folsom Boulevard Specific Plan and Mather Mills Opportunity Site goals, with future housing projects requiring separate entitlements for further review

Tentative Subdivision Map



City Project Team Presentation



RANCHO CORDOVA
CALIFORNIA

April 21, 2025

PROJECT OVERVIEW

Site Plan

Building 1

Building 2

Building 3

Open Space




MILLS CROSSING
ATTACHMENT 12
La Loma Dr
Housing Parcel 1
(Future Entitlement)
B1
B2
B3
Housing Parcel 2
(Future Entitlement)
Folsom Blvd

BUILDING 1 | MIXED OFFICE & COMMUNITY HEALTH

Size	36,000 SF
Programming/ Occupancy	Anchor Office: 21,000 SF
	Community Health: 15,000 SF

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BUILDING 2 | COMMUNITY ARTS CENTER

Size	27,500 SF
Programming/ Occupancy	Black Box Theater Rehearsal Space Classrooms Exhibit Space Flex Studios Concessions Pre-function/ Lobby Theater Support Roof Top Deck




MILLS CROSSING ART CENTER

BUILDING 3 | COMMUNITY EVENTS w/ SMALL CAFÉ/SHOP

Size	9,600 SF
Programming/ Occupancy	Event Hall for 250-300 attendees Catering Kitchen Support/Office Storage Restrooms Leased Café/Food




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SIGNAGE



ATTACHMENT 12

Program Elements

1. Main entry w passive safety-security
2. Theater outdoor pre-function area
3. Event lawn
4. Trellis with flexible outdoor event space
5. Festival street
6. Parking lot integrated into project green
7. Mini pedestrian plaza
8. Wellness loop
9. Hangout hill
10. Interpretive features for planted areas
11. Small garden seating nook
12. Additional parking w flexibility for hosting events & food trucks



SITE INFRASTRUCTURE & OPEN SPACE

Size	2.5 acres *(combined)*
Programming/ Occupancy	Main Plaza Project Green w wellness loop and mini-plaza Central Festival Street can be closed for street fairs





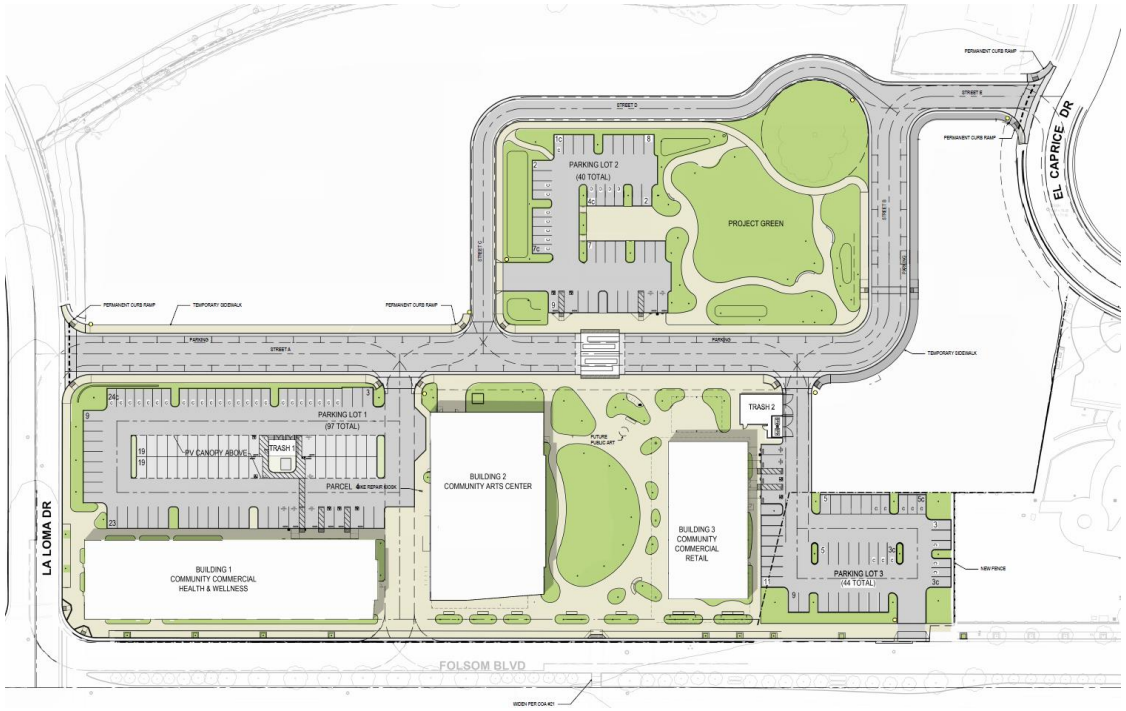

NEXT GENERATION
24-7-365

February 11th Work Session

Key Topics Addressed:

- **Building 2 Space Configuration and Flexibility:**
  - Maximum flexibility of indoor and outdoor spaces needed
  - Design classroom/rehearsal spaces for multi-functional uses
  - Use of timeless architecture encouraged
- **Parking Management:**
  - How will the surrounding community and Los Rios students utilize Mills Crossing parking
  - Explore parking garage models used in Sacramento

Mills Crossing Parking



- The project meets City zoning regulations, allowing parking reductions and shared parking opportunities near transit and for mixed-use; future housing will provide its own parking
- A parking study found peak demand at 170 spaces, and the project will provide 181 on-site spaces
- The site qualifies for reduced parking under AB 2097 due to its location to a major transit stop (Mather/Mills light rail)
- Shared parking opportunities include nearby lots, on-street spaces, and a proposed long-term agreement with Folsom Lake College

Design Review Exceptions

- The Folsom Boulevard Specific Plan allows exceptions to development standards as part of the Design Review process. The following exceptions are being requested:
  - A setback deviation is requested for the rear property line of Parking Lot 3 to allow parking spaces within the setback area
  - A pedestrian plan deviation is requested for reductions in required seating, electrical outlets, and trash receptacles to balance usability, safety, and operational efficiency
- The Mills Crossing project meets the required guidelines for granting exceptions, as outlined by the Folsom Boulevard Specific Plan

CEQA – Environmental Impact Report (EIR)

- The City issued a Notice of Preparation (NOP) for a Draft EIR on January 6, 2023, and held a public scoping meeting on January 19, 2023. The Draft EIR was released on June 7, 2024, with public comments accepted until July 22, 2024
- Seven comment letters were received and the Final EIR determined no new information required recirculation under CEQA
- The EIR identified impacts to air quality, biological and cultural resources, tribal cultural resources, hazards, and greenhouse gases
- Mitigation measures are included in the Mitigation Monitoring and Reporting Program (MMRP) and identify strategies that reduce all potential impacts to a less-than-significant level.

Planning Commission – March 26, 2025

Key Topics Addressed:

- **Pedestrian Space Amenities:**
  - Trash receptacles deemed sufficient
  - Concerns about number of electrical outlets provided
- **Pedestrian Safety & Access:**
  - Concerns about crossing Folsom Blvd. from Light Rail & shared parking lots
- **Parking Availability:**
  - Concerns over parking supply & overflow impacts
- **Loading Dock:**
  - Public concerns about size & location → Determined sufficient as designed
- **Site Lighting:**
  - Ensures adequate illumination & shields nearby properties → No further concerns
- **Trash Enclosures:**
  - Two enclosures confirmed as adequate for event needs

Planning Commission – March 26, 2025

- **Recommended approvals:**
  - Certify Environmental Impact Report (EIR) & Mitigation Monitoring and Reporting Program
  - Adopt Specific Plan Amendment
  - Approve Tentative Subdivision Map & Major Design Review
- **Additional Condition of Approval Added:**
  - Applicant must work with City staff to ensure adequate electrical outlets in the plaza and green areas (verified during the building permit process)
- **Recommendations to City Council:**
  - Explore feasibility of a pedestrian overcrossing at Folsom Boulevard
  - Consider using vacant housing parcels for temporary parking

Recommendation

Staff recommends that the City Council:

1. Adopt a Resolution Certifying the Mills Crossing Environmental Impact Report and adopting the Mitigation Monitoring and Reporting Program and CEQA Findings; and
2. Introduce and waive the first reading of an Ordinance adopting the Specific Plan Amendment with associated exhibit and track changes, subject to the findings contained in the Ordinance; and
3. Adopt a Resolution approving a Tentative Subdivision Map and a Major Design Review with associated exhibits, subject to the findings contained in the Resolution

THANK YOU

Questions & Discussion

RANCHO CORDOVA
CALIFORNIA

PROJECT ADDENDUM – BACKUP SLIDES



RANCHO CORDOVA
CALIFORNIA

April 21, 2025

Project Parking Code Analysis

Peak Parking Requirement = 254 Stalls (Based on Code Analysis)

Peak Parking Time of Day Demand Analysis = 170 Stalls

Code Allowed Parking Reduction Exemptions (23.719.080):

- Reduction for Parking Near Transit Stop: Allows 50% Reduction
- Parking in Mixed-Use Projects: Allows Peak Parking Demand Analysis
- Available Parking in Public or Common Area Lots: Potential City Lot
- *Additional Parking Reduction: Additional 30% Reduction Allowed*
  (not proposed for this project)

Parking Demand Analysis

Figure 8 Time of Day Demand Projections for Non-Residential Uses: Baseline Weekday

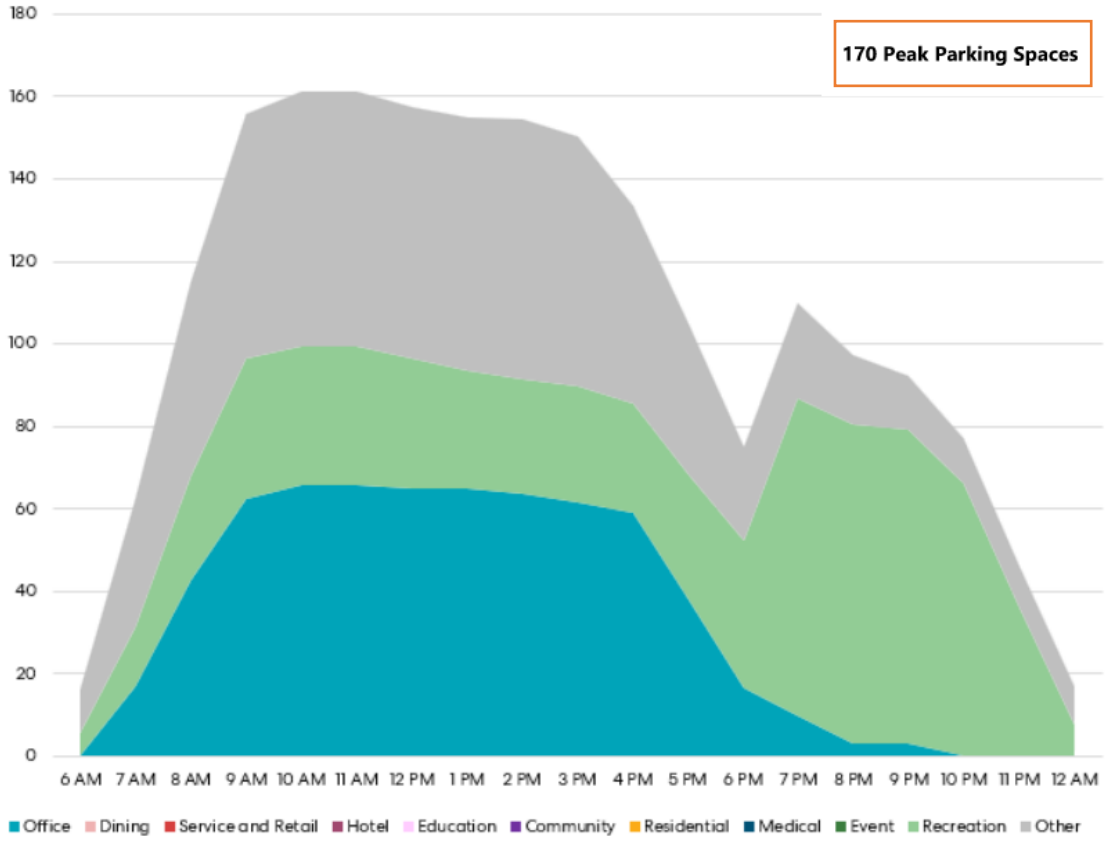
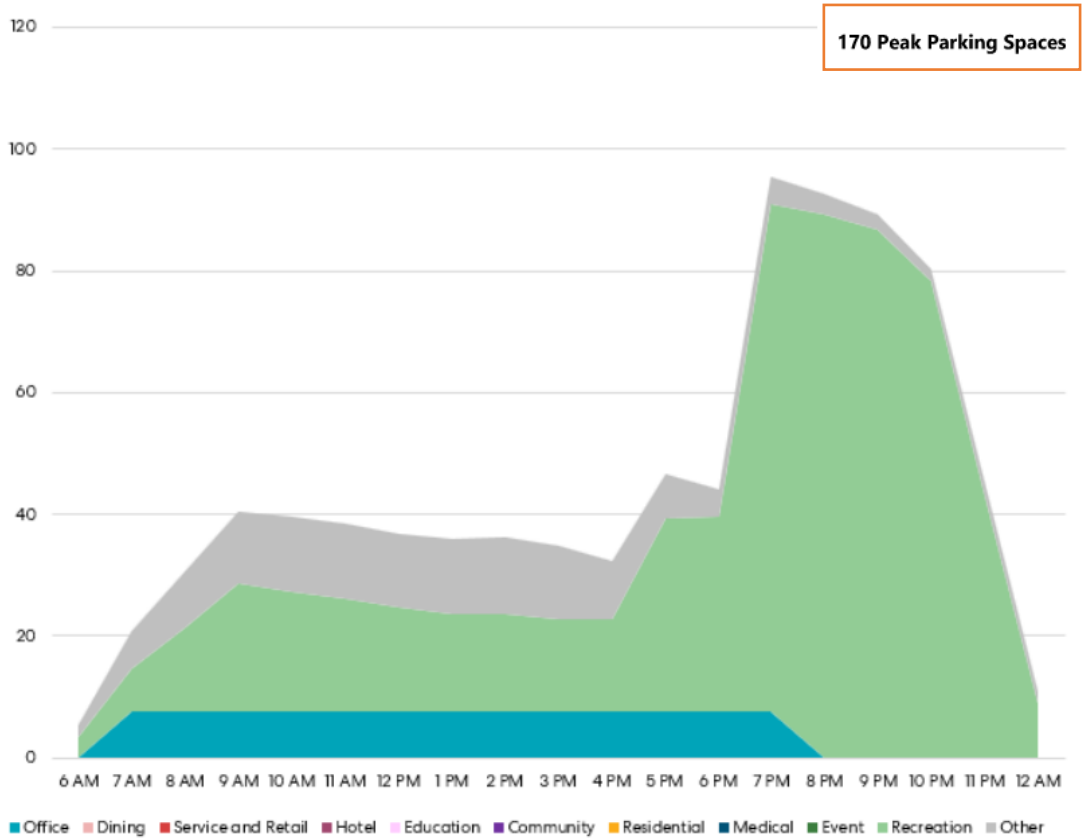


