

DRAFT

Easton Research Park West Tentative Subdivision Map Project

Initial Study/
Mitigated Negative Declaration

Lead Agency:

City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

September 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Rancho Cordova, California

Lead Agency:

City of Rancho Cordova Planning Department
2729 Prospect Park Drive
Rancho Cordova, CA 95670

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

September 2021

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DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency: City of Rancho Cordova, California

Project Proponent: Easton Development Company LLC

Project Location: City of Rancho Cordova, California, Southwest corner of Folsom Boulevard/Hazel Avenue intersection

Project Description: The Project proposes to subdivide 105.5 acres of land on two Assessor's Parcel Numbers (APNs) near the southwestern corner of the Hazel Avenue/Folsom Boulevard intersection within the City of Rancho Cordova into 10 lots numbered 1 through 9 and Lot A for future development of an industrial warehouse campus. Project development would be based on a conceptual site plan that would entail grading the entire Project site, including tree and vegetation removal (except avoidance of existing elderberry shrubs where possible), demolition of existing buildings, structures, foundations, and pavement with off-site demolition debris disposal, and construction of 8 warehouse buildings totaling 1,486,000 square feet. The Project would also construct associated stormwater detention basins, parking lots, and interior private streets and involve off-site construction and reconfiguration of overhead and underground utilities to serve the Project Site on adjacent and nearby roadways and Aerojet property.

Public Review Period: To Be Determined

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

BIO-1: **Worker Awareness Training for Special-Status Species:** Prior to start of construction activities, a qualified biologist shall conduct an education program for all persons involved with the proposed Project. The program shall consist of a presentation from the Biologist that includes a discussion of the biology and general behavior of the species discussed above, information about the distribution and habitat needs of these animals, sensitivity of these animals to human activities, and their status of legal protection.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-2: **Minimize potential significant impacts to Vernal Pool Fairy and Tadpole Shrimp:**

- Assume presence of Vernal Pool Fairy and Tadpole Shrimp and initiate the Section 7 consultation process with USFWS through the Clean Water Act Section 404 Process; OR conduct protocol-level surveys for these species to determine presence or absence prior to consultation.
- If presence is assumed or confirmed after protocol surveys, acquire a Biological Opinion for the Project and implement all conditions of the Biological Opinion, including purchasing compensatory mitigation for permanent impacts to

branchiopod habitat. Compensatory mitigation will be determined through the Section 7 process and outlined in the Biological Opinion.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and Project Applicant*

BIO-3: Minimize potential significant impacts to VELB:

- Initiate Section 7 consultation process with USFWS through the Clean Water Act Section 404 process on the Project effects to ESA-listed VELB and acquire a Biological Opinion for the Project. Implement all conditions of the Biological Opinion.
- Elderberry shrubs will be avoided to the extent practicable. For any impacts to elderberry shrubs, appropriate avoidance measures and a mitigation plan will be developed in consultation with USFWS and implemented during the appropriate timeframe.
- The area surrounding avoided elderberry shrubs shall be fenced and/or flagged as close to construction limits as possible.
- As much as feasible, all activities that could occur within 165 feet of an avoided elderberry shrub will be conducted outside of the flight season of VELB (March - July).
- Herbicides will not be used within the drip line of any elderberry shrubs. Insecticides will not be used within 100 feet of an elderberry shrub and will be applied using a backpack sprayer or similar direct application method.
- The potential effects of dust on VELB will be minimized by applying water during construction activities or by presoaking work areas that will occur within 100 feet of any potential elderberry shrub habitat.

Timing/Implementation: *Prior to and During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and construction contractor working for Project Applicant*

BIO-4: Minimize potential significant impacts to western spadefoot:

- Preconstruction surveys for western spadefoot will be conducted within the limits of construction to detect adults, larvae, and/or egg masses, within 48 hours prior to the start of construction.
- If no western spadefoots are found, no further measures pertaining to this species are necessary.
- If adults, larvae, or egg masses are found, they will be relocated to suitable habitat within an on- or off-site preserve(s), in consultation with CDFW.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-5: **Nesting birds.** A preconstruction survey for nesting birds will be conducted by a qualified biologist within 14 days (or fewer if recommended by CDFW) of commencement of Project activities. The survey will occur within the Project Area and a 100-foot buffer. If an active nest is located, a no-disturbance buffer will be established as determined by the biologist in consultation with CDFW and maintained until the nest is confirmed to be no longer active by the biologist.

Timing/Implementation: *Prior to and During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-6: **Raptors.** A preconstruction survey for nesting raptors will be conducted within 14 days of commencement of Project activities by a qualified wildlife biologist within the Project Area and a 500-foot buffer. If an active nest is located, a no-disturbance buffer will be established as determined by the biologist in consultation with CDFW and maintained until a qualified biologist determines the young have fledged and are no longer reliant upon the nest for survival.

Timing/Implementation: *Prior to and During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-7: **Swainson's Hawk.**

- A preconstruction survey for nesting Swainson's hawk will be conducted by a qualified biologist within 14 days of commencement of Project activities within the Project Area and a 0.25-mile buffer. As described above, if Swainson's hawks are found to be nesting in the vicinity, a no-disturbance buffer will be established in consultation with CDFW and maintained until a qualified biologist determines the young have fledged and are no longer reliant upon the nest for survival.
- Mitigation for permanent impacts to SWHA foraging habitat has been purchased for the portions of the Project Area that overlap with the Glenborough Project in accordance with the CEQA Environmental Impact Report Mitigation Measures for that Project.
- Mitigation for permanent impacts to SWHA foraging habitat for the remaining portions of the Project Area is required (see Appendix B, Figure 3). Compensatory mitigation should be consistent with the Sacramento County SWHA Ordinance.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, qualified biologist working for Project Applicant, and Project Applicant*

BIO-8: **Burrowing owl.** A preconstruction survey for nesting burrowing owl will be conducted by a qualified biologist within 14 days prior to commencement of Project activities within the Project Area and a 250-foot buffer. Surveys shall be conducted at appropriate times and in appropriate weather conditions to maximize detection. If active burrowing owl burrows are found, an avoidance buffer will be immediately established, and an avoidance plan will be prepared in consultation with CDFW prior to the commencement of any ground-disturbing activities.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-9: **Pallid Bat.**

- Prior to commencement of Project activities, a qualified biologist will survey for all suitable roosting habitat (e.g., manmade structures, trees, rock outcrops) within the Project Area proposed for removal and or disturbance. If no suitable roosting habitat is identified, no further measures are necessary.
- If suitable roosting habitat is identified, 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 is required prior to initiation of construction activities.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-10: **Waters of the U.S. and State**

- For aquatic resources within the Glenborough Permit area where mitigation has not been purchased, purchased mitigation credits as required by the Glenborough Permit.
- For aquatic resources outside of the Glenborough Permit area, a permit authorization to fill wetlands under the Section 404 of the federal Clean Water Act (Section 404 Permit) will be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Final mitigation measures will be developed as part of the Section 404 Permit process to ensure no-net-loss of wetland function and values.
- For aquatic resources outside the Glenborough Permit area, a Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions.
- For aquatic resources outside the Glenborough Permit area, pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior

to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State will be developed in consultation with the RWQCB.

No features that may be subject to Section 1600 of the Fish and Game Code were identified in the Study Area; therefore, a Streambed Alteration Agreement from CDFW pursuant to Section 1602 of the California Fish and Game Code is not required.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *Project Applicant, City of Rancho Cordova, USACE, RWQCB*

BIO-11: **Tree protection.** The following measures are recommended to comply with the City of Rancho Cordova's Tree Preservation Ordinance if trees will be impacted as part of the Project:

- Prior to tree removal, an arborist survey will be conducted for any areas within the Project Area not previously surveyed (see Attachment C in Appendix B).
- If the proposed Project activities occur within the dripline of, or require the removal of, any trees, a Tree Permit will be required, and the City of Rancho Cordova tree ordinance shall be consulted for tree mitigation and preservation measures. This will include the development of a tree protection plan or its equivalent. This plan will provide arborist recommendations for preserved trees and general recommendations during and after construction activities as well as specific recommendations for long term maintenance.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, qualified arborist working for Project Applicant, Project Applicant*

CUL-1: **Discovery of Unknown Archeological Resources**

- If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 50-foot radius of the discovery. The qualified archaeologist shall be called upon 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, he or she 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 eligible

for inclusion in the CRHR or NRHP. 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 eligible for or CRHR or NRHP; or 2) that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified archeologist working for Project Applicant*

CUL-2: **Discovery of Unknown Human Remains.** If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 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, who then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 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 may mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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 City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, Project Proponents, Sacramento County Coroner, HAHC*

GEO-1: **Discovery of Unknown Paleontological Resources.** If any paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the area shall be isolated using orange or yellow fencing until the City of Rancho Cordova is notified and the area is cleared for future work. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resources. In addition, in the event of an inadvertent find, sediment samples should be collected and processed to determine the small fossil potential on the Project Site. If the Project applicant resumes work in a location where paleontological remains have been discovered and cleared, the Project applicant will have a paleontologist onsite to observe any continuing excavation to confirm that no additional paleontological resources are in the area. Any fossil materials uncovered during

mitigation activities should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

GHG-1: **Greenhouse Gas Emissions Reductions.** In coordination with the Sacramento Metropolitan Air Quality Management District and City of Rancho Cordova Planning Department, the Project applicant shall purchase greenhouse gas emissions/carbon offsets to counterbalance the Project operational greenhouse gas emissions exceeding the annual significance threshold from a Sacramento Metropolitan Air Quality Management District-approved registry, including:

(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.

The specific amount of offset credits necessary to reduce potential GHG emission-related impacts to less than significant levels shall be determined through consultation with the Sacramento Metropolitan Air Quality Management District and City of Rancho Cordova Planning Department.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department; Sacramento Metropolitan Air Quality Management District*

HAZ-1: **Compliance with Environmental Restrictions in Land Use Covenant for Subsurface Contamination.** Prior to redevelopment, the Project applicant must receive USEPA's approval that all remedial actions have been completed to USEPA's satisfaction. The Project applicant must also comply with all restrictions and requirements contained in any land use covenants approved and executed by Aerojet and applicable federal and state regulatory agencies which may include USEPA, RWQCB, and DTSC. General components of the expected land use controls may include, but not necessarily be limited to:

- Restrictions on future site use to industrial/commercial purposes only;
- Prohibitions on groundwater extraction other than for remediation;
- Requirements that excavation or construction work below ground surface at the site may only be performed under a permit program that mitigates potential exposures and properly manages any contaminated soil that is disturbed; and
- Requirements for any vertical development (buildings) to include a vapor mitigation
- system and potentially indoor air monitoring if required by the Agencies.

Details of these land use controls will be proposed and approved by the Agencies before the overall remedy will be deemed complete.

Timing/Implementation: *Prior to and during Project construction and during project operations*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department, USEPA, RWQCB, DTSC*

NOI-1: **Nighttime construction noise impacts.** In the case that construction occurs between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and between 8:00 p.m. and 7:00 a.m. on weekends, a temporary noise barrier or enclosure shall be positioned between construction equipment and all residences within 2,600 feet of construction activities in a manner that breaks the line of sight between the construction equipment and these residences, to the extent feasible. The temporary noise barrier shall have a sound transmission class (STC) of 25 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. The temporary noise barrier can consist of a solid plywood fence at least 7/16-inch in thickness and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket, attached to chain link fencing or some other support structure. The length, height, and location of the temporary noise barrier shall be adequate to assure proper acoustical performance. Specifically, the barrier must completely break the line of sight between construction equipment and all residential properties less than 2,600 feet of construction activity, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

In order to qualify as a noise-sensitive receptor at the time of construction, such residential dwellings would be required to physically house individuals during the time Project construction activities occur.

TCR-1: **Tribal Inspections of Subsurface Soils.** To accommodate any necessary security clearance, no less than five working days before the start of construction, the contractor shall notify the Shingle Springs Band of Miwok Indians about the start date of ground disturbing activities. The tribe will be given the opportunity to send a tribal monitor to inspect the subsurface soils once during the first five days of ground disturbing activity on the project. Should the tribe choose not to send a monitor to perform the inspection within the first five days, work can continue as long as the notice was provided and documented.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, Project Applicant construction contractor, tribal monitor*

TCR-2: **Implement Measures to Protect Unanticipated Tribal Cultural Resources Discoveries.** If subsurface deposits believed to be cultural in origin are discovered during construction, all work must halt within 100 feet of the discovery. The construction foreman will notify the City, which shall notify the Shingle Springs Band of Miwok Indians and a qualified professional archaeologist. A representative from the tribe will be afforded a reasonable opportunity to visit the discovery location to determine whether or not it is a tribal cultural resource. The following actions shall apply, depending on the nature of the find:

- If the Shingle Springs Band of Miwok Indians determines that the find does not represent a tribal cultural resource, and the qualified professional archaeologist determines that the find does not represent a potential historical resource, and the City concurs, then work may resume immediately, and no further action is required.
- If the Shingle Springs Band of Miwok Indians determines that the find represents a tribal cultural resource, as defined in PRC Section 21074(a) though (c) of the CEQA Guidelines, the City shall consult with the tribe on appropriate treatment measures. Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.
- If the find includes human remains, or remains that are potentially human, the construction supervisor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641) and shall immediately notify the City and the Sacramento County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 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 within 24 hours. The NAHC will designate a Native American Most Likely Descendant (MLD) for the discovery (§ 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 (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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 Sacramento County (AB 2641). Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, Project Applicant construction contractor, Shingle Springs Band of Miwok Indians, County Coroner*

UTIL-1: **Water Service Availability.** The City of Rancho Cordova will coordinate with the City of Folsom and the Project Applicant to include any of The City of Folsom's standard and required conditions of approval regarding the review of construction documents for the water system and connections when submitted.