Figure 9 Time of Day Demand Projections for Non-Residential Uses: Baseline Weekend

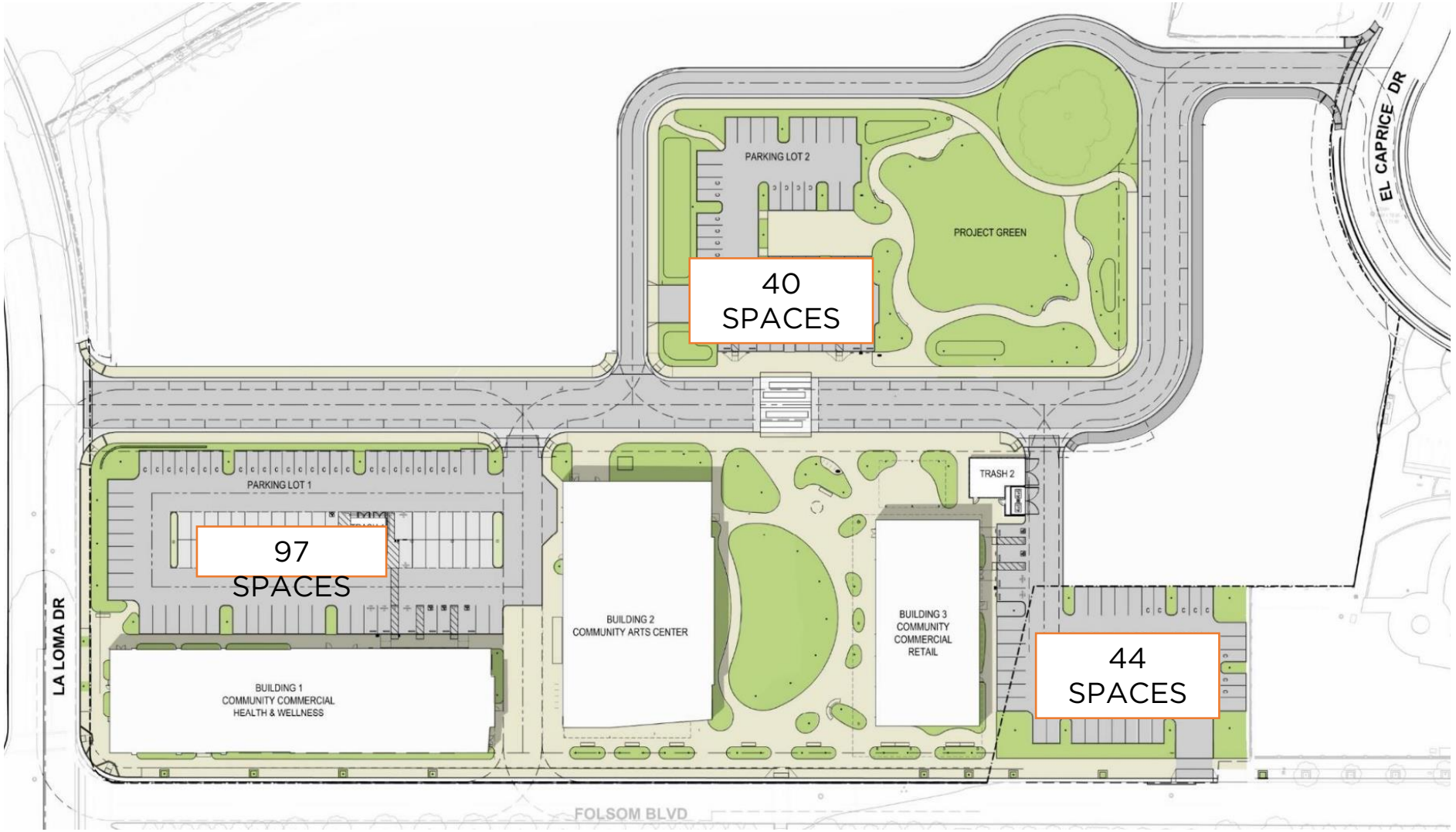


Source: Nelson Nygaard Parking Demand Analysis for Mills Crossing, 2024

Mills Crossing Parking Overview

Onsite Off-street Parking Stalls

181



"Parking Ecosystem" Master Plan Approach to Parking

- For Commercial Project Components (Buildings 1, 2, & 3):
  - Performed a time-of-day demand-based parking analysis to quantify parking need (170 stalls)
  - Included required Parking Spaces (181 stalls)
- Providing additional on-street parking (49 Additional Spaces)
- MOU with Los Rios for Parking Lot 3 (25-yr initial term)
- Develop shared parking agreements on neighboring lots (RT, Los Rios, City-owned parcel, etc.)
- Housing components must provide their own required parking on their parcels (e.g., 2-car garages in the for-sale homes, dedicated parking lot on the affordable housing site)
- Most costly approach - explore structured parking solutions

OFF-SITE SHARE PARKING STRATEGY

Sac Metro Gold Line Off-site Parking Lot	226 spaces
Folsom Lake College Off-site Parking Lot	295 spaces
City-owned Parcel *(Potential Solution with estimated space yield)*	80 spaces