Timing/Implementation: *Prior to submittal of improvement plans*

Enforcement/Monitoring: *City of Folsom, City of Rancho Cordova, Project Applicant*

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Appendix F – Will Serve Letter from City of Folsom for Water Service

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Description
µg/m^3	Micrograms per cubic meter
AB	Assembly Bill
ACCMD	Alder Creek Corridor Mining District – not used again
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model

Acronym/Abbreviation	Description
AF	Acre-feet
Agencies	USEPA, DTSC, and RWQCB
AMSL	Above mean sea level
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
ARD	Aquatic Resources Delineation
ARPMD	American River Placer Mining District
ASF	Age sensitivity factor
BACT	Best available control technology
BCC	Bird of conservation concern
BMPs	Best Management Practices
BP	Before Present
BRA	Biological Resources Assessment
BUOW	Burrowing owl
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commissions
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH4	Methane
City	City of Rancho Cordova
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
County	County of Sacramento
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Places
CRPD	Cordova Recreation and Park District
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dBA	A-weighted decibels

Acronym/Abbreviation	Description
DMR	Division of Mine Reclamation
DOC	Department of Conservation
DPR	Department of Parks and Recreation
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act
FAH	Fraction of time at home
FCUSD	Folsom Cordova Unified School District
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FTA	Federal Transit Administration
GET	Groundwater Extraction and Treatment System
GHG	Greenhouse Gas
Glenborough Project	Easton Project-Easton Place & Glenborough at Easton
GSP	Groundwater Sustainability Plan
Highway 50	U.S. Highway 50
HMMH	Harris Miller, Miller & Hanson Inc.
HPTP	Historic Property Treatment Plan
HRA	Health risk assessment ID on first use
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
kv	Kilovolts
kWh	Kilowatt-hours
Ldn	Day-Night Average
Leq	Equivalent Noise Level
Lmax	Maximum Noise Level
LOS	Level of Service
LTA	Local Transportation Analysis
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MTP	Metropolitan Transportation Plan
N_2O	Nitrous oxide
NADF	Natomas-Aerojet Dredge Fields
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act – ID on first use
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety & Health
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides

Acronym/Abbreviation	Description
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	California Office of Planning and Research
PCE	Tetrachloroethylene
PG&E	Pacific Gas and Electric Company
PM_{10}	Particulate Matter Less than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns in Diameter
ppm	parts per million
PPV	peak particle velocity
PR	photorevised
PRC	Public Resources. Code
RCPD	Rancho Cordova Police Department
RCRA	Resource Conservation and Recovery Act
REL	Reference Exposure Level
RMS	Root mean square
ROG	Reactive Organic Gases
RSP	Rock slope protection
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Government
SacRT	Sacramento Rapid Transit District
SARA	Superfund Amendments and Reauthorization Act
SASD	Sacramento Area Sewer District
SRCSD	Sacramento Regional County Sanitation District
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SCSD	Sacramento County Sheriff's Department
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMFD	Sacramento Metropolitan Fire District
SMUD	Sacramento Municipal Utility District
SO2	Sulfur dioxide
SOx	Sulfur oxides
SPA	Special Plan Area
SSC	Species of special concern
STC	Sound Transmission Class
SRTRR	Sacramento Regional Transit Railroad
SVAB	Sacramento Valley Air Basin
SVR	Sacramento Valley Railroad

Acronym/Abbreviation	Description
SWHA	Swainson's hawk
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TCE	Trichloroethylene
TCR	Tribal Cultural Resources
TMDL	Total Maximum Daily Load
Tpd	Tons per day
TRBL	Tricolored blackbird
US-50	U.S. Highway 50
USACE	United States Army Corps of Engineers
UAIC	United Auburn Indian Community
USEPA	U.S. Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VELB	Valley Elderberry Longhorn Beetle
VMT	vehicle miles traveled
VOCs	Volatile organic compounds
WWTP	Wastewater treatment plant

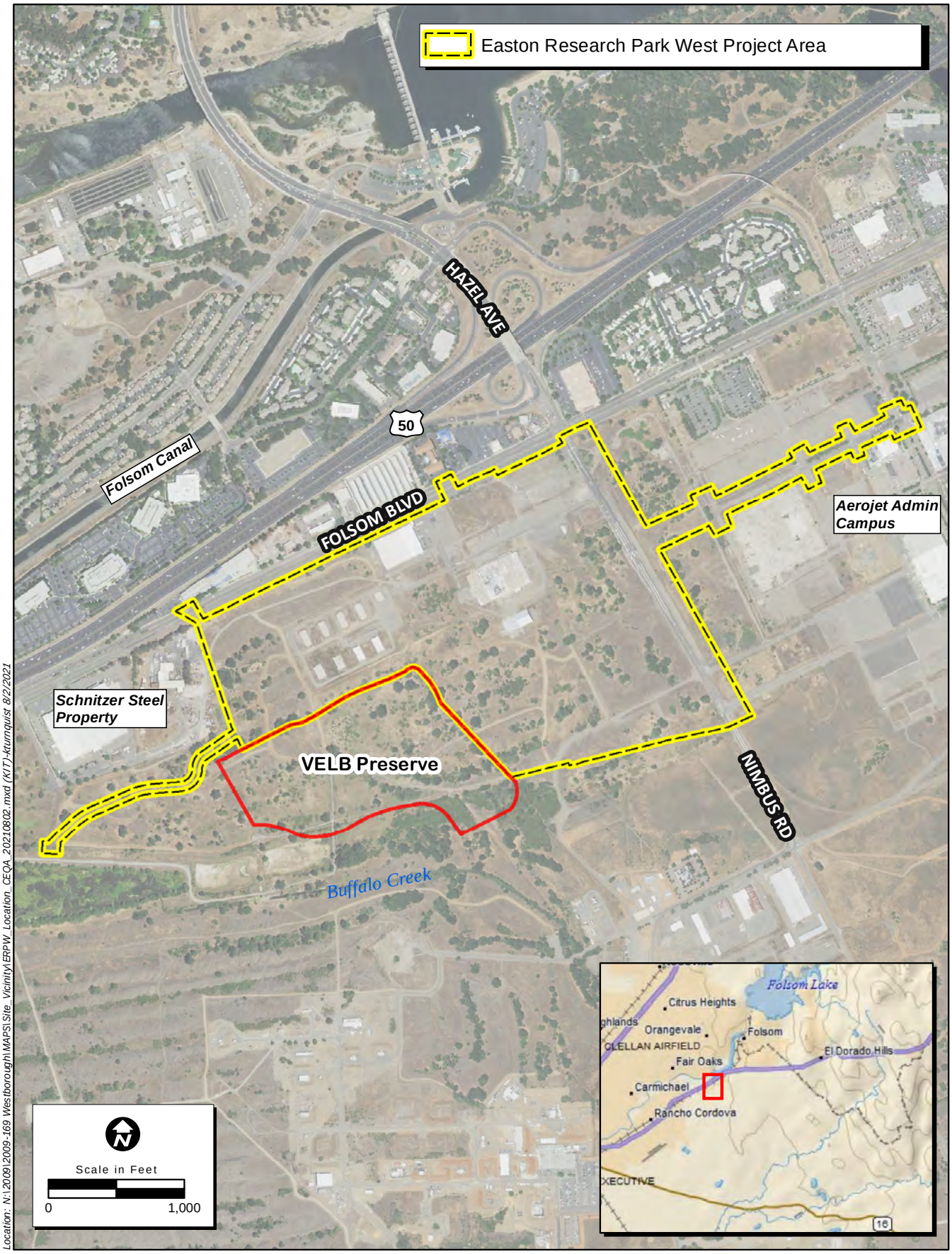
1.0 BACKGROUND

1.1 Summary

Project Title:	Easton Research Park West Tentative Subdivision Map Project
Lead Agency Name and Address:	City of Rancho Cordova Planning Department 2729 Prospect Park Drive Rancho Cordova, CA 95670
Contact Person and Phone Number:	Darcy Goulart, Planning Manager (916) 851-8784
Project Owner:	Easton Development Company, LLC
Project Location:	The Project occurs on an approximately 105.5-acre property within APNs 072-0231-102 and 072-0231-125 located at the southwestern corner of Nimbus Road (Hazel Avenue extension) and Folsom Boulevard intersection in the City of Rancho Cordova in Sacramento County (Figure 1-1).
General Plan Designation:	Planning Area (City of Rancho Cordova)
Zoning:	Aerojet Special Planning Area

1.2 Introduction

The City of Rancho Cordova (City) is the Lead CEQA Agency for this Project. An Initial Study has been prepared to identify and assess the anticipated environmental impacts of the Easton Research Park West Tentative Subdivision Map Project (Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resources. Code [PRC], Section 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study/Mitigated Negative Declaration (IS/MND) is generally used to determine the potentially significant environmental effects and mitigate those to be less than significant. This document will serve as the CEQA document for subsequent discretionary actions and approvals by the City related to the Project, including the Final Subdivision Map and improvement plans. The Environmental Checklist in Appendix G of the CEQA Guidelines was used to evaluate Project impacts.



Location: N:\2009\2009-169 Westborough\MAPS\Site_Vicinity\ERPW_Location_CEQA_20210802.mxd (KT7)-kturnquist 8/2/2021

Map Date: 8/2/2021

iService Layer Credits: Copyright:(c) 2018 Garmin

Figure 1-1. Project Location and Vicinity

2020-161 Easton Research Park West

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1.3 Lead Agency

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on the criteria above, the City of Rancho Cordova (City) is the lead agency for Project.

1.4 Purpose and Document Organization

The purpose of this Initial Study is to evaluate the potential environmental impacts of the Project. This document is divided into the following sections:

1.0 Introduction – This section provides an introduction and describes the purpose and organization of the document. This section provides general information regarding the Project, including the Project title, lead agency and address, contact person, brief description of the Project location, General Plan land use designation, zoning district, identification of surrounding land uses.

2.0 Project Description – This section provides a detailed description of the Project, as well as the identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors that are potentially affected by the Project.

3.0 Environmental Factors Potentially Affected and Determinations – This section is a summary of the environmental topic areas that were found to potentially impact the environment.

4.0 Environmental Checklist and Discussion – This section describes the environmental setting and overview for each of the environmental subject areas, evaluates a range of impacts classified as "no impact," "less than significant impact," "less than significant impact with mitigation incorporated," and "potentially significant impact" in response to the environmental checklist.

5.0 List of Preparers – This section lists the names of documents preparers.

6.0 Bibliography – This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

7.0 List of Appendices – This section provides a list of document appendices.

1.5 Project Location and Surrounding Land Uses

The Project site consists of approximately 105.5 acres of property located within the City of Rancho Cordova, except for some areas of utility-related work overlapping into adjacent and nearby roadways within unincorporated portions of Sacramento County to the east (Figure 1-1*)*. The Project Site is located within the former Aerojet campus, southwest of the intersection of Folsom Boulevard and Nimbus Road, south of U.S. Route 50 (Highway 50 or US-50) at the Hazel Avenue exit. It is bounded on the north by Folsom Boulevard, on the east by Nimbus Road, and on the south and west by largely undeveloped land parcels. Regional access to the Project Site is provided by US-50, which is an eight-lane freeway within the

Project area. Access to the Project Site is provided through the Hazel Avenue interchange, Hazel Avenue, and Folsom Boulevard (Figure 1-1).

The Project site is located south of Highway 50 in the Sacramento Valley, a semi-suburban and rural area surrounded by primarily undeveloped agricultural lands with some industrial and commercial development. Suburban residential areas are to the north across Highway 50, and primarily rural lands with some industrial development, mainly associated with current and former Aerojet operations, are to the south, east, and west of the Project site. Schnitzer Steel Recycling Center borders the Project site to the west. Elevations range from 140 to 150 feet above mean sea level. The American River is 0.5 mile to the north, Folsom South Canal is approximately one-third mile to the west, and Buffalo Creek is approximately 500 feet to the south. A preserve created to mitigate impacts to Valley Elderberry Longhorn Beetle (VELB), a species that is listed as threatened pursuant to the federal Endangered Species Act (ESA), from the adjacent planned Glenborough at Easton Development to the east, is located adjacent to and south of the Project site.

1.6 Environmental Setting and Background

The Project site's characteristic plant community is nonnative annual grassland. The vegetation is characterized by a dominance of nonnative grasses and forbs interspersed with native and nonnative trees and elderberry bushes.

The Project site consists of a flat landscape that is overgrown with grasses (Figure 1-2a). The northern portion of the Project site consists of developed industrial areas, which includes paved areas and foundations of several warehouses formerly used by Aerojet and now removed. (Figure 1-2a). An access road developed within the Project site revealed cobbles, which is evidence that the land was once dredge mined.