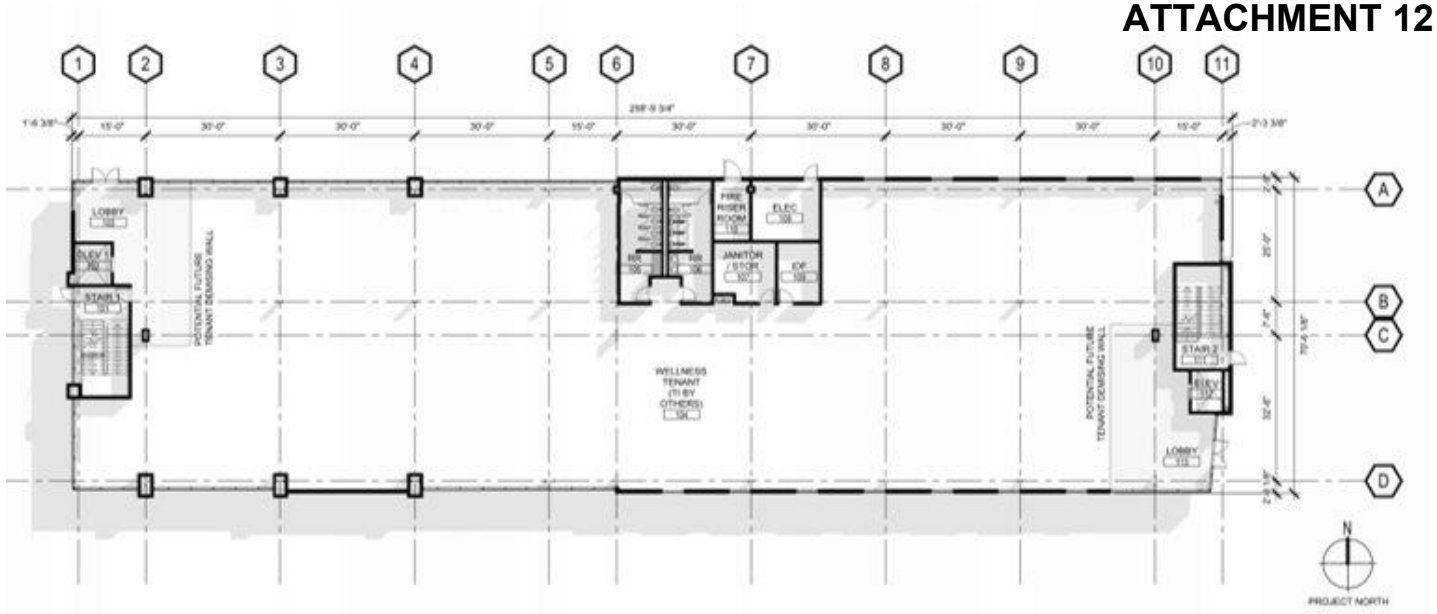
Shared Parking Strategy involves

521-601

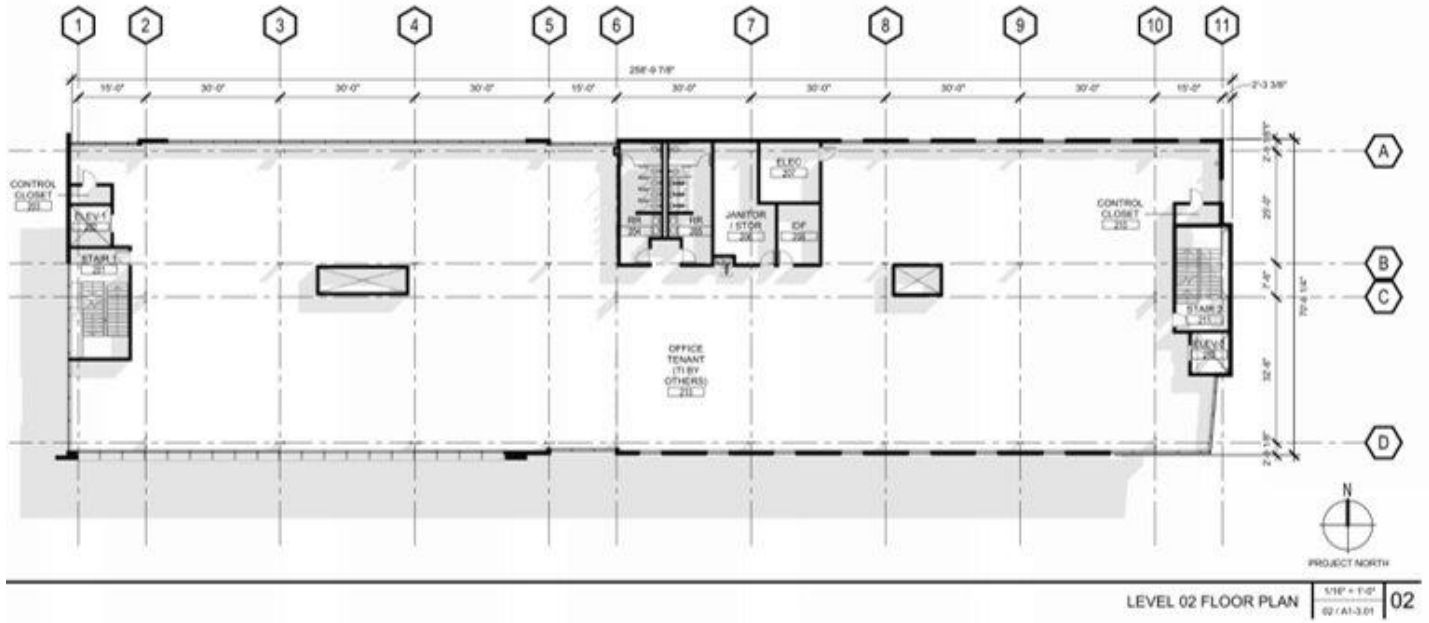
Spaces adjacent to Mills Crossing site



BLDG 01 FLOOR PLANS



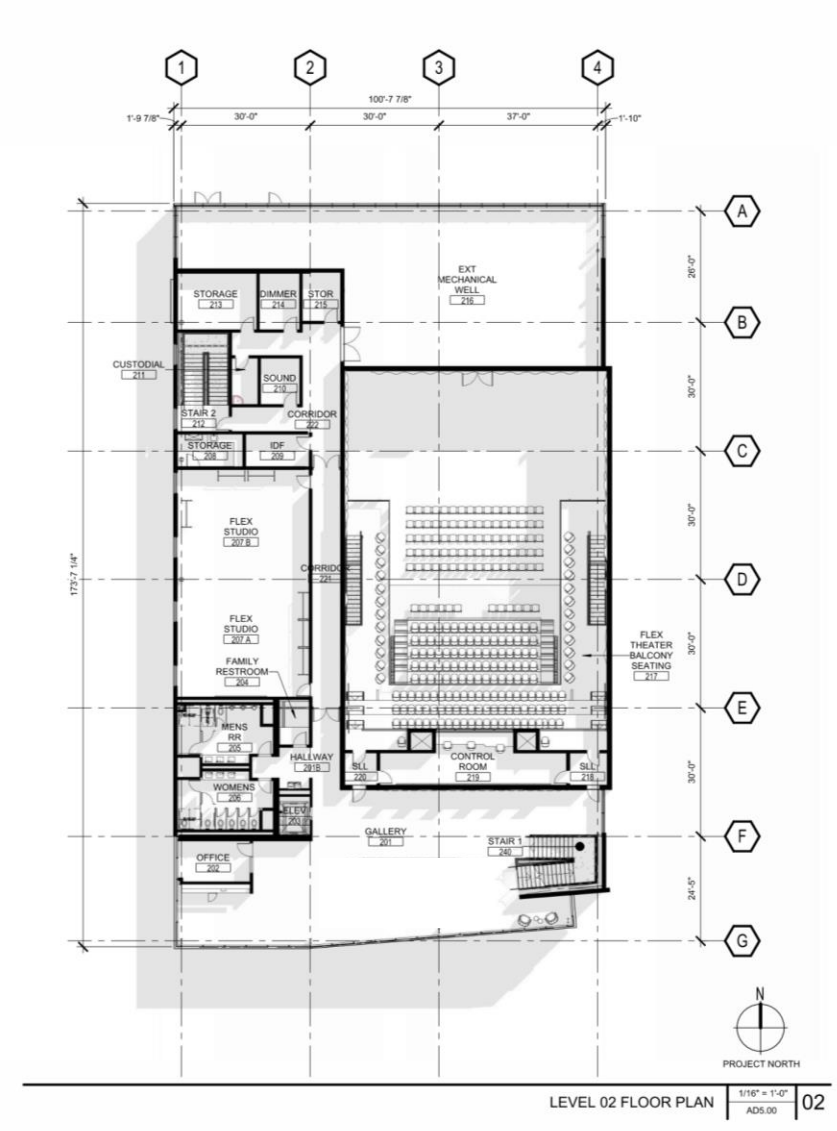
LEVEL 01 FLOOR PLAN 1/16" = 1'-0" 02 / A1-3.01 01

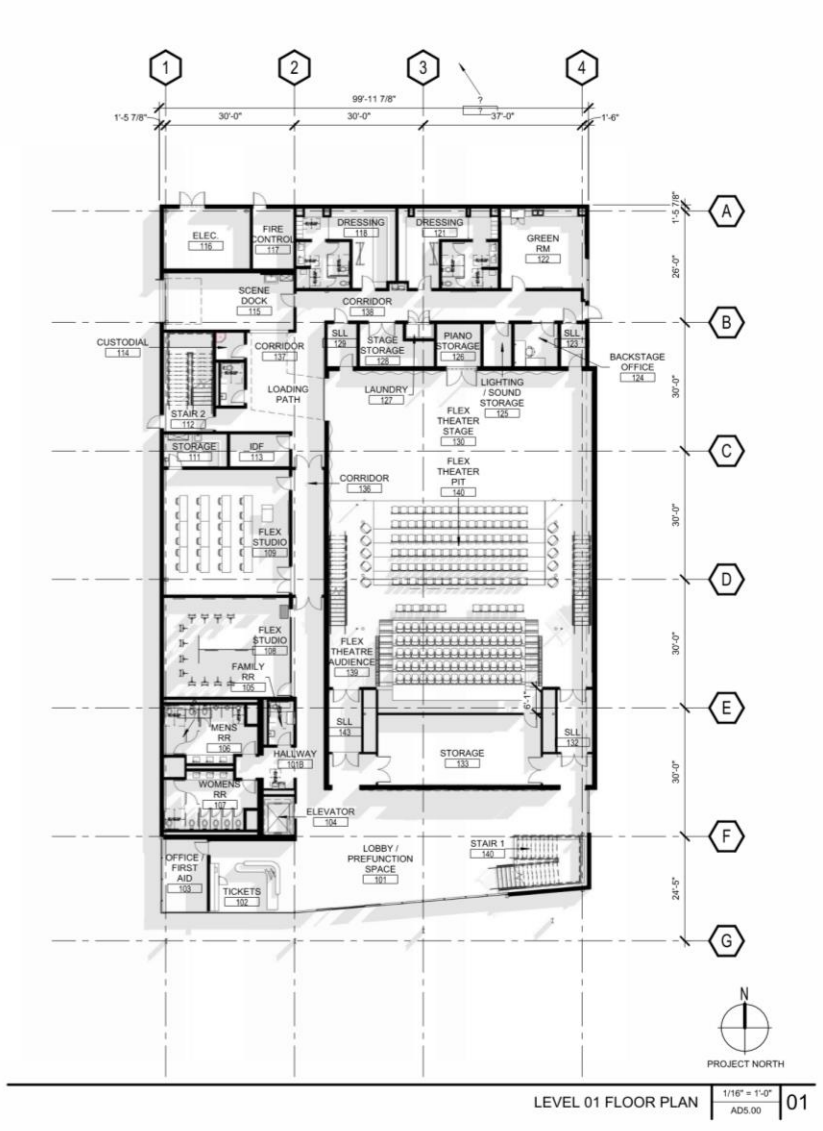


LEVEL 02 FLOOR PLAN 1/16" = 1'-0" 02 / A1-3.01 02

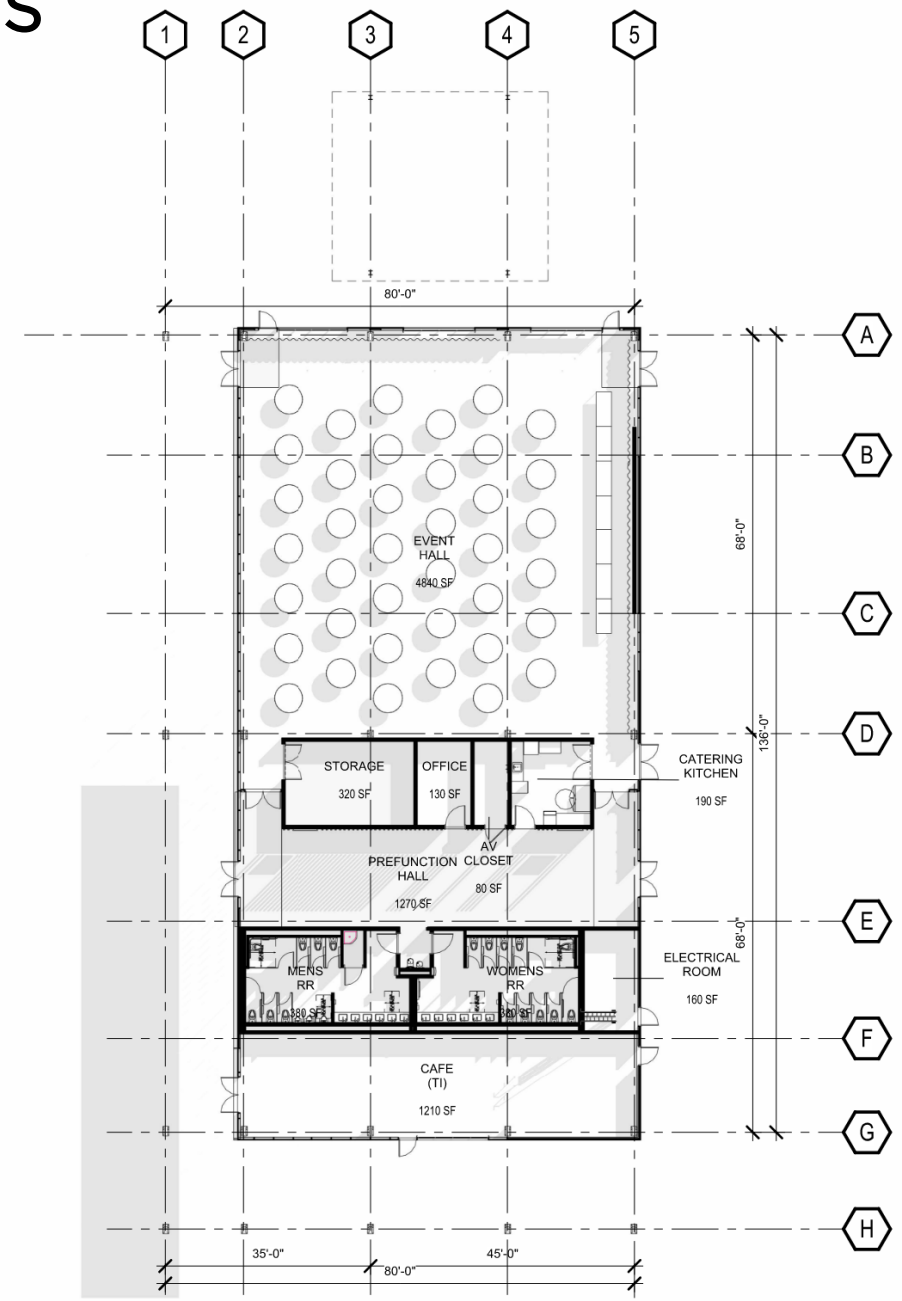
BLDG 02 FLOOR PLANS

ATTACHMENT 12





BLDG 03 FLOOR PLANS





FIRST FLOOR | LOBBY & PRE-FUNCTION SPACE



FIRST FLOOR | LOBBY & PRE-FUNCTION SPACE



FIRST FLOOR | LOBBY DESK & CONCESSIONS



BLDG 02 FIRST FLOOR STUDIOS



FIRST FLOOR | THEATER VIEW FROM STAGE



SECOND FLOOR | THEATER VIEW FROM MEZZANINE



SECOND FLOOR | LOBBY & PRE-FUNCTION SPACE



SECOND FLOOR | LOBBY & PRE-FUNCTION SPACE



SECOND FLOOR | FLEX STUDIO & REHEARSAL SPACE

BUILDING 2 ROOF DECK



BUILDING 3 ROOF DECK

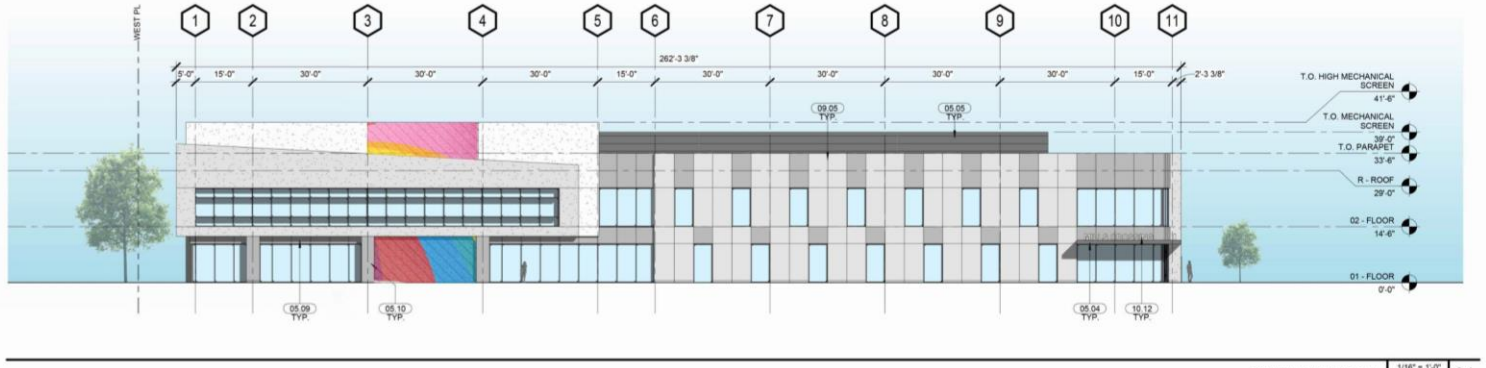




BLDG 03 EVENT HALL INTERIOR



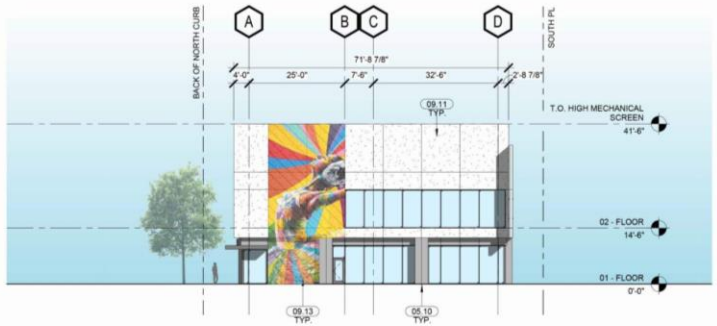
BLDG 03 PREFUNCTION



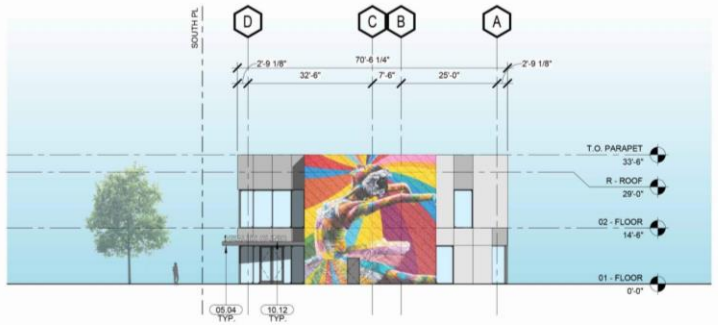
SOUTH ELEVATION 1/16" = 1'-0" 02 / A1-2.09 01



NORTH ELEVATION 1/16" = 1'-0" 02 / A1-2.09 02



WEST ELEVATION 1/16" = 1'-0" 02 / A1-2.09 04

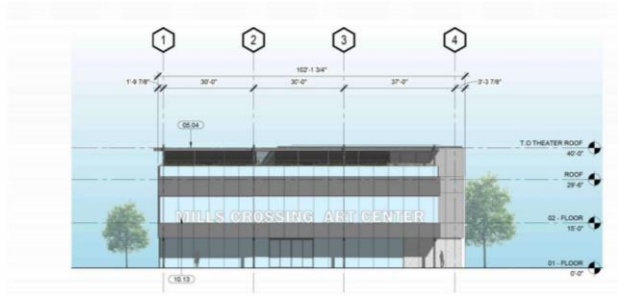


EAST ELEVATION 1/16" = 1'-0" 02 / A1-2.09 03

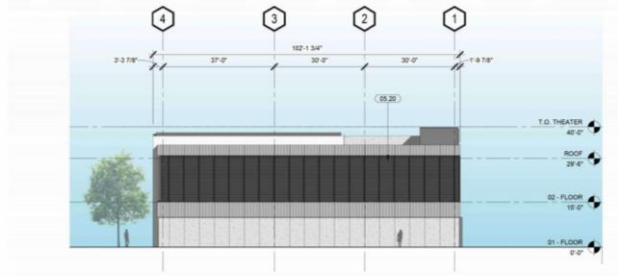



SIGNAGE

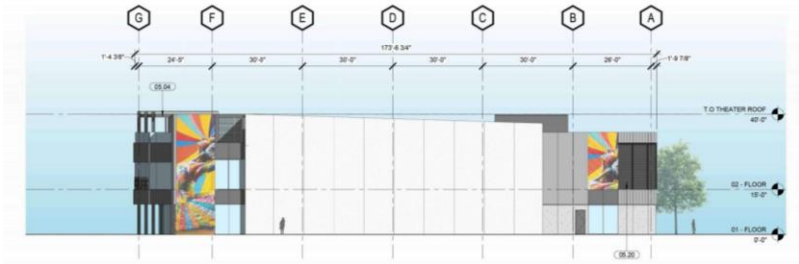

MILLS CROSSING



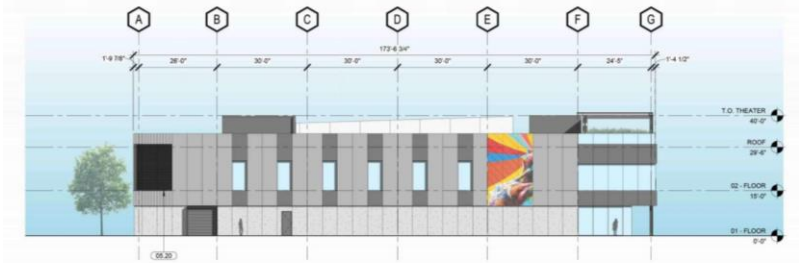
SOUTH ELEVATION 01



NORTH ELEVATION 02



EAST ELEVATION 03



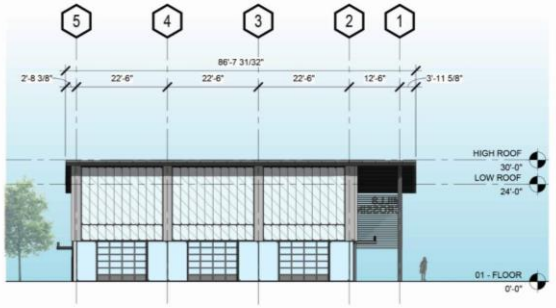
WEST ELEVATION 04


MILLS CROSSING ART CENTER

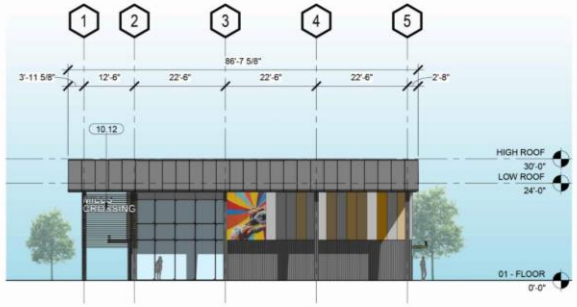



MILLS CROSSING ART CENTER
MILLS CROSSING


MILLS CROSSING ART CENTER



NORTH ELEVATION 1/16" = 1'-0" 05 / A3-2.01 02



SOUTH ELEVATION 1/16" = 1'-0" 05 / A3-2.01 01



WEST ELEVATION 1/16" = 1'-0" AD6.10 03



EAST ELEVATION 1/16" = 1'-0" AD6.10 04


MILLS
CROSSING
SIGNAGE
SIGNAGE



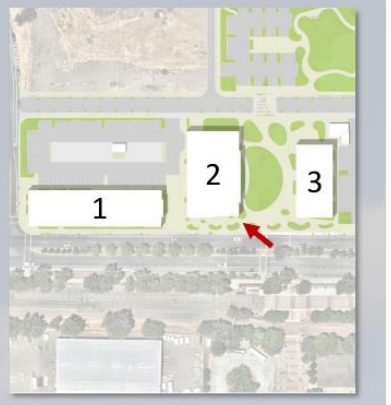



MILLS
CROSSING
SIGNAGE


MILLS CROSSING ART CENTER
MILLS
CROSSING

BUILDING LIGHTING DESIGN





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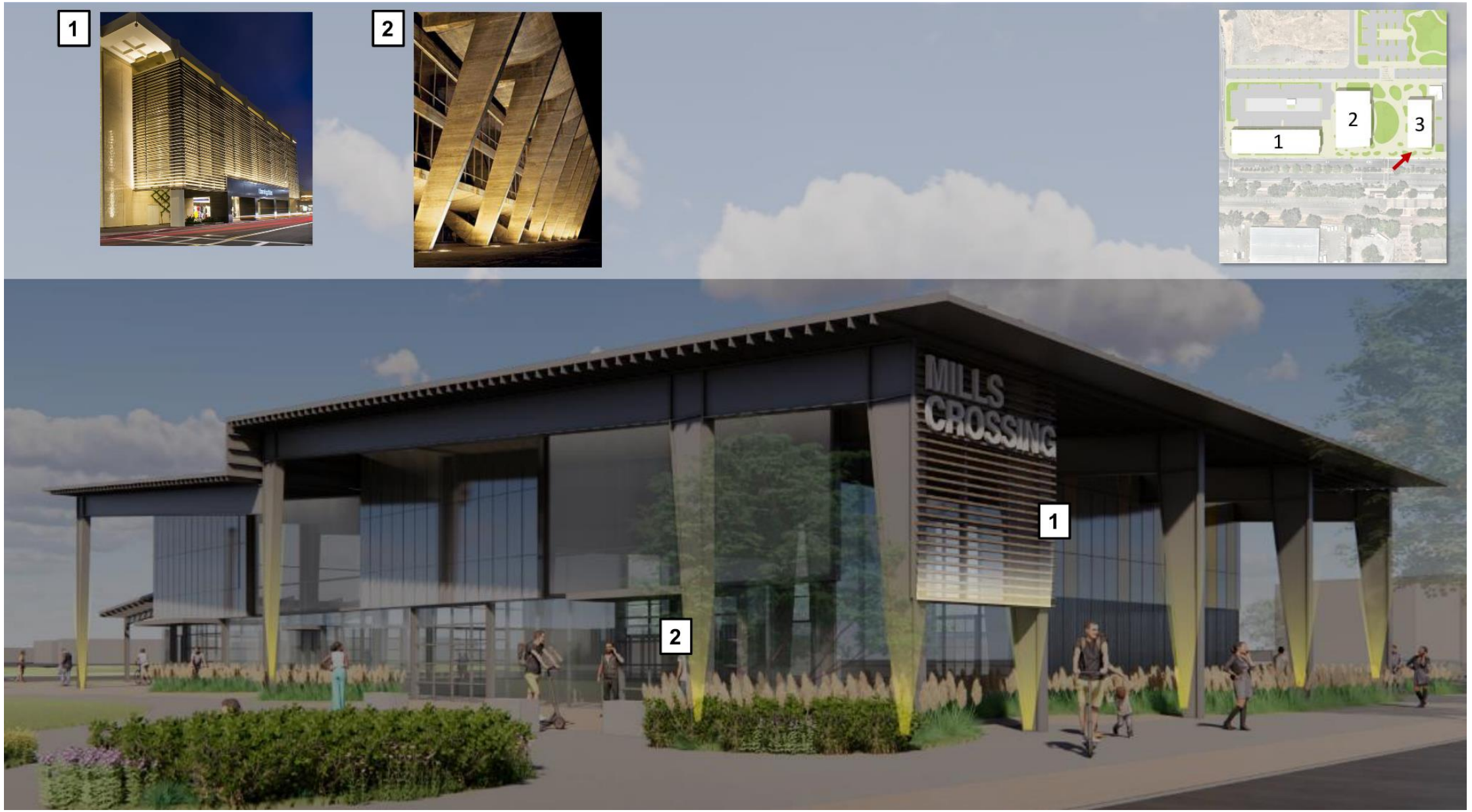
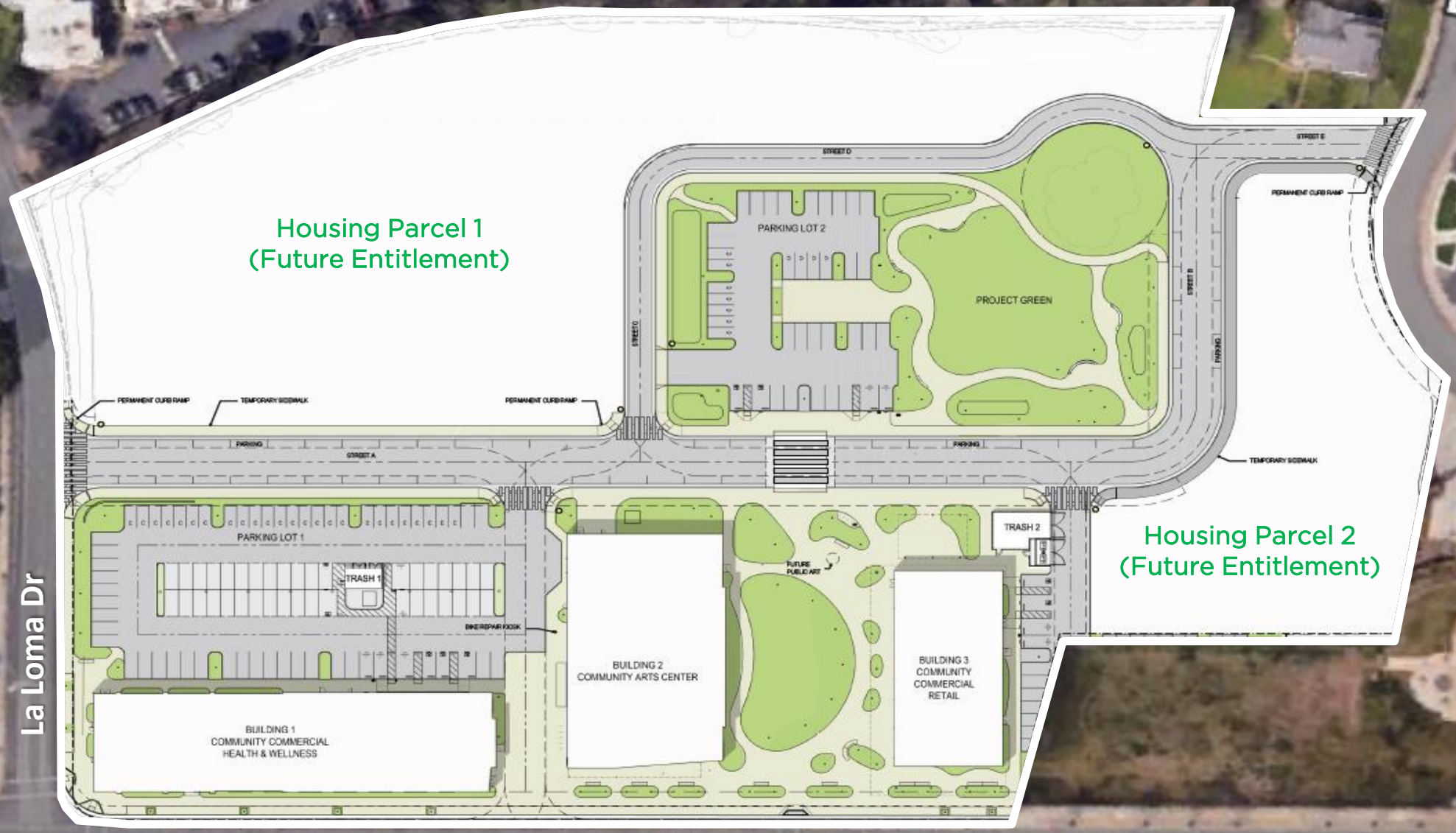
BUILDING LIGHTING DESIGN