Five industrial buildings remain within the Project Area, as described as follows (ECORP 2020a):

- **Building 49015** - a large, vacant, rectangular (300 by 220 feet) corrugated steel structure with a flat steel roof and a slab concrete floor built between 1954 and 1961. The building is a typical large warehouse with large metal roll up doors, flat roof, covered loading docks at the northern and southern façades, and no windows (Figure 1-2b.
- **Building 49011**- a large rectangular (300 by 230 feet) corrugated steel structure with a flat steel roof and a slab concrete floor built between 1954 and 1961. The building is a typical large warehouse with corrugated sheet metal siding, large metal roll-up doors, flat roof, and covered loading docks at the eastern-facing façade (Figure 1-2b). As of August 20, 2021, this industrial building is currently in use by Wesco.



2-1 Ground Visibility within the Project Area (view west), 3/5/20.



2-2 Ground visibility within the Project Area (view south), 5/5/20.



2-3. Overview of industrial area within the Project Area (view northeast), 5/5/20.



2-4. Location of Building 49016, building removed (view south), 5/5/20.



2-5 Building 49015, eastern façade overview (view southwest), 5/5/20.



2-6 Building 49011, eastern-facing façade (view southwest), 1/31/20.



2-7. Building 49020, southeastern-facing façade. (view north-west), 5/5/20.



2-8. Building 49024, southwestern-facing façade (view northeast), 5/5/20.

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Figure 1-2b. Project Current Condition Photographs

2020-161 Easton Research Park West Tentative Subdivision Map Project

- **Buildings 49020 and 49021**- two vacant rectangular (50 by 100 feet) steel corrugated buildings built between 1952 and 1961. The buildings have corrugated sheet metal siding, gable roofs, large metal siding doors on the northern and southern façades, raised concrete loading dock/platforms on the southern façades, and single-pane, aluminum-framed windows on the eastern and western façades (Figure 1-2b. Building 49020 and Building 49021 are located approximately 100 feet apart.
- **Building 49024** - a vacant rectangular (200 by 100 feet) open-air steel building that was built between 1961 and 1964, and has a gable roof, corrugated sheet metal roofing, concrete slab floor, and concrete footings (Figure 1-2b.

Aerojet purchased 7,200 acres of land in the late 1940s. It purchased the portion of the property containing the Project site from the Natomas Company in 1952 (ECORP 2021a), and one year later, the Rancho Cordova plant opened. Eventually, Aerojet expanded to 25,000 acres, making it the largest facility for rocket engine development, testing, and production in the free world. At its peak, the company was virtually a city with up to 23,000 employees and boasted a bus line, fire and police departments, a waste disposal facility, medical center, cafeteria, and planning commission (ECORP 2021a). The company continued research and development of solid and liquid propulsion systems until recently, when Aerojet announced a consolidation of its facilities across the country and opted to close and redevelop the facility into other uses (ECORP 2021a).

The Project site is immediately west of the County of Sacramento border. Vacant land owned by Aerojet Rocketdyne Inc. (Aerojet) Easton Development, LLC associated with former Aerojet operations immediately east of the Project site is planned for future mixed-use development under The Easton Project-Easton Place & Glenborough at Easton (Glenborough Project). Portions of the Project site (proposed Lots 8, 9, and the proposed Jughandle Road, and the offsite stormwater detention basin south of Lot 9) have been previously studied for biological impacts and resulting permitting under the Glenborough Project.

Regional transportation projects in the Project area include the construction of the US-50/Hazel Avenue interchange improvement project, immediately adjacent to the Project site.

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2.0 PROJECT DESCRIPTION

2.1 Project Description

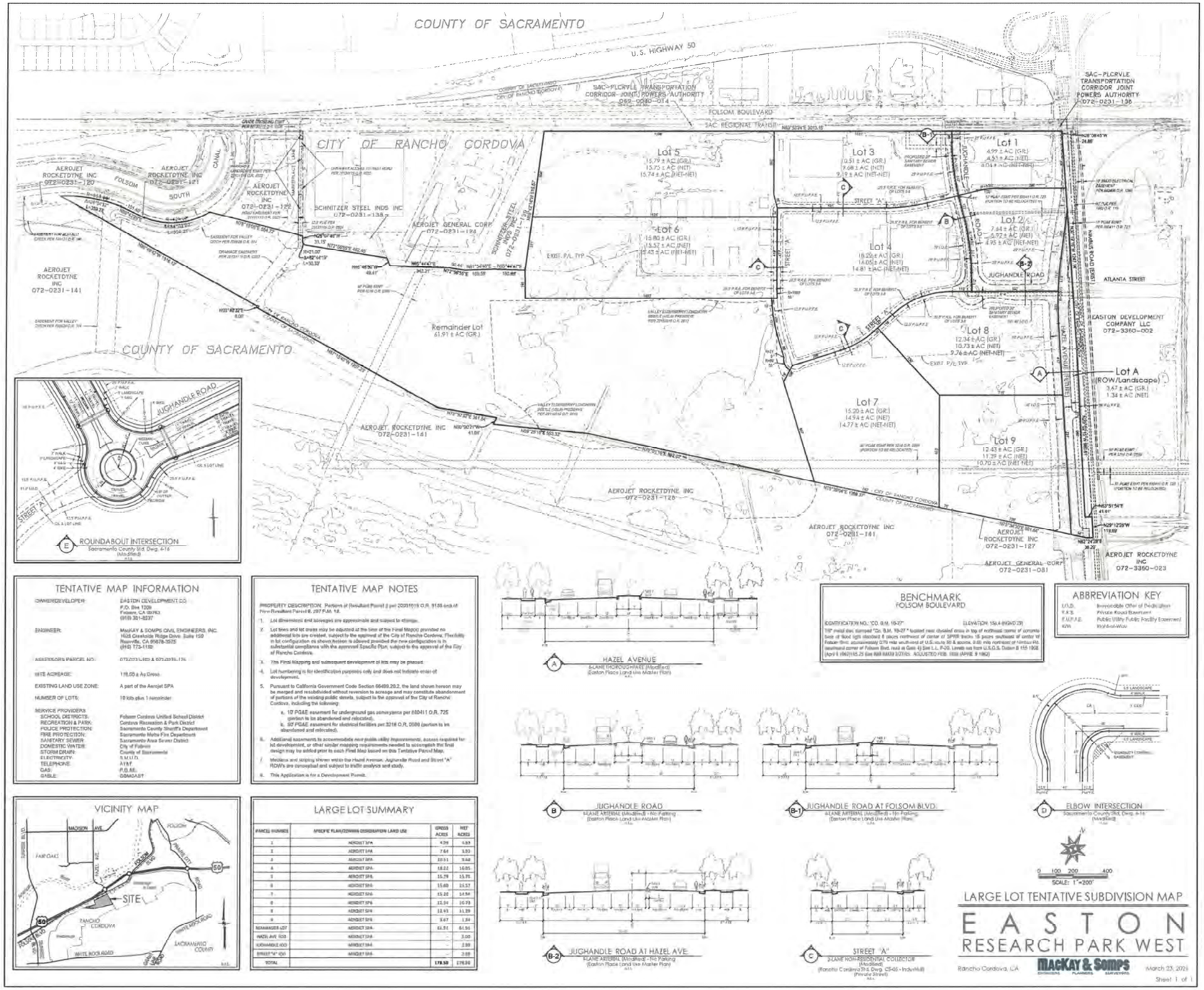
The objective of the Easton Research Park West Tentative Subdivision Map Project (Project) is to subdivide existing lots on approximately 105 acres of land on two APNs near the southwestern corner of the Hazel Avenue/Folsom Boulevard intersection within the City of Rancho Cordova into 10 lots numbered 1 through 9 and Lot A for future development of an industrial warehouse campus that would retain jobs and reduce driving distances to employment centers having Class A industrial space in the community.

2.2 Project Characteristics

The Project site is within the Aerojet Special Planning Area, as identified in the City of Rancho Cordova's General Plan Land Use Map. The Project site is zoned as light industrial under the Aerojet Special Planning Area (SPA). Projects within the Aerojet SPA are not required to go through a design review by the City of Rancho Cordova. Project development would be based on the proposed large lot subdivision map, conceptual site plan, and Hazel Avenue improvements map shown on Figures 2-1, 2-2, and 2-3, respectively. The Project's areas of permanent and temporary impacts, including off-site utility installation involving ground-disturbance, are shown on Figure 2-4.

Development of the subdivision would entail the following components:

- Grading the entire 105.5-acre Project site, including tree and vegetation removal (except avoidance of existing elderberry shrubs where possible).
- Demolition of existing buildings, structures, foundations, and pavement with off-site demolition debris disposal.
- Construction of 8 warehouse buildings totaling 1,486,000 square feet, with maximum heights of 55 feet.
- Construction of associated stormwater detention basins, parking lots, and interior private streets, as shown on Figures 2-1,2-2, and 2-4.
- Construction and reconfiguration of overhead and underground utilities to serve the Project Site, including off-site construction of the following underground utilities and storm drainage features, as shown on Figure 2-4:
    - Two sanitary sewer pipelines extending north approximately 150 feet and up to 16 feet deep each under the Sacramento Rapid-Transit District (SacRT) and Union Pacific Railroad track right-of ways and connecting to an existing sewer main under Folsom Boulevard. One offsite sewer pipeline connection would begin just west of the proposed Jughandle/Folsom Boulevard intersection on Lot 3, and the other at the northwest corner of Lot 5 (Figure 2-4). Jack and bore methods would be used for pipeline installation under the rail tracks, while 4-foot wide trenches shored with trench plates would be used for pipeline installation on Folsom Boulevard.



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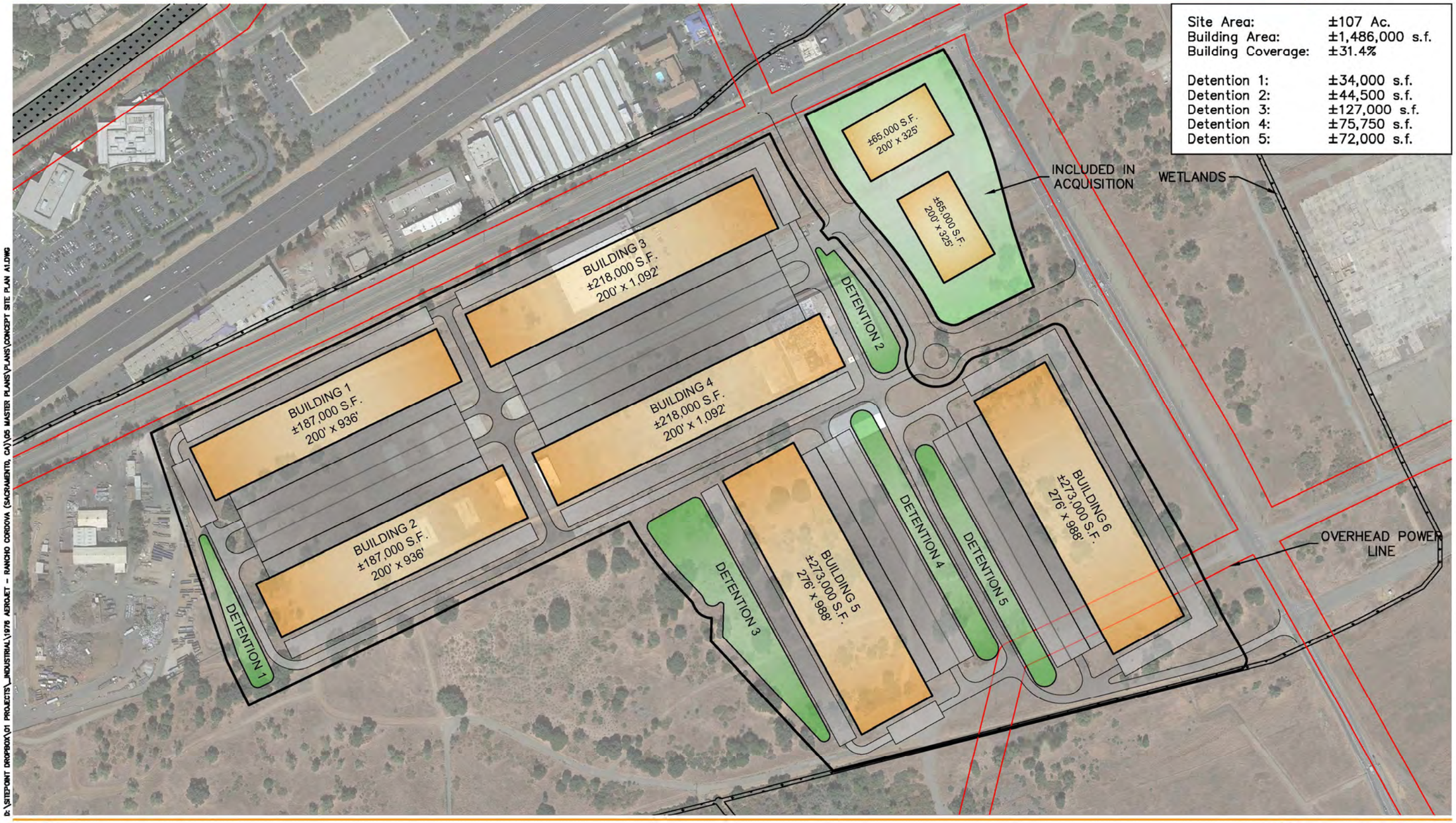
Figure 2-1. Proposed Large Lot Tentative Subdivision Map

2020-161.01 Easton Research Park West Project

AEROJET - RANCHO CORDOVA (SACRAMENTO, CA)