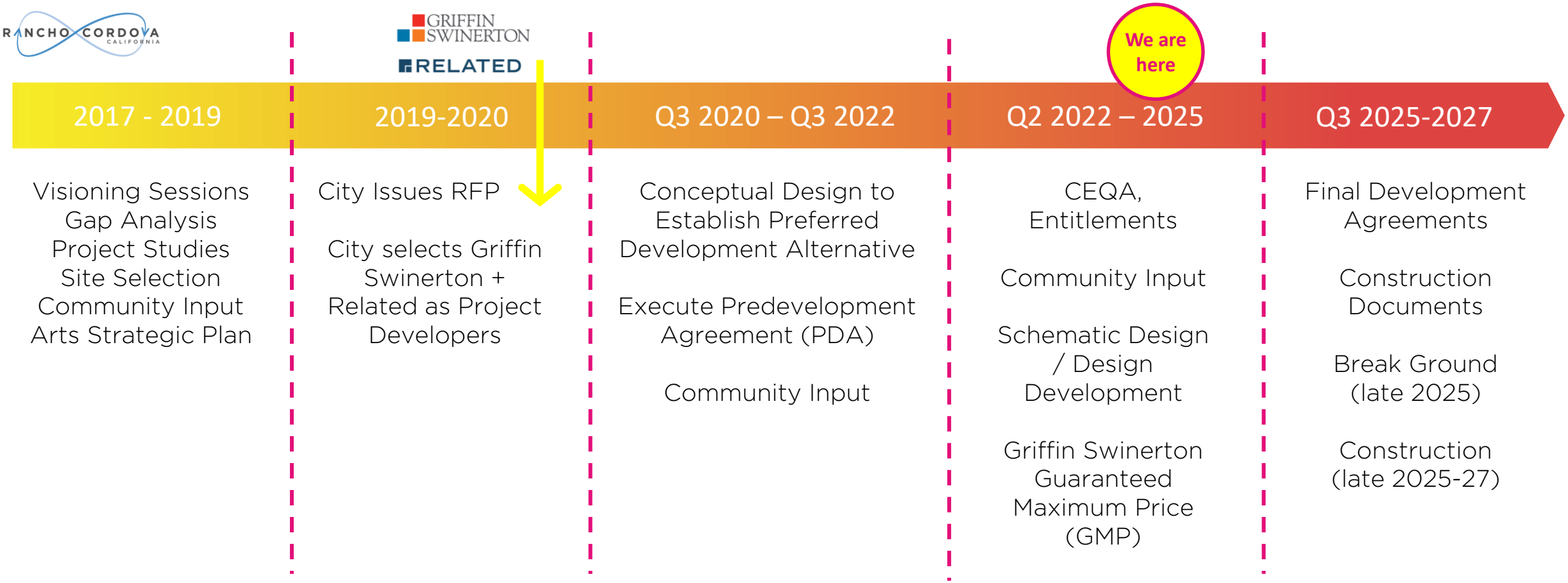
BUILDING LIGHTING DESIGN



MILLS CROSSING



PROJECT HISTORY



Key Council & Community Themes: Community Amenity & Economic Development

Project Location (Existing Conditions)

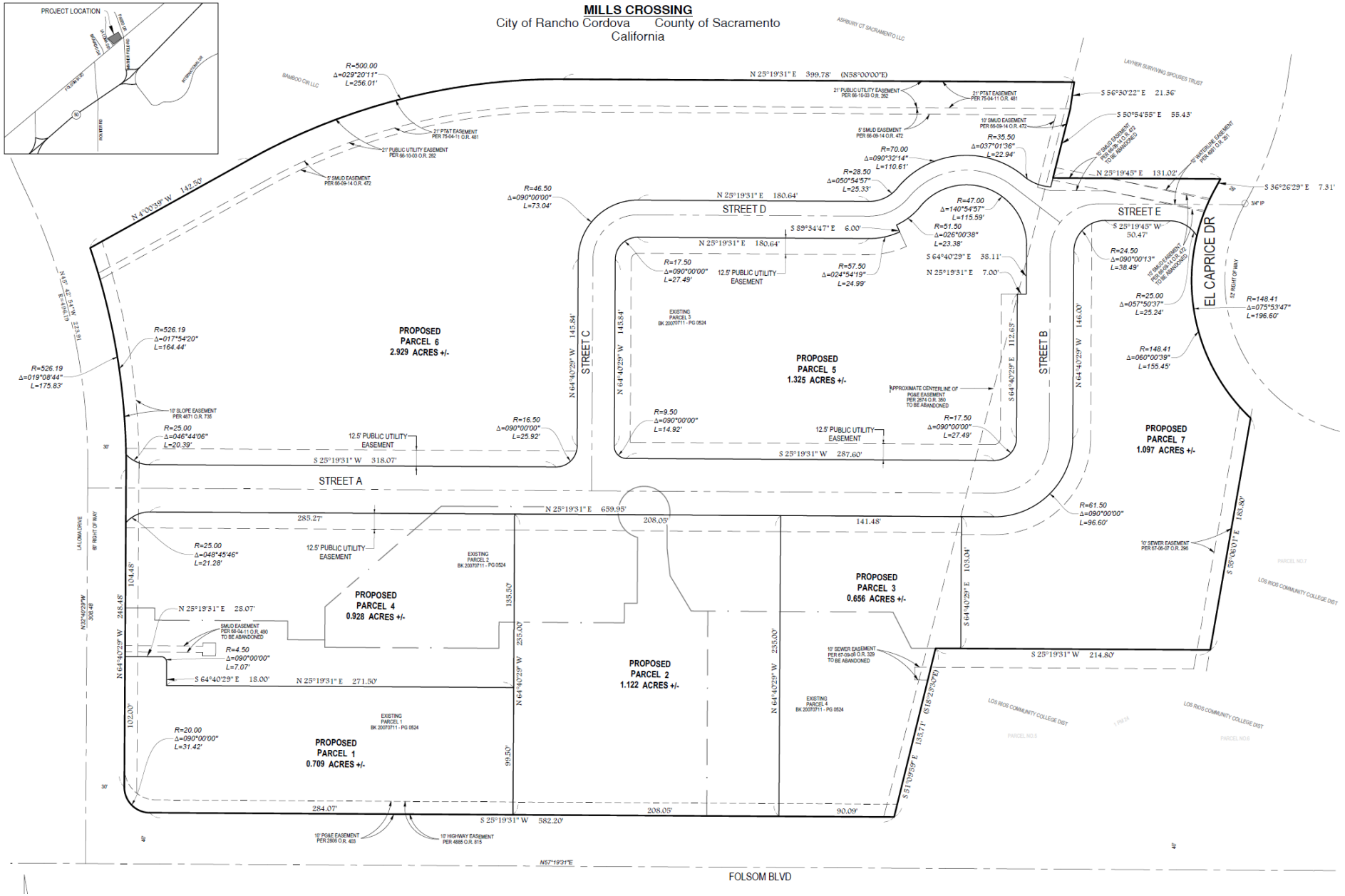
View from Folsom Blvd. and La Loma Drive



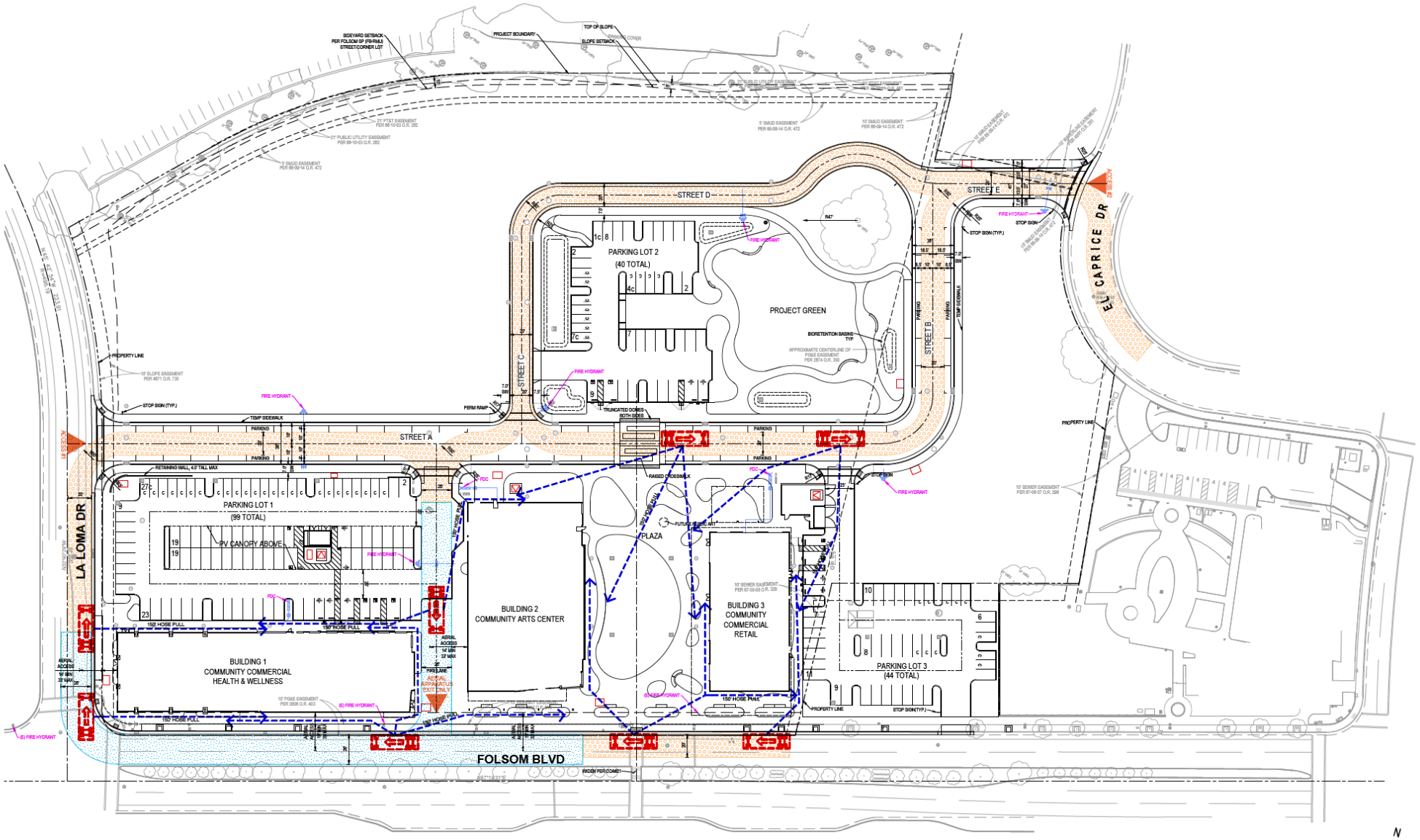
View from Folsom Blvd. Looking Northwest



Tentative Subdivision Map



Site Fire Access



Trash Enclosures

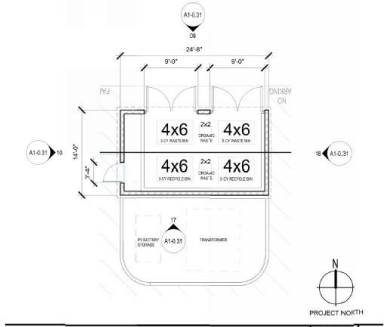
Enclosure #1



VIEW FROM STREET SIDE



VIEW FROM BUILDING SIDE



FLOOR PLAN - TRASH ENCLOSURE 1/8" = 1'-0" 02 / A1-3.01 05

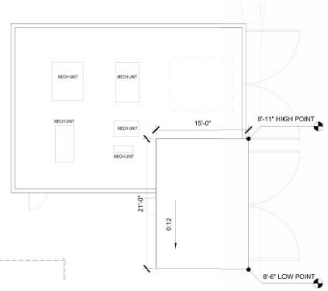
Enclosure #2



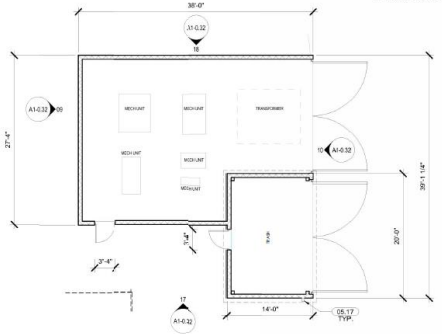
VIEW FROM PLAZA



VIEW FROM PARKING LOT

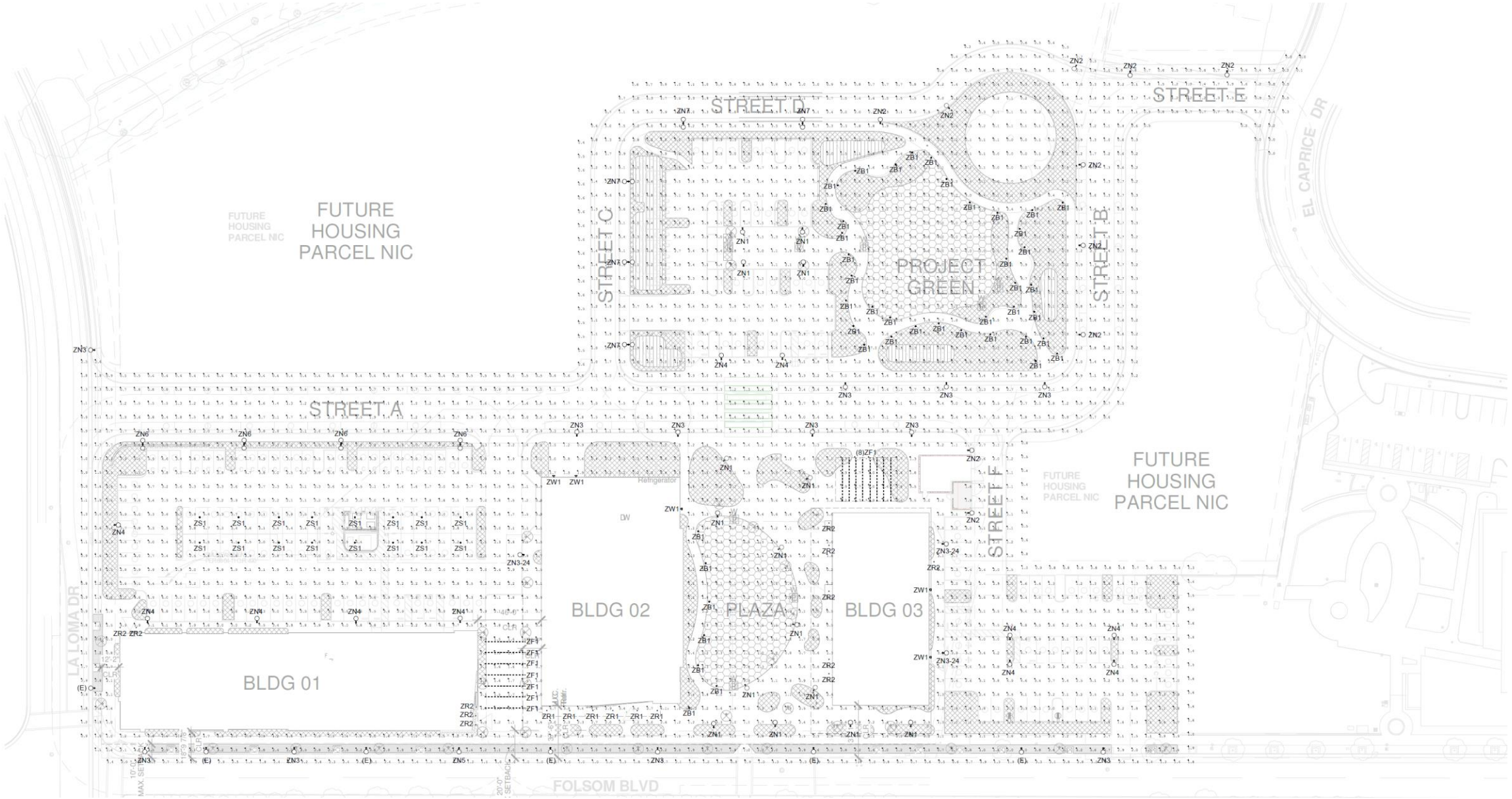


ROOF PLAN - TRASH ENCLOSURE 2 1/8" = 1'-0" A1-0.32 06



FLOOR PLAN - TRASH ENCLOSURE 2 1/8" = 1'-0" A1-0.32 05

Photometric Plan



MEMORANDUM

ITEM 12.1.

DATE: April 21, 2025

TO: Honorable Mayor and Council Members

FROM: Amanda Norton, Economic Development Director

SUBJECT: **ECONOMIC DEVELOPMENT STRATEGIC PLAN UPDATE**

RECOMMENDATION

Receive presentation and provide feedback and direction to staff on frequency of future updates from the Economic Development Department.

RESULT OF RECOMMENDED ACTION

Staff would proceed with recommended direction received from Council.

BACKGROUND

The City Council approved the three-year Economic Development Strategic Plan (EDSP) on November 11, 2024. The EDSP was designed to frame the strategic initiatives and measure, track, and amplify ongoing efforts.

Economic Development Strategic Plan (EDSP)

The EDSP is composed of 3 goal areas: business development, placemaking and real estate, and workforce partnerships. Staff will present an update on current activities and next steps in the three goal areas.

Business Development

- The Economic Development Department (Department) actively engages in business development initiatives, assisting numerous businesses through the Development Services Team (DST), site searches, and referrals. Staff have been working on the design of the Customer Relationship Management (CRM) database with the goal to better track interactions and outcomes with the business community. The CRM system is about to be piloted and implemented in the second quarter of 2025.
- The development of a structured Business Retention and Expansion (BRE) Program is currently in progress. While staff regularly meet with businesses, a more structured program will be launched by the second quarter of 2025 and will be tracked utilizing the new CRM system.
- Looking forward, staff are collaborating closely with the Communications and Public Affairs Department to develop a robust marketing strategy, emphasizing storytelling aligned with targeted industries and small businesses. Efforts are also underway to

update grants and incentives tailored to strategic industries, complemented by the creation of a user-friendly Business Resource Platform and increased understanding of and engagement with the various resources and programs available for businesses.

Placemaking and Real Estate

- Partnering with the Greater Sacramento Economic Council and Newmark, data collection for a Playbook for Semiconductor and Electric Vehicle (EV) Battery Recruitment for the Greater Sacramento region has begun. The Playbook will explore existing assets and a path to further grow and attract businesses in the semiconductor and EV battery space.
- Staff are preparing to release a Request for Proposals (RFP) for an Office Park Study. The RFP is scheduled to be released in the second quarter of 2025.

Workforce Partnerships

- All American Rescue Plan Act (ARPA) funded Workforce Development programs have concluded. A study is being conducted to track the employment of participants in the programs. All participants have been asked about employment at twelve-month post-program and will be surveyed again at eighteen-months post-program. To aid in participation in the study, a gift card incentive program has been successfully implemented.
- Moving forward, the Workforce Development initiatives have transitioned fully to a Talent Pipeline Management (TPM) model led by the Rancho Cordova Area Chamber of Commerce (Chamber). The Chamber will present a detailed update on the TPM model at a future Council meeting. The Chamber will also provide an update on their other key initiatives, which include the Minority Business Assistance and Recovery Kickstart (MBARK), and Artificial Intelligence (AI) Training and Data Collection.

Next Steps

The Economic Development Department (Department) continues to lay the groundwork for EDSP initiatives, ensuring strategic alignment with both immediate and long-term economic objectives.

Recommendation

Department staff are proposing an annual update on all EDSP initiatives.

FISCAL IMPACT AND FUNDING SOURCE

No fiscal impact is associated with this presentation.

ATTACHMENT(S)

1. Presentation



RANCHO CORDOVA
CALIFORNIA

Economic Development Strategic Plan

Update

April 21, 2025

Presentation Agenda

01 Introduction

02 Economic Development Strategic Plan

03 Business Development

04 Placemaking and Real Estate

05 Workforce Partnerships

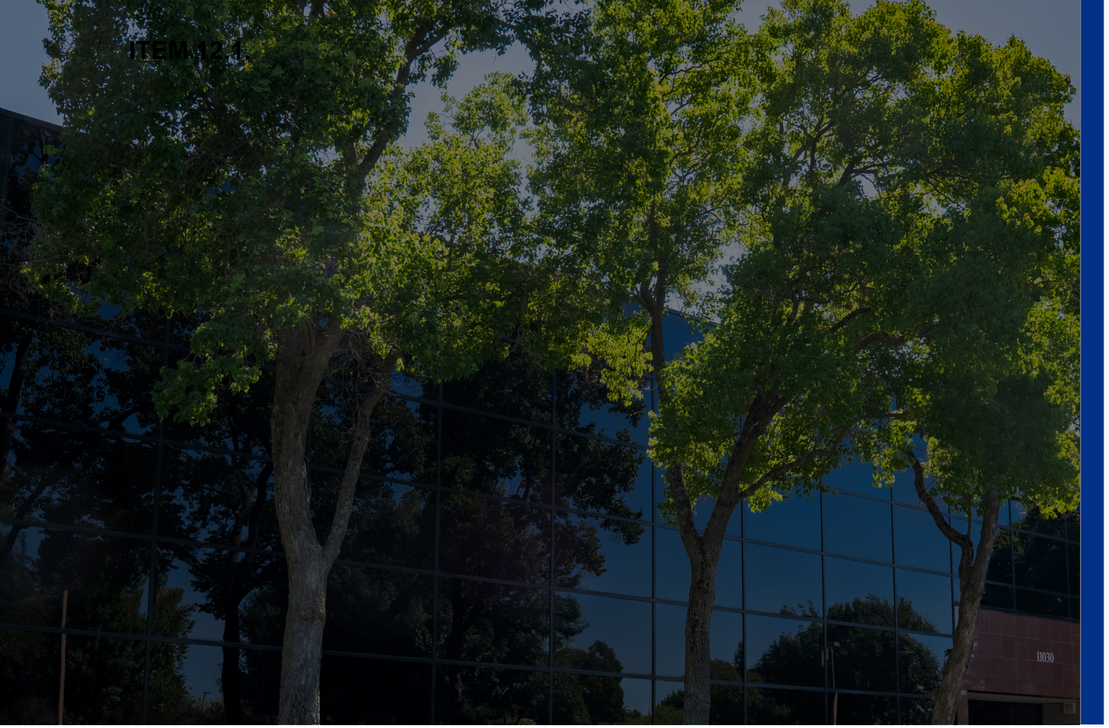
06 Future Projects

07 Recommendation





Economic Development Strategic Plan



Pathway to Progress

YEAR 1 (2025)

Building on Progress

Establishing Tools for Measurement & Growth

YEAR 2 (2026)

Expanding Success

Scaling Initiatives for Greater Impact

YEAR 3 (2027)

Sustaining Momentum

Refining Strategies for Continued Growth

Economic Development Strategic Plan



Business Development

Targeted business attraction efforts in specific industries, support business-friendly environment for new and existing businesses.