CONCEPT SITE PLAN A1

2021.02.03
SCALE 1:300



D:\SITEPOINT DROPBOX\01 PROJECTS_INDUSTRIAL\1976 AEROJET - RANCHO CORDOVA (SACRAMENTO, CA)\05 MASTER PLANS\PLANS\CONCEPT SITE PLAN A1.DWG

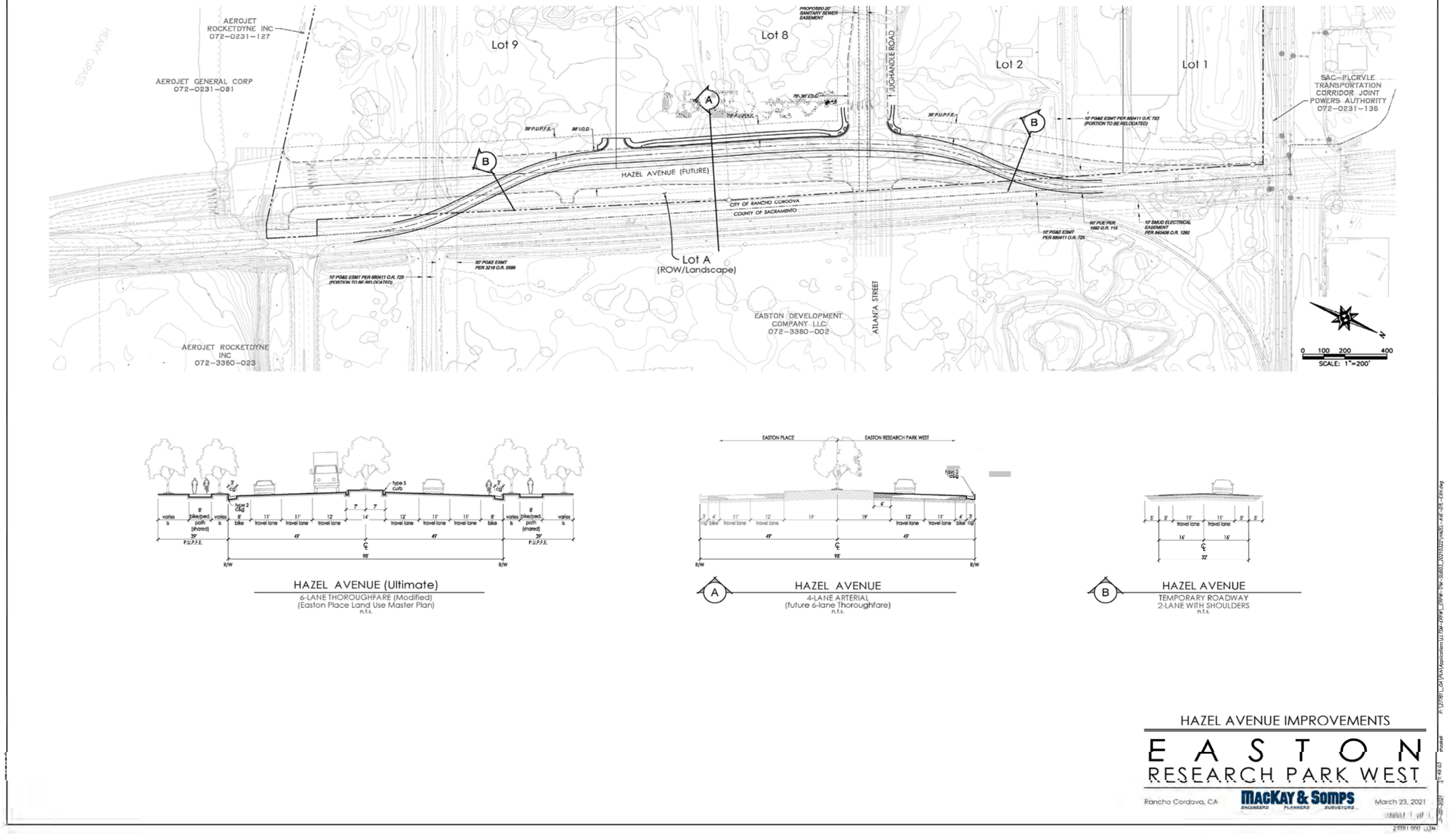
SITEPOINT
A Division of NorthPoint Development

NorthPoint DEVELOPMENT

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Figure 2-2. Concept Site Plan A1 Layout

2020-161.01 Easton Research Park West Project



HAZEL AVENUE (Ultimate)
6-LANE THOROUGHFARE (Modified)
(Easton Place Land Use Master Plan)
n.t.s.

A HAZEL AVENUE
4-LANE ARTERIAL
(future 6-lane Thoroughfare)
n.t.s.

B HAZEL AVENUE
TEMPORARY ROADWAY
2-LANE WITH SHOULDERS
n.t.s.

HAZEL AVENUE IMPROVEMENTS

EASTON RESEARCH PARK WEST

Rancho Cordova, CA — MacKay & Somps Engineers Planners Surveyors — March 23, 2021

Figure 2-3. Hazel Avenue Improvements

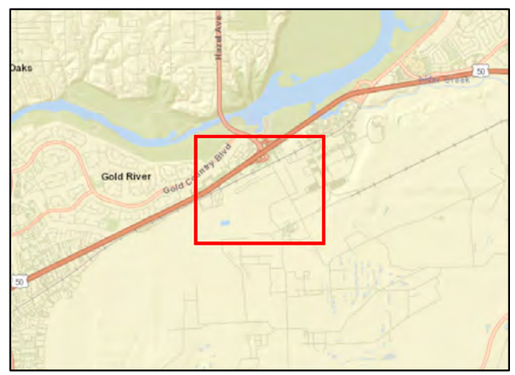
2020-161.01 Easton Research Park West Project



Map Features

- PROPOSED ERPW IMPACT LIMIT (PER M&S 4/28/21; LIMIT NORTH OF LOT 1 REVISED 6/18/21)
- PROPOSED OFF-SITE UTILITY IMPACT LIMIT
- PROPOSED OFF-SITE STORMWATER DETENTION BASIN IMPACT LIMIT

Sources: NAIP 2020



ECORP: N:\2009\2009-169 Westborough\MAPS\CEQA\ERPW_CEQA_Impacts_20210923.mxd (KIT) -kturnquist 9/23/2021

Map Date: 9/23/2021

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Scale in Feet
0 600

Figure 2-4 - Project Impact Area Map,
Easton Research Park West Tentative Subdivision Map Project
2009-169 Easton Research Park West

- A new approximately 1,800-foot long and 50-foot wide stormwater basin outfall ditch leading west from the southwest corner of Lot 6 and connecting to the existing Aerojet administration campus drainage channel (Aerojet Admin. Channel). This new stormwater ditch would be constructed through the Glenborough VELB Preserve as shown on Figure 2-4. An approximate 25-foot by 25-foot area of existing Aerojet Admin. Channel around the new ditch outfall would be lined with rock slope protection (RSP).
- A proposed basin outfall ditch connecting with the existing Aerojet Admin. Channel at the southern border of Lot 9, requiring an approximate 70-foot long by 24-foot wide area of the existing Aerojet Admin. Channel around the new ditch outfall to be lined with RSP.
- A proposed stormwater detention basin south of Lot 9 and south of the Aerojet Admin. Channel that will provide flood control for the proposed project by detaining large event flows in the Aerojet Admin. Channel. This proposed basin will receive large event flows from the Aerojet Admin. Channel via a weir structure and meter water back into the Aerojet Admin. Channel by a pipe after peak events have passed the project. Basin construction will include excavation of the basin and erosion protection for the proposed weir and pipe outfall into the Admin. Channel.
- A new underground potable water pipeline leading east approximately 2,500 feet from between Lots 2 and 8 of the Project along the future Atlanta Street alignment thorough the proposed Easton Place/Glenborough development, and connecting to the existing potable water line at Aerojet Road, as shown in Figure 2-4.

- Access to Project site would be from driveways off Jughandle Road connecting to Folsom Boulevard and Hazel Avenue in the northern portion of the Project site, and one driveway connecting to Hazel Avenue extension in the southern portion of the Project site, as shown on Figure 2-3.

2.3 Project Timing

The Project is scheduled to begin in 2022 and would be phased over the 20-year buildout period. This analysis assumes that two buildings and associated utilities, stormwater detention basins, parking lots, and access roads would be constructed in each phase. While nighttime work is not anticipated, there is a chance that it may be required during the Project. A formal Project phasing plan would be submitted to the City with Project improvement plans.

2.4 Regulatory Requirements, Permits, and Approvals

The Project may require approvals and/or permits from other public agencies for which this Initial Study may be used, including, without limitation, the following:

- U.S. Army Corps of Engineers (USACE) - A Section 404 Nationwide Permit
- Central Valley Regional Water Quality Control Board (RWQCB) - Notice of Intent and Storm Water Pollution Prevention Plan (SWPPP) for compliance with General Permit for Storm Water discharge

Associated with Construction Activities, and a Water Quality Certification or waiver pursuant to Section 401 of the Clean Water Act (CWA).

- US Fish and Wildlife Service (USFWS) - Section 7 consultation process and Biological Opinion for potential Impacts to Valley Elderberry longhorn Beetle (VELB), Vernal Pool Fairy Shrimp, and Vernal Pool Tadpole Shrimp.

2.4.1 Relationship of Project to Other Plans and Projects

2.4.1.1 City of Rancho Cordova General Plan

The proposed Project would be located in Rancho Cordova. The City of Rancho Cordova General Plan was adopted by the City Council on June 26, 2006 (City of Rancho Cordova 2006a). The General Plan is the fundamental document governing land use development in the incorporated areas of the City. It includes numerous goals and policies pertaining to land use, circulation, housing, conservation, open space, parks and recreation, noise, public health and safety, and public facilities. The Project would be consistent with the land use designations in the General Plan. Any future uses developed in the Project Area would be required to abide by all applicable goals and policies included in the adopted General Plan.

US-50/Hazel Avenue Interchange Improvement Project.

Based on information obtained from the *Hazel Avenue/U.S. 50 Interchange Project Public Draft Environmental Impact Report/Environmental Assessment* (Caltrans 2020c) the Hazel Avenue interchange project would elevate Hazel Avenue above Folsom Boulevard and the light-rail tracks and create a jug handle road to provide circulation between Hazel Avenue and Folsom Boulevard. The jug handle would intersect Folsom Boulevard west of the proposed Hazel Avenue overcrossing and intersect Hazel Avenue at the future Atlanta Street extension into Easton Place, located south of Folsom Boulevard. Figure 2-3 shows these planned street improvements covering portions of Lots 1, 2, and A. As a result of the interchange project, the intersection of Hazel Avenue/Folsom Boulevard would be grade separated and turning movements between these two streets would shift to the jug handle. The Hazel Avenue interchange project documentation also indicates that Hazel Avenue would be widened and extended south to the future Easton Valley Parkway. The Project design would accommodate these aspects of the US-50/Hazel Avenue Interchange Project.

2.5 Consultation with California Native American Tribe(s)

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the Lead Agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds in writing, within 30 days of receipt of the formal notification, and requests the consultation.

The following California Native American tribes traditionally and culturally affiliated with the project area have been notified of the project: Shingle Spring Band of Miwok Indians, Ione Band of Miwok Indians, Wilton Rancheria, and United Auburn Indian Community (UAIC) of Auburn Rancheria. The Shingle Spring Band of Miwok Indians tribe has requested consultation pursuant to Public Resources Code section 21080.3.1. A summary of the notification process is provided in Section 4.18 of this Initial Study.

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☒ Hazards/Hazardous Materials	☐ Recreation
☐ Agriculture and Forestry Resources	☐ Hydrology/Water Quality	☐ Transportation
☐ Air Quality	☐ Land Use and Planning	☒ Tribal Cultural Resources
☒ Biological Resources	☐ Mineral Resources	☒ Utilities and Service Systems
☒ Cultural Resources	☒ Noise	☐ Wildfire
☐ Energy	☒ Mandatory Findings of Significance	
☒ Geology and Soils	☐ Population and Housing	
☒ Greenhouse Gas Emissions	☐ Public Services	

Determination

On the basis of this initial evaluation:

I find that the Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	☒
I find that the Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	☐
I find that the Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	☐
I find that although the Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Project, nothing further is required.	☐

Darcy Goulart — Date
City Planning Manager

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

This section of the environmental checklist describes the aesthetic, or visual, setting of the project area and vicinity; identifies substantial changes to the visual setting directly or indirectly caused by the Project; and recommends mitigation measures to reduce or eliminate any impacts found to be significant. The discussion contained in this chapter is based upon a qualitative description of the setting derived from photographs, satellite imagery, and site visits.

4.1.1.1 Regional Setting

The visual character of the region in which Project activities would occur is defined by the heavily developed Sacramento, Rancho Cordova, and Folsom metropolitan areas to the west and north along the U.S. Highway 50 corridor; areas highly disturbed by historic dredge mining activities south of US Highway 50; and sparsely developed expanses of native grassland and oak woodlands that extend south along the base of the Sierra Nevada foothills. Panoramic views from any given location can include paved roadways, unpaved private access roads, densely vegetated riparian corridors, commercial and industrial facilities, office parks, homes, roads, utility lines, oak woodlands, agricultural fields, mine tailings consisting of extensive "hedgerows" of sparsely vegetated cobble piles, and views of the foothills to the east

State and County Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. There are no designated state scenic highways within view of the Project site (California Department of Transportation [Caltrans] 2021).

Sacramento County has one route, River Road (Highway 160), in its Scenic Highway Program (County of Sacramento 2017). This road runs along the Sacramento River levees in the Delta from the Sacramento City Limits to the southern tip of the Delta. This road is not within view of any element of the Project.

4.1.1.2 Visual Character of the Project Site

As described in the Project Description of this IS/MND, activities associated with the Project would occur on a generally flat landscape that is overgrown with grasses and scattered shrubs and trees (Figure 1-6). The northern portion of the Project site consists of developed industrial areas, including paved areas and foundations of several warehouses formerly used by Aerojet and now removed, and five remaining corrugated steel warehouse buildings. The Project site is located south of Highway 50 in the Sacramento Valley in a semi-suburban and rural area surrounded by primarily undeveloped agricultural lands with some industrial and commercial development. Suburban residential and commercial areas are to the north lining Folsom Boulevard and across Highway 50, and primarily rural lands with some industrial

development, mainly associated with current and former Aerojet operations, are to the south, east, and west of the Project site. Schnitzer Steel Recycling Center borders the Project site to the west. Elevations range from 140 to 150 feet above mean sea level. The American River and Nimbus Dam/Lake Natoma are 0.5 mile to the north across the Hazel Avenue/US-50 interchange, Folsom South Canal is approximately one-third mile to the west, and Buffalo Creek is approximately 500 feet to the south. The open space Glenborough VELB preserve adjacent to and south of the Project site is not accessible by the public.

Views of the Project site are dominated by relatively flat expanses of grassland, with sparse trees and widely-dispersed one-two story industrial warehouse buildings. Exposed areas such as graded access roads include a large number of cobbles, indicative of historic mining operations.

Due to the relatively flat nature of the Project site and surrounding properties and sparsity of tree cover, long distance views to the northeast and east from Nimbus Road (Hazel Avenue extension) are relatively unobstructed. Views north from the Project site are of commercial buildings along Folsom Boulevard, Hazel Avenue/US-50 interchange, and the hill above the northern bank of the American River above Nimbus Dam. The American River Parkway riparian zone located 0.5 mile north of the Project site is not visible. Views from the Project site to the east, west, and south contain distant views of open grassland, sparse trees, a few widely-dispersed industrial buildings, and the foothills to the east.

Lighting conditions of the developed portions of the City of Rancho Cordova, City of Folsom, and the active Aerojet industrial and administrative campus east of the Project in unincorporated Sacramento County consist of typical urban light conditions found in urban areas (e.g., roadway lighting, commercial and industrial buildings, and headlights from motor vehicles). These conditions contrast with the low ambient nighttime lighting and illumination of rural and widely-dispersed light-industrial uses to the south, east, and west of the Project site.

According to the City of Rancho Cordova General Plan Draft Environmental Impact Report [City of Rancho Cordova 2006b (EIR)], scenic vistas of the American River are provided within the City at various public accesses within the American River Parkway and at river crossings at Watt Avenue, Sunrise Boulevard, and Folsom Boulevard.

Given that views of the Project site and beyond from Folsom Boulevard and Hazel Avenue contain relatively contiguous expanses of open grassland interspersed with patches of well-developed oak woodland, these views can, arguably, be considered a scenic vista. The quality of this vista, however, is limited by the presence of roadways and visible remnants of previous industrial and mining activities on Aerojet lands.

The General Plan has a number of policies and actions designed to protect the rural uses surrounding the city as well as protect riparian habitat and open space. These policies and actions are discussed further below. All new development resulting from the Project would be subject to these policies.

4.1.2 Regulatory Framework

Projects within the Aerojet Special Planning Area are not subject to City of Rancho Cordova design review.

4.1.2.1 Tree Ordinance

Title 19 of the City of Rancho Cordova Zoning Code is the Tree Preservation Ordinance ("Tree Ordinance" (Ord. 915 § 1, 1966). The Tree Ordinance was established to promote the health, safety and enhance the beauty and general welfare of the County and, by virtue of the City having adopted the Tree Ordinance, the City of Rancho Cordova. The Ordinance requires the City to plant, maintain, protect, preserve, and to regulate the planting, maintaining, protecting and preserving of public trees and landscaping; to eliminate dangerous conditions caused by trees and shrubs that may result in injuries to persons or property; to protect all trees within the City against the spread of disease or pests, and to provide for the special protection of heritage and landmark trees within the city limits.

4.1.2.2 Lighting Standards

Title 1 (General Provisions) of the City of Rancho Cordova Zoning Code contains standards requiring that illumination of buildings, landscaping, signs, and parking and loading areas be shielded and directed so that no light trespasses onto adjacent properties. Title III (Use Regulations and Development Standards) requires that lighting shall be directed away from residential areas and public streets so that glare is not produced that could impact the general safety of vehicular traffic and the privacy and well-being of residents.

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4.1.3 Aesthetics (I) Environmental Checklist and Discussion

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Less than significant impact.

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As previously described, the City of Rancho Cordova General Plan lists the American River as a scenic vista and regulates development within the American River Parkway via the provisions of the American River Parkway Plan, which includes numerous criteria for evaluating the potential to impact the viewshed. Because the American River Parkway is not visible from the Project Site, nor would the Project's estimated maximum building height of approximately 55 feet cause it to be visible from the American River Parkway, there would be no impact on this scenic vista.

Views of the Sierra Nevada afforded from roadways near the Project site are distant and diffused. In addition, multi-family residential housing, commercial, and other light industrial development is planned for the Easton Place district adjacent to the east side of the Project under the Easton Land Use Master Plan, along with the planned Hazel Avenue extension and widening along the eastern portion of the

Project site which would further obstruct and diffuse views of the Sierra Nevada. Thus, the Project would have a **less than significant impact** on scenic vistas.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No impact.

The Project is not located within the vicinity of an officially designated scenic highway. **No impact** would occur.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In non-urbanized 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 Proposed Project is in a semi-rural area. Commercial areas line Folsom Boulevard adjacent to and north of the Project site, while commercial and suburban residential areas occur to the north across Highway 50, Primarily undeveloped lands, zoned as light industrial under the Aerojet Special Planning Area (SPA), with some widely-dispersed industrial development associated with current and former Aerojet operations, occur to the south, east, and west of the Project site.

As described above, public views of the Project site are primarily views of the site afforded to travelers near the Folsom Boulevard/Hazel Avenue intersection at the northeast corner of the Project site. The visual character of these views is largely undeveloped open space, with relatively flat expanses of grassland and scattered woodland visible in near and mid-range views from the road, and distant partially-obstructed and diffuse views of the El Dorado County foothills and Sierra Nevada beyond the site. Various small to medium-sized industrial warehouse buildings and small access roads associated with Aerojet properties can be seen on and near the Project site, limiting the quality of the view.

Project development, including mass grading, tree removal, and construction of a distribution warehouse campus on 105 acres with several warehouse buildings up to 55 feet in height and associated stormwater detention basins, parking lots, and interior private streets would result in a change in character of the

Project Area from semi-rural, dispersed, light-industrial uses to a fully developed urban industrial area. Project development would ultimately increasingly obstruct near and mid-range views of semi-rural landscapes. However, this change in use is consistent with the City's General Plan and Aerojet SPA land use designations and therefore, the Area was assumed to be developed in the future in the General Plan.

Listed below are General Plan policies and actions designed to promote the aesthetic character of the City.

The following General Plan policies and action items contained in the Land Use Element, Natural Resource Element, and Urban Design Element address preservation of the visual character of the Project Area:

Policy LU.1.4: Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g. flood, soil instability) on adjacent neighborhoods and infrastructure and preserve existing and future residential neighborhoods from encroachment of incompatible activities and land uses. [Cross-reference Economic Development, ED.2.6]

- Policy NR.3.2 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 discourage the placement of concrete within creeks and channels.
- Action NR.3.2.1 Develop guidelines for channel creation or modification that will ensure channel meander, naturalized side slope, and varied channel bottom elevation are considered in design.

Policy NR.3.4: Encourage projects that contain wetland preserves or creeks, or are located adjacent to wetland preserves or creeks, to be designed for maximum visibility and, as appropriate, access. (Cross-reference: Open Space, Parks and Trails Element)

- Action NR.3.4.2 – Establish standards that allow public access in the floodplain and buffers along creek corridors and preserves. Mitigation measures shall be incorporated into environmental documents and conditions of approval that require open-view fencing adjacent to preserves.

Policy NR.4.1: Conserve native oak and landmark tree resources for their historic, economic, aesthetic, and environmental value.

- Action NR.4.1.3 Establish development guidelines that require all oak habitat to be avoided to the maximum extent feasible. When avoidance is not possible, require mitigation efforts that result in preservation of in-kind habitat in the Planning Area.

Policy NR.4.2: Improve overall landscaping quality and sustainability in all areas visible to the public.

- Action UD.2.3.1 Land uses along the eastern and southern boundaries of the City shall transition down the intensity and density of development from urban to rural at the City edge.

Policy UD.4.2: Design new development to be compatible with surrounding development in ways that contribute to the desired character of the City and District.

The Project would be subject to those policies and actions listed above which would assist in promoting the visual character of the Project area. In addition, the Planning Department reviews architectural drawings or renderings, which are required to be submitted with an application for a building permit.

Compliance with the City's General Plan policies, including lighting standards, would be effective in reducing the aesthetic impact of the Project. Therefore, this is considered a **less than significant impact.**

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Less than significant impact.

Implementation of the Project may introduce future new sources of daytime glare and may change nighttime lighting and illumination levels. Lighting nuisances typically are categorized by the following:

- Glare – Intense light that shines directly or is reflected from a surface into a person's eyes.
- "Skyglow"/Nighttime Illumination – Artificial lighting from urbanized sources that alters the rural landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features.
- "Spillover" Lighting – Artificial lighting that spills over onto adjacent properties, which could interrupt sleeping patterns or cause other nuisances to neighboring residents.

The main sources of daytime glare in Rancho Cordova are from sunlight reflecting from structures with reflective surfaces such as windows. Building materials (e.g., reflective glass and polished surfaces) are the most substantial sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because the angle of the sun is lower during these times. Project development would include industrial warehouse-type structures with few windows, except for small office areas, and thus would not be a significant source of daytime glare.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include lighting from nonresidential uses, lights associated with vehicular travel (e.g., car headlights), street lighting, parking lot lights, and security-related lighting for nonresidential uses. Increased nighttime lighting and illumination could result in adverse effects to adjacent land uses through the spilling over of light into these areas and skyglow conditions.

While nighttime work is not anticipated, there is a chance that it may be required during the Project which may require temporary construction lighting. Temporary construction lighting would be directed away from any existing roadways and residential development. Project Lighting would be provided in all paved areas at an average of 1 FC using LED lights. Photometric plans would be developed once the final site plans are completed.

The Project would comply with existing City Title 1 (General Provisions) of the Zoning Code requiring that illumination of buildings, landscaping, signs, and parking and loading areas be shielded and directed so that no light trespasses onto adjacent properties, and Title III (Use Regulations and Development Standards) requiring that lighting be directed away from residential areas and public streets so that glare is not produced that could impact the general safety of vehicular traffic and the privacy and well-being of residents in the planned multi-family residential housing in the adjacent Easton Place Land Use Master Plan.

Because final improvement plans would include a lighting plan that would adhere to the City's lighting standards impacts associated with daytime glare and nighttime lighting would be **less than significant**.

4.1.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The Project site is zoned in the Aerojet Special Planning Area and consists of a generally flat landscape that is overgrown with grassland and scattered trees and forbs. The northern portion of the Project site consists of developed active and abandoned industrial areas, which includes paved areas and foundations of several warehouses formerly used by Aerojet and now removed. Excavated Areas within the Project site revealed cobbles, which is evidence that the land was once dredge mined. No agricultural or forestry uses or operations occur on the Project site or adjacent lands.

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The California DOC manages the California Important Farmland Finder, an interactive website program that identifies the Project Area as being within an area of Urban and Built-up Land (DOC 2021).

According to Sacramento County Planning and Community Development Department Williamson Act Parcels mapping, none of the land within the project Area is under a Williamson Act contract (Sacramento County 2012).

The Project site is located in a flat industrial/semi-rural area that does not contain forest or timber resources.

4.2.2 Regulatory Framework

There are no relevant local, State, or federal regulations applicable to agriculture and forestry resources given the lack of these resources in the Project area.

4.2.3 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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.

Per the DOC Farmland Mapping and Monitoring Program, neither of the Project parcels nor adjacent properties include Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The DOC Program identifies the Project parcels as being Urban and Built-Up Land, and some adjacent property as Other Land, and, therefore, not considered to be agriculturally important land [DOC 2017b]. **No impact** would occur, and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No impact.

According to Sacramento County Williamson Act mapping, the are no properties within the Project Area or within the Project vicinity that are subject to a Williamson Act contract (County of Sacramento 2012). The Project would have **no impact** in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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 located in a forestland protection or timber production area. The Project would have **no impact** in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No impact.

No identified forest lands exist on the Project site or within the vicinity of the Project. The Project would have **no impact** in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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 Proposed Project is located within the City of Rancho Cordova in Sacramento County on land designated for industrial use. The Project site does not support farming or forest use. Therefore, Project development would not result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use, resulting in **no impact** and no mitigation required.

4.2.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

This section addresses air quality issues present or with the potential to occur in the Project Area, potential direct and indirect Project impacts on sensitive receptors, and mitigation measures to reduce impacts identified as potentially significant. This assessment is based on the Air Quality and Greenhouse Gas Assessment for the Easton Research Park West Project prepared by ECORP (2021b) which is included with this Initial Study as Appendix A.