Placemaking and Real Estate

Support high-quality mixed-use development, infill and redevelopment. Creatively activate vacant spaces.



Workforce Partnerships

Enhance local talent pipeline for employers through partnerships and marketing.



Business Development

Microsoft Dynamics 365

EconDev Hub

Goal 1.1

Transforming Outreach Into Outcomes

Building Stronger Business Relationships Through Smart Data

WHY DYNAMICS 365?

Seamless integration with Microsoft Suite.
Customizable for Economic Development Workflows.
Scalable for future citywide use.

HOW WILL IT BE USED?

Log outreach, meetings, site visits, and incentive discussions
Track and manage business retention & expansion efforts
Track long term projects
Data collection for reports and dashboards

IMPLEMENTATION

Process mapping + customization plan

System set-up + pilot testing

Team training + data migration



Business Assistance

78 Businesses Assisted
Nov 2024 - Current

52
Business Support & Navigation Activities

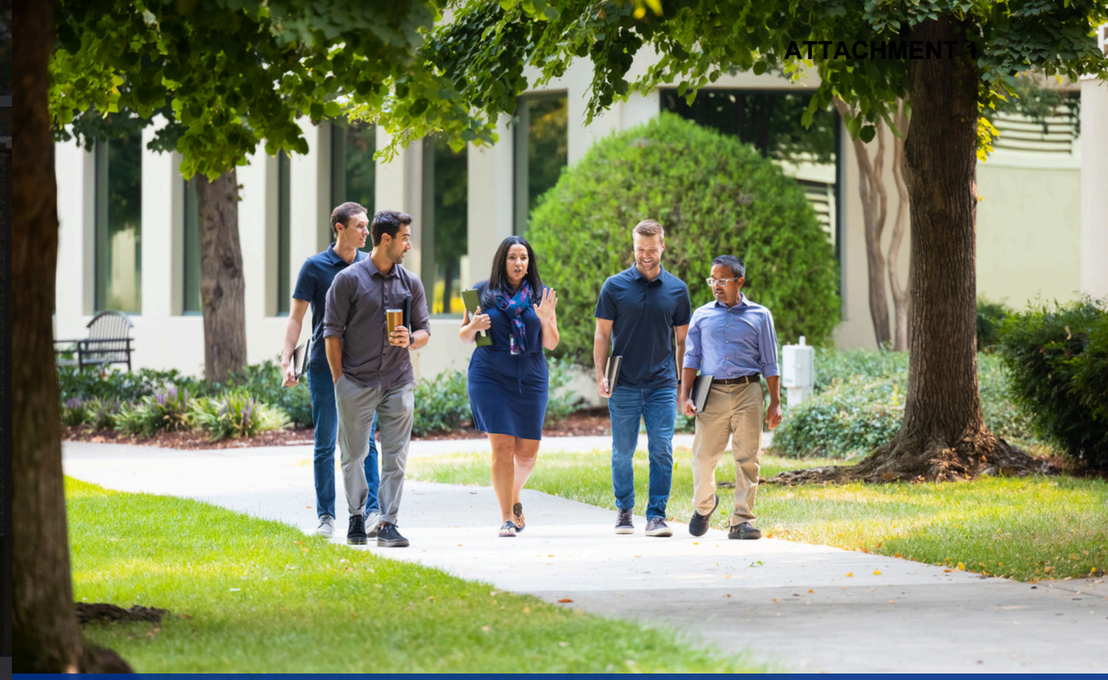
15
Site Searches

19
Referrals

Evaluating **5** early-stage project concepts

Business Retention and Expansion (BRE) Program

Goal 1.1



Core Activities:

- Regular business visits
- Targeted industry outreach
- Issue resolution (e.g. permitting, infrastructure)
- Connecting businesses to resources and incentives
- Identifying opportunities for expansion

Goals:

Strengthen local business climate

Increase job retention and creation

Identify and reduce barriers to growth

Promote long-term investment in the community

Entrepreneurial Ecosystem

Goals 1.4 and 1.6

Whether they're just starting out or further along in their business, entrepreneurs have access to programs to meet them where they are in their journey.

Minority Business Assistance and Recovery Kickstart (MBARK) - Rancho Cordova Area Chamber of Commerce

- 8-12 person cohorts
- 10-week training program
- Foundational business modules
- $1,500 stipend upon graduation

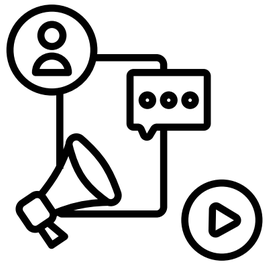
Entrepreneurs' Organization Accelerator (EOA)

- 5-10 person cohorts
- Annual program
- Advanced training and mentorship
- Reduced tuition

Looking Ahead

Goals 1.1, 1.2, and 1.5

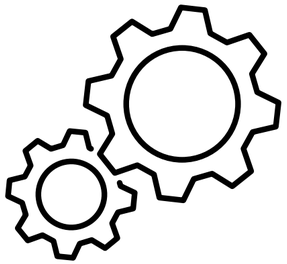
Other initiatives for the **Building on Progress** phase of our implementation plan, will work to enhance our visibility, attract targeted investment, and support local businesses.



Marketing Strategy



Grants and Incentives



Business Resource Platform



Placemaking and Real Estate



The Newmark Playbook

Goals 1.3, 2.1, and 2.2

The California Solution:

EV Battery and Semiconductor Value Chain Opportunities in Greater Sacramento

NEWMARK

GREATER SACRAMENTO
ECONOMIC COUNCIL

Office Park Study

Goal: 2.3

1

May 2025

RFP and Identify Stakeholders

2

June 2025

RFP Review

3

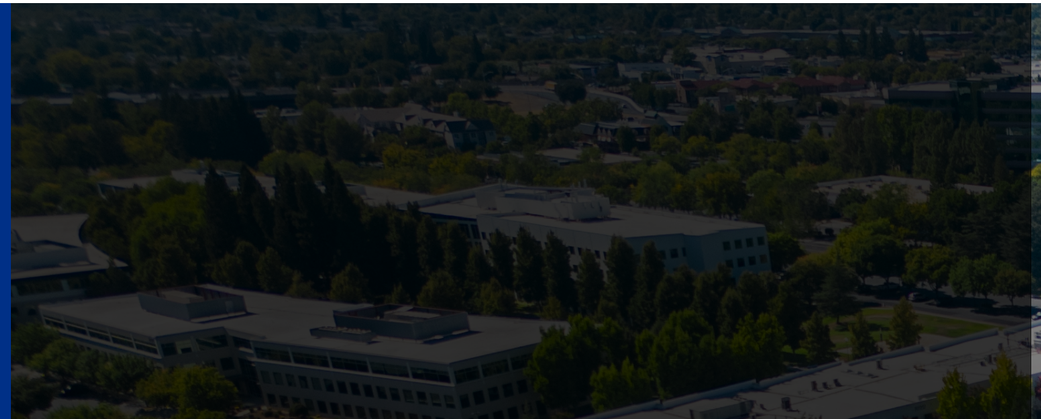
July 2025

Office Park Study Kickoff

4

December 2025

Draft Study



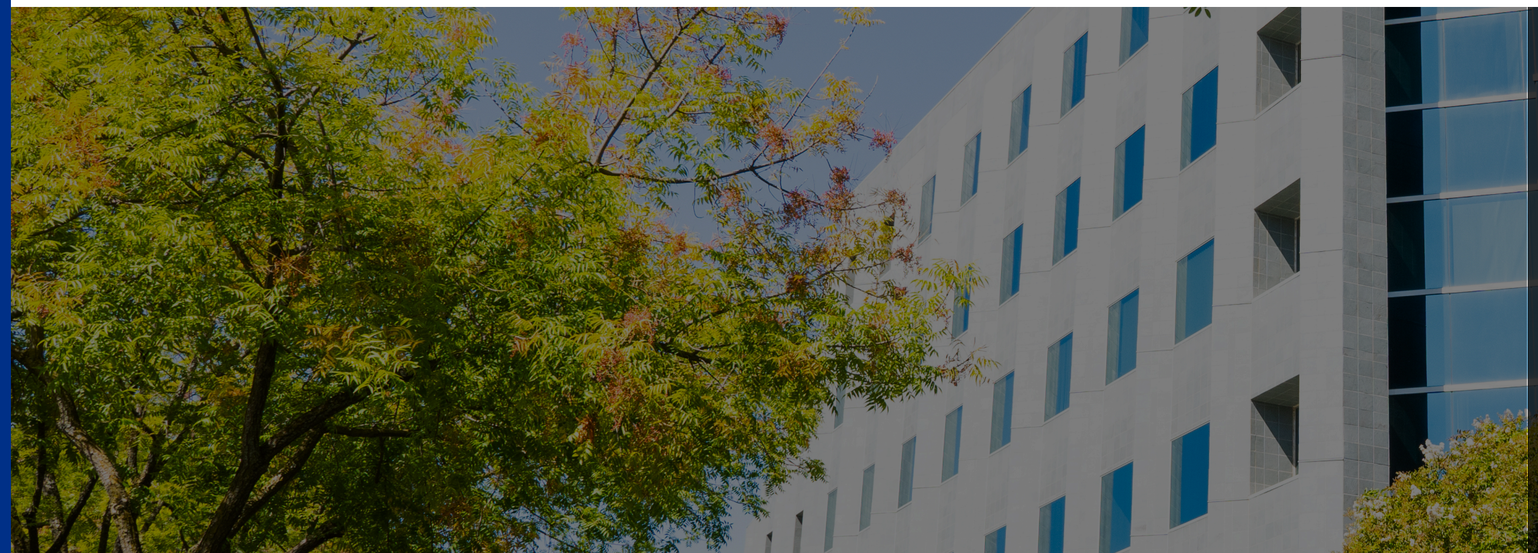


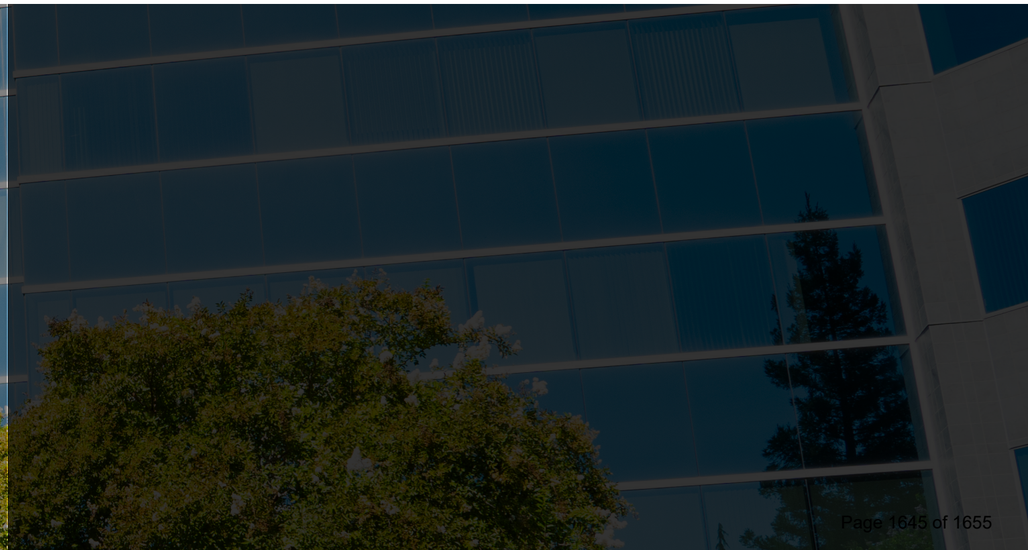
Looking Ahead

Goal 2.2

Alignment of the Office Park Study, Newmark Playbook & General Plan Update

- Compare Data
- Align Strategies
- Set Implementation Goals







Workforce Partnerships

Workforce Development Program

UPDATE

Funded through the American Rescue Plan Act (ARPA), Rancho Cordova supported a series of workforce development initiatives aimed at assisting local job seekers and employers. These programs provided career training, upskilling, and connections to employment.