4.3.1 Environmental 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 Sacramento Metropolitan Air Quality Management District (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.

4.3.1.1 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 is located in the SVAB, which is under the jurisdiction of the SMAQMD. 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.

4.3.1.2 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), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) 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 4.3-1.

Table 4.3-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manufactured 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 (N2O) 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.

Table 4.3-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manufactured Sources	Human Health & Welfare Effects
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 (2013)

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.

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.

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.

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.

4.3.1.3 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. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a toxic air contaminant (TAC) based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. 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.

Diesel Exhaust

Most recently, CARB identified 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.

4.3.1.4 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 2019). The Folsom-Natoma Street air quality monitoring station, located at 50 Natoma Street approximately 5 miles northeast of the Project Site, monitors ambient concentrations of O_3 and $PM_{2.5}$. The Sacramento-Del Paso Manor air quality monitoring station, located at 2701 Avalon Drive, approximately 8.0 miles west of the Project Site, monitors ambient concentrations of PM_{10}. Ambient emission concentrations would vary due

to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project area.

Table 4.3-2 summarizes the published data concerning O_3, $PM_{2.5}$ and PM_{10} since 2017 for each year that the monitoring data is provided.

Table 4.3-2. Summary of Ambient Air Quality Data

Pollutant Standards	2017	2018	2019
O_3- Folsom-Natoma Street			
Max 1-hour concentration (ppm)	0.107	0.105	0.087
Max 8-hour concentration (ppm) (state/federal)	0.087/0.086	0.094/0.093	0.073/0.072
Number of days above 1-hour standard (state/federal)	4/0	5/0	0/0
Number of days above 8-hour standard (state/federal)	19/17	19/18	2/2
PM_{10}- Sacramento-Del Paso Manor			
Max 24-hour concentration (µg/m3) (state/federal)	65.8/59.0	224.0/212.0	110.4/53.0
Number of days above 24-hour standard (state/federal)	18.6/0	12.2/12.3	*/*
$PM_{2.5}$- Folsom-Natoma Street			
Max 24-hour concentration (µg/m3) (state/federal)	36.7/33.2	104.5/104.5	25.4/25.4
Number of days above federal 24-hour standard	0.0	9.0	*

Source: CARB 2020a
$\mu g/m^3$ = 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 4.3-3.

Table 4.3-3. 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 2019

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 2019).

4.3.1.5 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 receptor to the Project Site is the Comfort Inn and Suites located directly across Folsom Boulevard as well as the Twilight Recreational Vehicle (RV) and Mobile Home Park located approximately 691 feet northeast of the Project Site boundary. Additionally, there are approved residential land uses located directly east of the Project Site beyond Nimbus Road (Nimbus Road would be redesignated Hazel Avenue upon completion of the Hazel Avenue/US-50 Interchange Project).

4.3.2 Regulatory Framework

4.3.2.1 Federal

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. On April 2, 2007, the Supreme Court found that carbon dioxide (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

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 4.3-3 lists the federal attainment status of the SVAB for the criteria pollutants.

4.3.2.2 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 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 USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

The SMAQMD *2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (including 2018 updates), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013) are air quality attainment plans and reports that constitute the SIP for the Sacramento County portion of the SVAB. 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.

Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with 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 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.

Mobile Source Strategy

In 2016 CARB released the update to the Mobile Source Strategy (Strategy). This demonstrates how the state will meet air quality standards, achieve greenhouse gas emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next 15 years. This includes engine technology that is effectively 90 percent cleaner than today's current standards, with clean, renewable fuels comprising half the fuels burned.

The strategy also relies on the increased use of renewable fuels to ensure that air pollutant reductions are achieved while meeting the ongoing demand for liquid and gaseous fuels in applications where combustion technologies remain, including in heavy-duty trucks and equipment and light-duty hybrid vehicles. The estimated benefits of the Mobile Source Strategy in reducing emissions from mobile sources includes a substantial reduction of O_3-forming emissions (ROG and NO_x) and DPM.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

In 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM and NO_X emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks had to be retrofitted with PM filters beginning January 1, 2012, and older trucks had to be replaced by January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010-model-year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of CARB's ATCM *to Limit Diesel-Fueled Commercial Motor Vehicle Idling* is to reduce public exposure to DPM and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.[1] The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for

[1] *The ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is codified in Title 13 of the* CCR*, Chapter 10, § 2485.*

greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, *Requirements to Reduce Idling Emissions from New and In-Use Trucks*, which began in 2008, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

4.3.2.3 Local

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.

4.3.3 Air Quality Emissions Impact Assessment

4.3.3.1 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 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).

4.3.3.2 Sacramento Metropolitan Air Quality Management 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 4.3-4.

Table 4.3-4. SMAQMD Significance Thresholds

Air Pollutant	Construction Activities	Operations
Reactive Organic Gas	-	65 pounds/day
Nitrogen Oxide	85 pounds/day	65 pounds/day
Carbon Monoxide	-	-
Sulfur Oxide	-	-
Coarse Particulate Matter	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	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 2019
Notes: BACT = best available control technology; BMP = best management practices

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 significance thresholds would not be considered cumulative considerable.

4.3.3.3 Toxic Air Contaminant Threshold

The SMAQMD has not established quantitative thresholds of significance for mobile-sourced TAC emissions. However, SMAQMD has established a quantitative threshold for stationary sources of TACs. The SMAQMD consider the following types of projects significant:

- an incremental increase in cancer risk greater than 10 in one million at any off-site receptor; and/or
- an off-site ground-level concentration of non-carcinogenic TACs generated from the project that would result in a Hazard Index greater than 1 (unless approved by the Office of Environmental Health Hazard Assessment (OEHHA).

Considering the absence of specific thresholds applicable to mobile-sourced TACs resulting from the use of heavy-duty diesel trucks on-site, the SMAQMD's threshold for health risks for stationary sources is applied to health risks from Project operations, which would constitute a conservative approach to this analysis.

4.3.3.4 Emissions Calculation Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where Project-related criteria air pollutant quantification was required, emissions from off-road equipment and ground disturbance were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Emissions from worker commute trips were also calculated with CalEEMod. 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 air pollutant emissions were calculated using a combination of model defaults for Sacramento County, Project Site plans, as well as the estimated traffic trip generation rates and fleet mix provided by Fehr & Peers (2021). All CalEEMod output files can be found in Appendix A.

Additionally, because the Project would attract heavy duty trucks that would spend time idling and maneuvering on the site, an HRA was prepared. The air dispersion modeling for the HRA was performed using the USEPA American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Version 19121 dispersion model as a result of Project operations. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The alberhill30m.dem file found at CARB's website for HARP Digital Elevation Model Files was used for elevation data for all sources and receptors in the Project domain.

AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Pre-processed meteorological data files provided by SMAQMD using USEPA's AERMET program designed to create AERMOD input files for the Sacramento Executive Airport were selected as being the most representative meteorology based on proximity.

The unit emission rate of one gram per second was utilized in AERMOD to create plot files which established source receptor relationships later to be combined in HARP with the emissions inventory to calculate the ground level concentrations related to Project operations. This allows for variable annual emissions to account for the changes in operational emission rates over time. All AERMOD inputs and output file can be found in Appendix A.

4.3.4 Air Quality (III) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

Less than significant impact.

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 Sacramento County portion of the SVAB, which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the 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), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), 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. The Project would not

be contributing to an increase in population or housing growth beyond that currently anticipated in Rancho Cordova. Furthermore, as shown in Tables 4.3-5 and 4.3-6 below, all Project construction and operational emissions would fall below SMAQMD significance thresholds.

In conclusion, the Project would not conflict with the population or job growth projections used by SMAQMD to develop its air quality attainment plans. Project emissions would be emitted below SMAQMD significance thresholds. Therefore, the Project would not conflict with SMAQMD's air quality planning and would result in a **less than significant impact** in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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?	☐	☐	☒	☐

Less than significant impact.

4.3.4.1 Construction Significance Analysis

Emissions associated with Project construction would be temporary and short-term but have the potential to represent a significant air quality impact. Two basic sources of short-term emissions would be generated through Project construction: operation of the heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading. 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 activities would be subject to SMAQMD Rule 403, which, as previously described, requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water and limiting vehicle speeds, where possible, for control of dust during the clearing of land and other construction activities.

Emissions associated with Project off-road equipment, worker commute trips, and ground disturbance 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 types of construction equipment used and Project duration used in this analysis.

Predicted maximum daily emissions attributable to Project construction are summarized in Table 4.3-5. Such emissions are short-term and of temporary duration, lasting only as long as Project 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. The Project is anticipated to begin in early

2022 and would be phased over a 20-year buildout period with two buildings and associated features being constructed in each phase.

As shown in Table 4.3-5, emissions generated during Project construction would not exceed the SMAQMD's annual thresholds of significance. Additionally, Project emissions resulting from construction would not exceed the SMAQMD daily significance criterion for NO_X, PM_{10}, or $PM_{2.5.}$ SMAQMD states that projects generating less than 80 pounds of PM_{10} and less than 82 pounds of $PM_{2.5}$ daily while also implementing SMAQMD's Basic Construction Emission Control Practices, known as Best Management Practices (BMPs) are considered less than significant. The Project would not exceed the SMAQMD significance criterion for NO_X, PM_{10}, or $PM_{2.5}$ with the implementation of the following best available control technology (BACT) and BMPs for controlling fugitive dust from a construction site. Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff.

- Water all exposed surfaces three 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 2 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.
- All roadways, driveways, sidewalks, and parking lots to be paved should be completed as quickly 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 [required by CCR, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- 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.

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. Since the Project's emissions do not exceed SMAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no regional health effects from Project criteria pollutants would occur.

Table 4.3-5. Project Construction -Related Emissions

Construction Year	Pollutant					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Daily (pounds per day)						
Demolition and Grading Year 1	2.80	29.61	21.90	0.05	3.04	1.48
Demolition and Grading Year 2	3.39	34.55	28.55	0.06	4.96	2.75
Demolition and Grading Year 3 & Stormwater Drainage and Sewer Connection	7.88	63.32	67.28	0.13	24.42	13.88
Building Construction Phase 1 (Building 1 & 2) Year 1	11.12	27.59	38.26	0.08	3.00	1.48
Building Construction Phase 1 (Building 1 & 2) Year 2	11.08	27.47	37.89	0.08	3.00	1.48
Building Construction Phase 2 (Building 3 & 4) Year 1	12.46	28.16	38.32	0.08	3.30	1.56
Building Construction Phase 2 (Building 3 & 4) Year 2	12.41	28.05	37.99	0.08	3.30	1.56
Building Construction Phase 3 (Building 5 & 6) Year 1	14.85	29.34	38.90	0.09	3.83	1.71
Building Construction Phase 3 (Building 5 & 6) Year 2	15.17	22.94	39.89	0.09	3.33	1.27
Building Construction Phase 4 (Building 7 & 8) Year 1	5.79	17.72	35.46	0.07	1.31	0.72
Building Construction Phase 4 (Building 7 & 8) Year 2	5.78	17.70	35.37	0.07	1.31	0.72
SMAQMD Daily Significance Threshold (pounds per day)	-	*85*	-	-	*80 (If all feasible BACT/BMP applied)*	*82 (If all feasible BACT/BMP applied)*
Exceed SMAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual (tons per year)						
Demolition and Grading Year 1	**0**	**3**	**2**	**0**	**0**	**0**
Demolition and Grading Year 2	**0**	**3**	**2**	**0**	**0**	**0**

Table 4.3-5. Project Construction -Related Emissions

Construction Year	Pollutant					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Daily (pounds per day)						
Demolition and Grading Year 3 & Stormwater Drainage and Sewer Connection	**0**	**3**	**2**	**0**	**0**	**0**
Building Construction Phase 1 (Building 1 & 2) Year 1	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 1 (Building 1 & 2) Year 2	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 2 (Building 3 & 4) Year 1	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 2 (Building 3 & 4) Year 2	**1**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 3 (Building 5 & 6) Year 1	**2**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 3 (Building 5 & 6) Year 2	**2**	**3**	**4**	**0**	**0**	**0**
Building Construction Phase 4 (Building 7 & 8) Year 1	**1**	**2**	**4**	**0**	**0**	**0**
Building Construction Phase 4 (Building 7 & 8) Year 2	**1**	**2**	**4**	**0**	**0**	**0**
SMAQMD Annual Significance Threshold	**-**	**-**	**-**	**-**	*14.6 tons/year*	*15 tons/year*
Exceed SMAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A in Appendix 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 the following: sweeping/cleaning adjacent roadway access areas daily; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour.
Daily construction emissions taken from the season (summer or winter) with the highest output.

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 Project Site plans and the estimated traffic trip generation rates provided by Fehr & Peers (2021). Long-term operational emissions attributable to the Project are identified in Table 4.3-6 and compared to the operational significance thresholds promulgated by the SMAQMD.