BAY VALLEY TECH
www.bayvalleytech.com

NORTH STATE BUILDING INDUSTRY foundation

CHARLES A. JONES CAREER & EDUCATION CENTER

CYBERPROUD
A TALENT REVOLUTION

Global SOLUTIONS

GENERAL ASSEMBLY

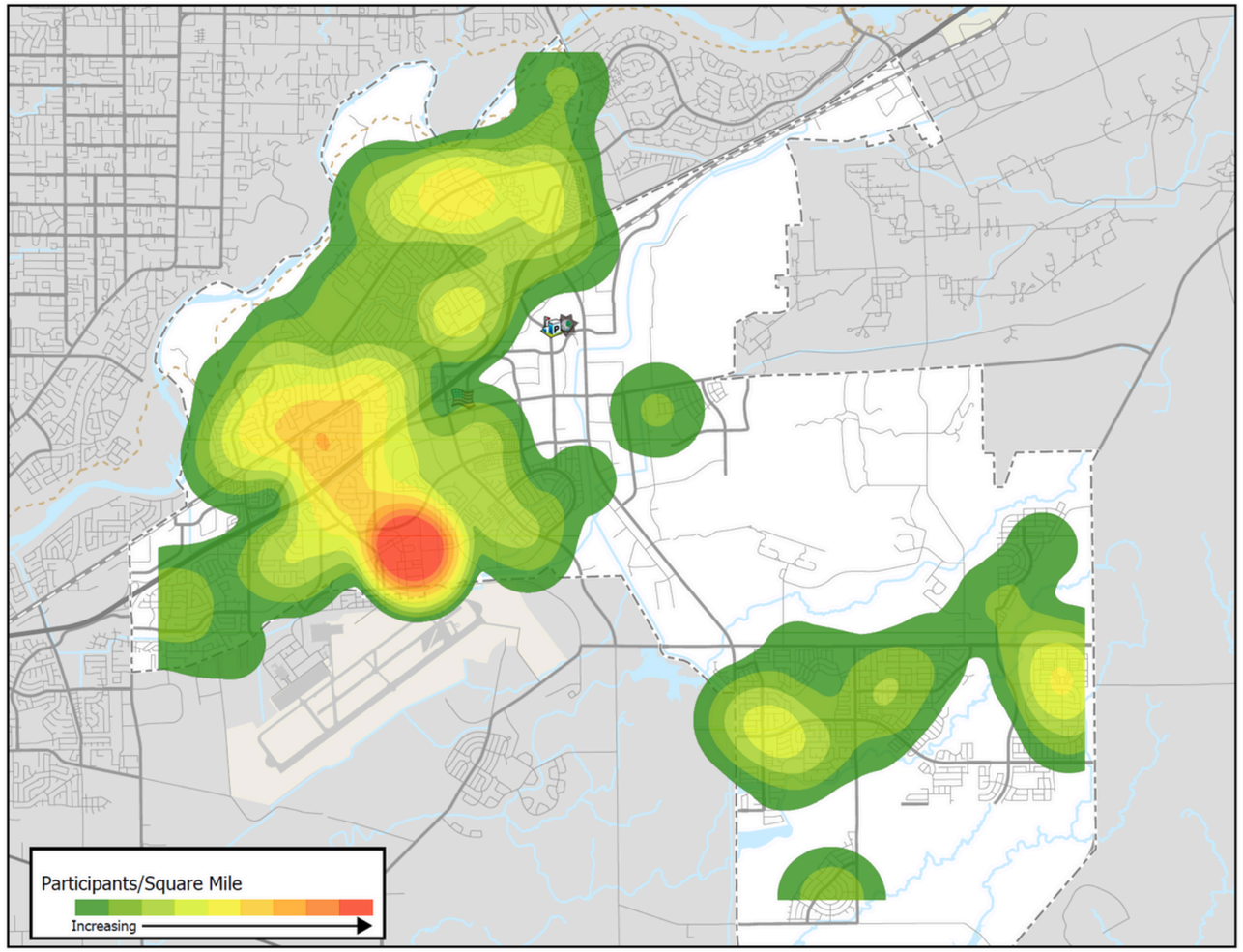
Children • Family • Community
FOLSOM CORDOVA
Community Partnership

Northern California Construction Training

WELLSPACE HEALTH

WOMEN IN DATA™

Workforce Development Program



$1.59 million

Invested into Workforce Programs

226

Residents Participated

120

Residents Graduated

68

Received Employment

87

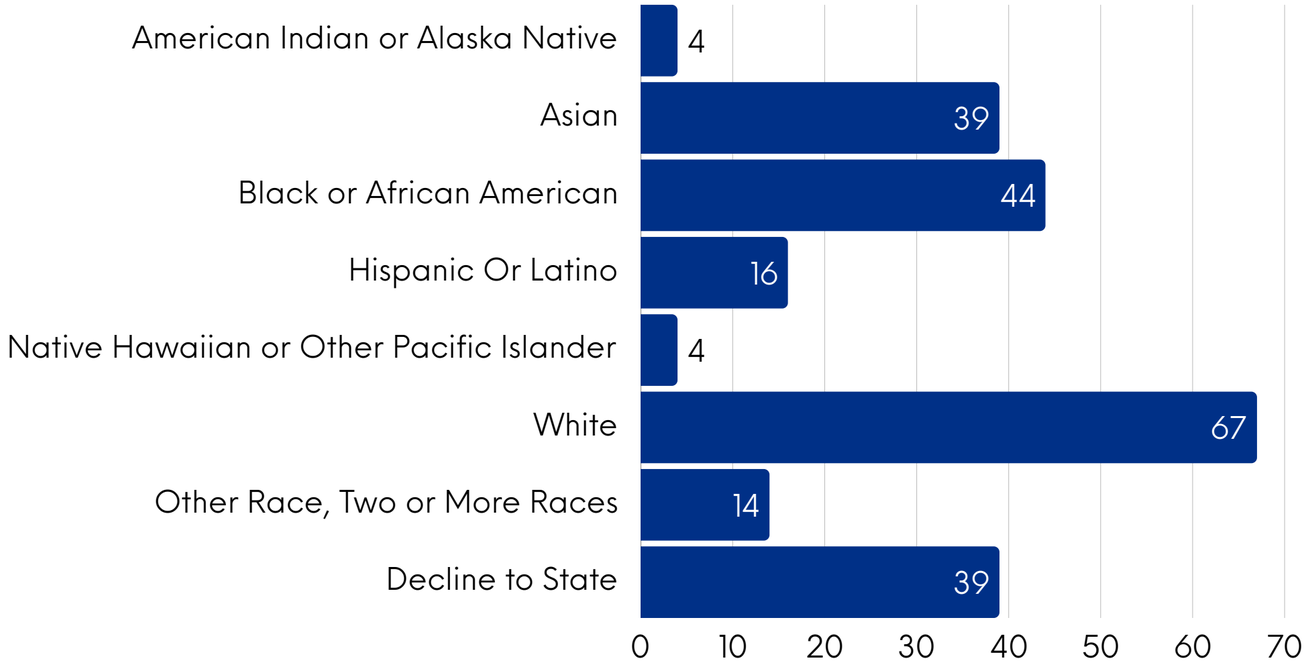
Received a Certificate

Workforce Development Program

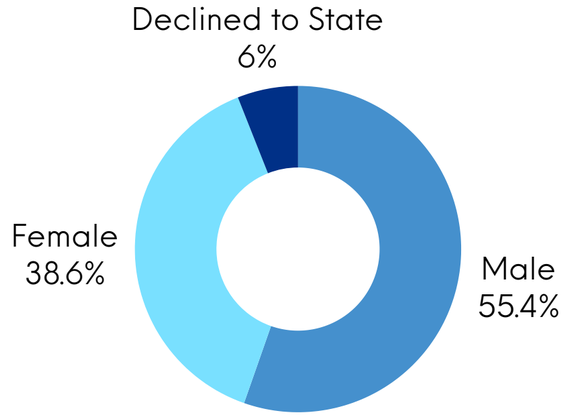
Milestone/Outcome	Employment and Training Administration Workforce Development Program	Rancho Cordova's Target Goal	Rancho Cordova's ACTUAL Performance
Participants completed training	47%	75%	**53%**
Participants completed the training and obtained a certificate or credential	37%	50%	**38%**
Participants have entered "non-training related" employment	24%	35%	**23%**
Participants have entered into "training related" employment	17%	25%	**33%**

Demographics

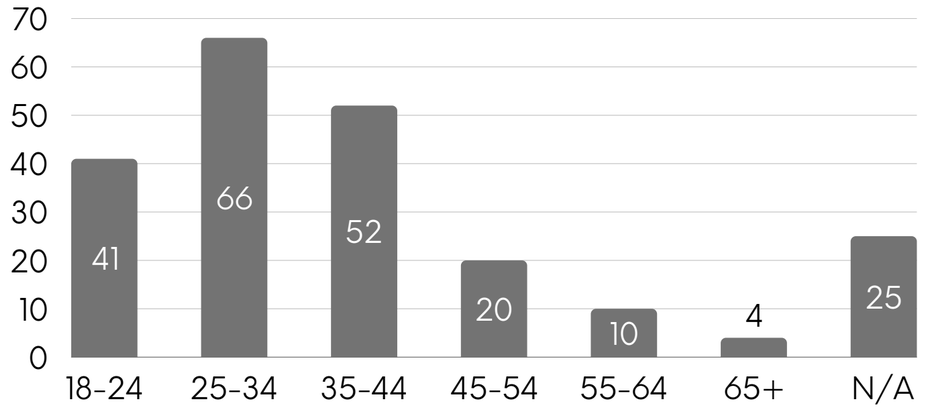
Ethnicity



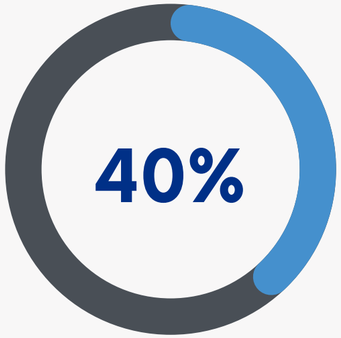
Gender



Age



Post-Program Update



Response Rate

52 participants completed the post-program hiring survey

44%

Employment Rate

$58K

Average Annual Income

45%

Salary Increase

Employer Highlights

Solidigm | WBE Traffic Control | Laborers Union | Folsom Cordova Unified School District | Adora POS | SK Hynix | Excite Energy | Technet | Procare Therapy | Kindercare | Bonney Plumbing | Norcal Roofing

Gift Card Program

To encourage continued engagement, the City launched a gift card program for workforce program graduates who participate in the long-term follow-up surveys.

Response rate increased from **19%** to **40%**. The next post-program survey will be activated in June.

Advancing Talent Solutions Through Collaboration

Goals 3.1 and 3.2

Talent Pipeline Management

Evolving from City-led efforts to Employer-led solutions

- Partnership with the Rancho Cordova Area Chamber of Commerce
- Employer-led framework to align talent development with real business needs
- Builds on local education, workforce, and industry assets
- Fosters sustainable pipelines for in-demand careers
- Supports long-term economic competitiveness and job growth





Partnerships

50 Corridor TMA

Goals 2.5 and 3.4

Identify the infrastructure needed to connect residents with amenities and job opportunities.

The Public Works Department recently executed a contract with the 50 Corridor Transportation Management Association (TMA) to, among other things, engage with businesses to understand the needs and concerns around transportation and access for their employees.

RANCHO CORDOVA CHAMBER OF COMMERCE

Goal 1.4

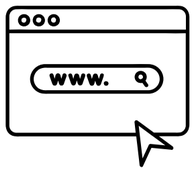
The Rancho Cordova Area Chamber of Commerce, in partnership with the City, aims to empower small businesses in Rancho Cordova by providing comprehensive AI training. The program will focus on businesses with 1–50 employees.

Future Projects



Retail Strategy

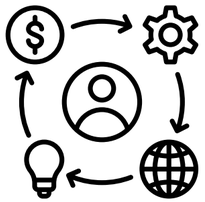
The EDSP has a focus on helping existing businesses, targeted industry sectors, and entrepreneurs, it does not address retail as a specific attraction effort. This strategy will provide an informed roadmap to attracting retail businesses our community not only wants but has data that tells us is feasible to sustain.



Website Update

Goals 1.2 and 1.4

We're updating the Economic Development section of the City's website to better meet businesses where they are, delivering organized, relevant information through a user-friendly layout.



Entrepreneurial Ecosystem

Goal 1.6

We will be mapping the existing entrepreneurship ecosystem as well as the corresponding opportunities to support that ecosystem in the City.

RANCHO CORDOVA
CALIFORNIA

NEXT STEPS

City Council consideration:
Economic Development to update Council annually.

Feedback, Comments, Questions?