Table 4.3-6. Operational-Related Emissions (Regional Significance Analysis)

Emission Source	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Summer Emissions						
Area	36.61	0.00	0.15	0.00	0.00	0.00
Energy	0.41	3.74	3.14	0.22	0.28	0.28
Mobile	1.74	41.76	21.22	0.19	11.17	3.02
Total:	**38.76**	**45.50**	**24.51**	**0.41**	**11.45**	**3.30**
SMAQMD Significance Threshold (pounds per day)	*65*	*65*	-	-	*80*	*82*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	35.61	0.00	0.15	0.00	0.00	0.00
Energy	0.41	3.74	3.14	0.22	0.28	0.28
Mobile	1.47	41.82	20.23	0.18	11.18	3.02
Total:	**37.48**	**45.56**	**23.52**	**0.40**	**11.46**	**3.30**
SMAQMD Significance Threshold (pounds per day)		*65*	-	-	*80*	*82*
Exceed SMAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A fin Appendix A for Model Data Outputs.

As shown in Table 4.3-6, the Project's emissions would not exceed any SMAQMD thresholds for any criteria air pollutants during operation.

As identified in Table 4.3-3, 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}. 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 4.3-6, the Proposed Project would result in increased emissions of O_3 precursor emissions (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. 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), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), 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, Project operations 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. Thus, neither Project construction or operational air emissions would 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, and the impact would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Less than significant impact.

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 existing sensitive receptors receptor to the Project Site is the Comfort Inn and Suites located directly across Folsom Boulevard as well as the Twilight RV and Mobile Home Park located approximately 691 feet

northeast of the Project Site boundary. Additionally, as previously described, there are proposed residential land uses located directly east of the Project Site beyond Nimbus Road.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); 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 4.3-5 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.

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM 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 toxic air contaminant (TAC) of concern. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. Given the dispersed nature of the Project site, the very small number of nearby sensitive receptors, the relatively short period of construction emissions that would occur in the vicinity of the nearest sensitive receptors (approximately 6 months), and the negligible level of operational emissions, the overall health risks from TACs would not be significant. As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SJVAPCD'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.

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The Proposed Project is not located within an area designated by the State of California as likely to contain

naturally-occurring asbestos (DOC 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

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

Health Risk. A health risk computation was performed to determine the risk of developing an excess cancer risk as a result of Project operations. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual (2015).

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations are calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home or at work, and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kilogram body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function of the breathing rate, the exposure frequency, and the concentration of a substance in the air. For receptor exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, third trimester, 0<2, 2<9, 2<16, 16<30, and 16-70 years. To estimate cancer risk, the dose was estimated by applying a formula involving age sensitivity factors (ASFs) and fraction of time at home (FAH) to each ground-level concentration (Tables 4.3-7 and 4.3-8).

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age two years, an ASF of 3 for ages two through 15 years to account for potential increased sensitivity to carcinogens during childhood, and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <two years, 85 percent of time is spent at home; from age two through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

Cancer Risk. To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only) (Table 4.3-7).

Chronic Non-Cancer Hazard. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated (Table 4.3-8). Acute Non-Cancer Hazard. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts (Table 4.3-8).

Acute HQ = Maximum Hourly Air Concentration (µg/m^3)/Acute REL (µg/m^3)

The modeled operational health risk for the Proposed Project is summarized below. Operational emissions sources in the model include line-volume sources to represent truck movement on the Project Site, Folsom Boulevard, Nimbus Road, Highway 50 East and Highway 50 West. The model was run to obtain the annual average concentration in micrograms per cubic meter (µg/m^3) at nearby sensitive receptors as well as locations where future sensitive receptors are approved for construction. The concentration estimates developed using this methodology are considered conservative and are not a specific prediction of the actual concentrations that would occur as a result of the Project at any one point in time.

Table 4.3-7 presents the cancer risk at representative locations for 9, 30 and 70-year operational scenarios.

Table 4.3-7. Maximum Operational Health Risk at the Project Vicinity

Exposure Scenario	Maximum Cancer Risk (Risk per Million	Significance Threshold (Risk per Million)	Exceeds SMAQMD Significance Threshold?
Comfort Inn & Suites Rancho Cordova-Sacramento			
70-Year Exposure	1.18	*10*	**No**
30-Year Exposure	1.07	*10*	**No**
9-Year Exposure	0.76	*10*	**No**
Twilight RV and Mobile Home Park			
70-Year Exposure	1.00	*10*	**No**
30-Year Exposure	0.90	*10*	**No**
9-Year Exposure	0.64	*10*	**No**
Future Residential Development			
70-Year Exposure	2.43	*10*	**No**
30-Year Exposure	2.20	*10*	**No**
9-Year Exposure	1.57	*10*	**No**

Source: Refer to Attachments B and C in Appendix A for Model Data Outputs.

As seen in Table 4.3-7, cancer risk for operations is below the significance threshold of ten in one million.

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index at nearby sensitive receptors associated with DPM emissions is shown in Table 4.3-8.

Table 4.3-8. Maximum Operational Non-Cancer Risk at the Project Vicinity

Exposure Scenario	Maximum Non-Cancer Hazard	Index Significance Thresholds	Exceeds SMAQMD Significance Threshold?
Comfort Inn & Suites Rancho Cordova-Sacramento			
Chronic Hazard Index	0.00031	*1*	**No**
Acute Hazard Index	0.00826	*1*	**No**
Twilight RV and Mobile Home Park			
Chronic Hazard Index	0.00026	*1*	**No**
Acute Hazard Index	0.00695	*1*	**No**
Future Residential Development			
Chronic Hazard Index	0.00064	*1*	**No**
Acute Hazard Index	0.01690	*1*	**No**

Source: Refer to Attachments B and C in Appendix A for Model Data Outputs.

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 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) *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 Air Quality Management Plan 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, 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 2,080 daily traffic trips on weekdays (Fehr & Peers 2021). Due to the nature of the Project, substantially less traffic trips are anticipated on the weekends. 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.

As shown, impacts related to cancer risk, non-cancer risk (chronic and acute hazard index), and carbon monoxide hotspots would not surpass significance thresholds at the nearby sensitive receptors, resulting in a **less than significant impact** in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less than significant impact.

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.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors. Furthermore, the Proposed Project would also be required to comply with SMAQMD Rule 402 to prevent occurrences of public nuisances. Rule 402 prohibits the discharge from any source that causes nuisance, annoyance, or discomfort to a considerable number of persons.

Therefore, operational odors would result in a **less than significant impact** related to odor emissions.

4.3.5 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.4 Biological Resources

This section describes the existing biological resources, including special-status species and sensitive habitats known to occur or that potentially occur in the proposed Project Area. This information was provided in the *Biological Resources Assessment Easton Research Park West Project* [(BRA), Appendix B, ECORP 2021b]. The purpose of the BRA was to collect information on the biological resources present or with the potential to occur in the Project Area, assess potential biological impacts related to Project activities, and identify potential mitigation measures to inform and support the Project's CEQA documentation for biological resources. The BRA includes a comprehensive discussion of biological resources regulatory requirements pertaining to Project activities and is hereby incorporated by reference.

4.4.1 Evaluation Methods

4.4.1.1 Literature Review

The following resources were reviewed to determine the special-status species that had been previously documented within or in the vicinity of the Project Area:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) data for the "Buffalo Creek, California" and "Folsom, California" 7.5-minute quadrangles as well as the 10 surrounding USGS quadrangles (CDFW 2021);
- USFWS Information, Planning, and Consultation System Resource Report List for the approximate Project Area (USFWS 2021); and
- California Native Plant Society's (CNPS) electronic Inventory of Rare and Endangered Plants of California was queried for the "Buffalo Creek, California" and "Folsom, California" 7.5-minute quadrangles as well as the 10 surrounding USGS quadrangles (CNPS 2021).

The results of the database queries are included in Attachment A of Appendix B.

Based on database queries, a list of special-status species that are considered to have the potential to occur within the vicinity of the Project Area was generated. Each of the species was evaluated for its potential to occur within the Project Area through the literature review, field observations, and survey results and categorized based on the following criteria:

- **Present** - Species was observed during field surveys or is known to occur within the Project Area based on documented occurrences within the CNDDB or other literature.
- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Project Area.

- **Low Potential to Occur** - Marginal or limited amounts of habitat occurs and/or the species is not known to occur within the vicinity of the Project Area based on CNDDB records and other available documentation.
- **Absent** - No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Project Area based on CNDDB records and other documentation, or the species was not found during protocol-level surveys.

4.4.1.2 Field Surveys Conducted

ECORP biologists conducted surveys within the Project Area as part of other survey efforts within the Aerojet campus. The results of those field surveys were analyzed and are included in the BRA. The following surveys have been conducted:

- Aquatic Resources Delineation (ARD): An ARD was conducted by ECORP in 2020 in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Region Supplement) (USACE 2008); however, this has not been verified by USACE.
- Arborist Survey: A tree inventory was conducted in 2021 by ECORP according to the City of Rancho Cordova's Preservation and Protection of Private Trees Ordinance (and the Sacramento County Arborist Report Requirements (ECORP 2021c).
- Special-Status Plants: A survey for special-status plant species was conducted in 2018 (ECORP 2018). Determinate-level field surveys were conducted in accordance with guidelines promulgated by USFWS (USFWS 2000), California Department of Fish and Game (CDFG 1983 [revised 2000]), and CNPS (CNPS 2001).
- VELB: A survey for valley elderberry longhorn beetle (VELB, Desmocerus californicus dimorphus;) was conducted by ECORP in 2016. The survey followed the protocol described in the Conservation Guidelines for the Valley Elderberry Longhorn Beetle (Conservation Guidelines) (USFWS 1999).

4.4.2 Environmental Setting

The Project area is part of the Aerojet campus. A portion of the Project Area overlaps with a separate project (referred to as the "Glenborough Project") that is fully permitted and mitigated (SPK-2004-00515). The area that overlaps with the Glenborough Project would be developed as part of this Project. Since the Glenborough Project is fully permitted and mitigated, the portion of the Project Area that overlaps with the Glenborough Project is not analyzed further in this document. However, resources within the entire Project Area, including the Glenborough Project overlap, are shown on maps for full transparency.

4.4.2.1 Vegetation Communities

Two vegetation communities or land cover types are present within the Project Area. These include developed/disturbed, and annual grassland.

Developed/disturbed is the dominant land cover within the Project Area. Development onsite includes several structures that were previously used for industrial and/or storage purposes as part of the Aerojet campus. Paved parking areas are present adjacent to the structures and paved roadways run between them. Dirt roads void of vegetation and metal fencing occurs throughout the Project Area.

Annual grassland within the Project Area is dominated primarily by nonnative grass and forb species such as Italian ryegrass (*Festuca perennis*), soft brome (*Bromus hordeaceous*), ripgut brome (*Bromus diandrus*), wild oat (*Avena fatua*), rose clover (*Trifolium hirtum*), yellow star thistle (*Centaurea solstitialis*), and Italian thistle (*Carduus pycnocephalus*). Scattered oak trees, including interior live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*), occur throughout the annual grassland (ECORP 2021d).

4.4.2.2 Soils

According to the NRCS' Web Soil Survey (NRCS 2021), six soil types have been mapped within the Project Area. These are: Natomas loam, 0 to 2 percent slopes (181); Redding gravelly loam, 0 to 8 percent slopes, MLRA 17 (198); Urban land (227); Urban land-Natomas complex, 0 to 2 percent slopes (228); Xerorthents, dredge tailings, 2 to 50 percent slopes (245); and Xerorthents, dredge tailings-Urban land complex, 0 to 2 percent slopes (246) (Figure 4.4-1).

4.4.2.3 Potential Aquatic Resources

A total of approximately 0.533 acre of aquatic resources have been mapped within the Project Area (Figure 4.4-2). Of the 0.533 acre of aquatic resources, 0.411 acre is included under the Glenborough permit (SPK-2004-00515). Impacts to 0.237 of these features are fully mitigated. The remaining 0.122-acre aquatic resources consist of seasonal wetlands and ditch. These occur as three small, disturbed features within the eastern and south-central portion; and two manufactured features in the southwesternmost portion and the northeastern portion of the Project Area (Figure 4.4-2). These features and acreages have not been verified by the USACE.

Seasonal Wetland

Seasonal wetlands are ephemerally wet due to accumulation of rainfall and surface runoff within low-lying areas or shallow groundwater. Inundation periods tend to be relatively short (typically confined to winter and spring). Three seasonal wetlands occur within the Project Area (Figure 4.4-2).

The seasonal wetlands onsite are small, depressional features predominately vegetated with curly dock (*Rumex crispus*), Italian ryegrass, dense-flower spike primrose (*Epilobium densiflorum*), annual rabbit-foot grass (*Polypogon monspeliensis*), and yellow star thistle.

4.4.2.4 Wildlife

Wildlife use onsite is expected to be minimal due to the highly impacted and developed nature of the Project Area and vicinity. The Project Area and surrounding area to the south have historically been mined, and subsequently used for activities related to the Aerojet campus. The area to the north includes a major highway and associated infrastructure, as well as some commercial development. The remnant

grassland and oak woodland in the greater surrounding landscape provide potential nesting and foraging habitat for many bird species, including raptors, and foraging and roosting habitat for bat species.

4.4.2.5 Evaluation of Special-Status Species

Table 1 of the BRA (Appendix B of this Initial Study), lists all the special-status plant and animal species identified in the literature review as potentially occurring within the vicinity of the Project Area. Included in this table are the listing status for each species, a brief habitat description, and an evaluation on the potential for each species to occur within the Project Area.

Special-status species found on CNPS, CNDDB, and USFWS database queries were evaluated for their potential to occur onsite. Based on the assessment of special-status species and the results of surveys conducted,

Twelve species were found to have some potential to occur within the Project Area. These special-status species include three invertebrates, one amphibian, seven birds, and one mammal, as described in more detail below. No special-status plant species were found during surveys in 2018 (ECORP 2018), and no special-status reptiles species are expected to occur based on a lack of habitat or range for the species.

Invertebrates

Vernal Pool Fairy Shrimp. The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened pursuant to the federal ESA. Historically, the range of vernal pool fairy shrimp extended throughout the Central Valley of California. Vernal pool fairy shrimp populations have been found in several locations throughout California, with habitat extending from Stillwater Plain in Shasta County through the Central Valley to Pixley in Tulare County, and along the Central Coast range from northern Solano County to Pinnacles National Monument in San Benito County. Additional populations occur in San Luis Obispo, Santa Barbara, and Riverside counties. The historic and current ranges of vernal pool fairy shrimp are very similar in extent; however, the remaining populations are more fragmented and isolated than during historical times (USFWS 2005). Threats to vernal pool fairy shrimp include agricultural conversion and development that result in habitat loss. Habitat loss also occurs through changes in natural hydrology, incompatible livestock grazing, pollution by storm water, and disturbance from recreational activities (USFWS 2005a).

The life cycle of vernal pool fairy shrimp is adapted to seasonally inundated features such as vernal pools, seasonal wetlands, and seasonal wetland swales. Fairy shrimp embryos survive the dry season in cyst form. Cysts "hatch" soon after pools become inundated during the wet season. Fairy shrimp complete their life cycle quickly and feed on small particles of detritus, algae, and bacteria (Eriksen and Belk 1999).

Critical Habitat for vernal pool species was designated in August 2003 by USFWS and revised in 2005 and 2006 (ECORP 2021d). The site does not occur within Critical Habitat for vernal pool fairy shrimp. The *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Recovery Plan)* includes vernal pool fairy shrimp conservation strategies (ECORP 2021d).

Figure 4.4-1
Natural Resources Conservation Service Soil Types

Map Features

Easton Research Park West Project Area

Series Number - Series Name

- 181 - Natomas loam, 0 to 2 percent slopes
- 198 - Redding gravelly loam, 0 to 8 percent slopes, MLRA 17
- 227 - Urban land
- 228 - Urban land-Natomas complex, 0 to 2 percent slopes
- 245 - Xerorthents, dredge tailings, 2 to 50 percent slopes
- 246 - Xerorthents, dredge tailings-Urban land complex, 0 to 2 percent slopes

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Sacramento County, CA

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Location: N:\2009\2009-169 Westborough\MAPS\Soils_and_Geology\Soilsv3_ERPWIERPW_soils_20210713.mxd (CCH)-ktumquist 7/13/2021

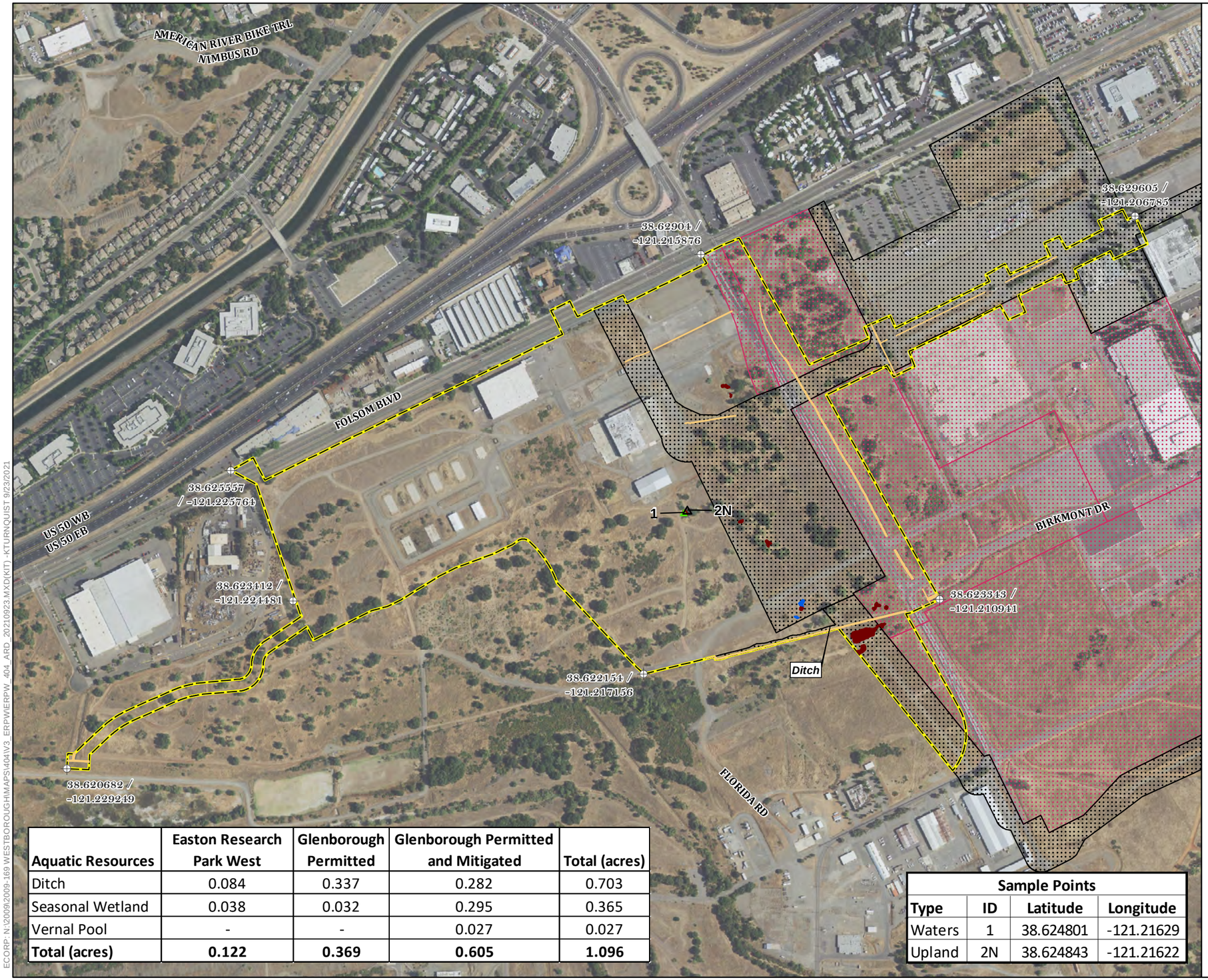
2018-012.02 Easton Research Park West

Scale in Feet
0 800

Photo Source: NAIP (2018)

Map Date: 7/13/2021

Figure 4.4-2.
Aquatic Resources Delineation



Map Features

- Easton Research Park West Study Area - 150.25 ac.
- Glenborough Phase 1 & Phase 2 Permitted and Mitigated (SPK-2004-00515)
- Future Glenborough Phases Permitted

Sample Points

- Upland Point
- Waters Point

Aquatic Resources[1*]

Wetlands

- Seasonal Wetland
- Vernal Pool

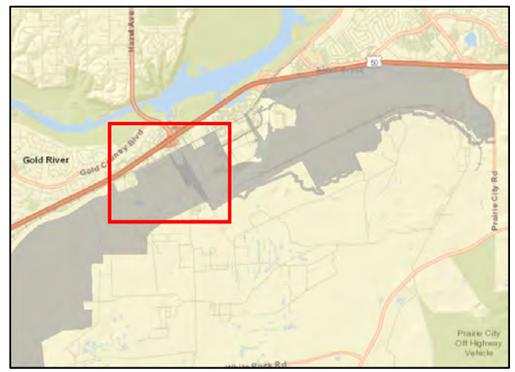
Other

- Ditch

[1] *Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Sacramento District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.*

** The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



Aquatic Resources	Easton Research Park West	Glenborough Permitted	Glenborough Permitted and Mitigated	Total (acres)
Ditch	0.084	0.337	0.282	0.703
Seasonal Wetland	0.038	0.032	0.295	0.365
Vernal Pool	-	-	0.027	0.027
Total (acres)	**0.122**	**0.369**	**0.605**	**1.096**

Sample Points			
Type	**ID**	**Latitude**	**Longitude**
Waters	1	38.624801	-121.21629
Upland	2N	38.624843	-121.21622

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2018-012.02 Easton Research Park West

Scale in Feet
0 300 600

Photo Source: NAIP (2018)

Map Date: 9/23/2021

ECORP: N:\2009\2009-169 WESTBOROUGH\MAPS\404\V3_ERPWIERPW_404_ARD_20210923.MXD(KIT)_KTURNQUIST 9/23/2021

There are nine documented CNDDB occurrences of vernal pool fairy shrimp within 5 miles of the Project Area (ECORP 2021d). The seasonal wetlands onsite provide marginally suitable habitat for this species; therefore, vernal pool fairy shrimp has low potential to occur onsite.

Valley Elderberry Longhorn Beetle. The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*, VELB) is listed as threatened pursuant to the federal ESA. The VELB occurs in metapopulations throughout the Central Valley. These metapopulations (subpopulations) occur throughout contiguous riparian habitat which shift temporarily and spatially based on changing environmental conditions. This temporal and spatial shifting of the metapopulations results in a patchy and ever-changing distribution of the species. Research indicates that dense elderberry shrub clumps in healthy riparian habitat is the primary habitat for the VELB. The beetle's current distribution extends from Shasta County in the north to Fresno County in the south and includes everything from the valley floor up into the lower foothills.

The VELB is completely dependent on its larval host plant, elderberry (*Sambucus* sp.), which occurs in riparian and other woodland and scrub communities. The vast majority of VELB occurrences have been recorded below 500 feet (152 meters), however, rare occurrences have been recorded up to approximately 3,000 feet. Elderberry plants, located within the range of the beetle, with one or more stems measuring 1.0 inch or greater in diameter at ground level are considered to be habitat for the species. The adult flight season extends from late March through July. During that time the adults feed on foliage and perhaps flowers, mate, and females lay eggs on living elderberry plants. The first instar larvae bore into live elderberry stems, where they develop for one to two years feeding on the pith. The fifth instar larvae create exit holes in the stems and then plug the holes and remain in the stems through pupation.

There are nine documented CNDDB occurrences of VELB within five miles of the Project Area (ECORP 2021d). Additionally, elderberry shrubs were documented within the Project Area during the 2016 survey (Figure 4.4-3*).* A total of 215 shrubs are located within the Project Area, including those that were fully mitigated for by the Glenborough Project (Figure 4.4-3). One shrub within the Project Area was observed with evidence of VELB (Figure 4.4-3). Therefore, VELB has potential to occur.

An existing ±36.92-acre Offsite Preserve, which was established as mitigation for impacts to VELB habitat from Glenborough (Regulatory #200400515; USFWS File #81420-2010-F-0714-1), is located adjacent to the southwest boundary of the Project. The existing preserve is currently protected by a conservation easement and is monitored annually in accordance with the approved *Glenborough at Easton and Easton Place Operation and Management Plan* (ECORP 2015).

Figure 4.4-3. Valley Elderberry Longhorn Beetle Habitat



Map Features

- Easton Research Park West Study Area - 150.25 ac.
- Glenborough Phase 1 & Phase 2 Permitted and Mitigated (SPK-2004-00515)
- Future Glenborough Phases Permitted
- Existing Elderberry Shrubs – VELB Evidence (1)
- Existing Elderberry Shrubs – No VELB Evidence (199)
- Existing Elderberry Shrubs – Unknown Evidence (14)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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2018-012.02 Easton Research Park West

Scale in Feet
0 300 600

Photo Source: NAIP (2018)

Map Date: 9/23/2021

ECORP: N:\2009\2009-169 WESTBOROUGH\MAPS\SSS_SURVEY_AND_MAPPING\VELB\V4_ERPW\ERPW_ELDERBERRY_LOC_BRA_20210923.MXD(KIT) -KTURNQUIST 9/23/2021

Amphibians

Western Spadefoot. Western spadefoot (*Spea hammondii*) is not listed pursuant to either the California or federal ESAs; however, it is considered a species of special concern (SSC) by CDFW. Western spadefoot is typically associated with lowland washes, floodplains, rivers, vernal pools, alluvial fans, playas, and alkali flats in the Central Valley, although they also occur in foothills and mountains to approximately 4,000 feet above mean sea level. This species is found in open areas with sandy or gravelly soils and may be found in valley and foothill grasslands, open chaparral, and pine-oak woodland habitats. Adult western spadefoots are terrestrial and enter water only to breed.

Individuals may spend eight to nine months in upland burrows during dry periods, emerging from burrows after late-winter and early-spring rains to forage and mate. Surface activity is generally nocturnal and has been documented in every month from October to May.

There are two documented CNDDB occurrences of western spadefoot within five miles of the Project Area (ECORP 2021d). The seasonal wetlands provide very marginal habitat for this species. Western spadefoot has low potential to occur onsite.

Birds

Tricolored Blackbird. The tricolored blackbird (TRBL, *Agelaius tricolor*), is listed as threatened under the California ESA. Additionally, it is considered a bird of conservation concern (BCC) by USFWS and an SSC by CDFW. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California (Meese et al. 2014). TRBL nests in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. tricolor blackbird nesting habitat includes emergent marsh, riparian woodland/scrub, blackberry thickets, densely vegetated agricultural and idle fields (e.g., wheat, triticale, safflower, fava bean fields, thistle, mustard, cane, and fiddleneck), usually with some nearby standing water or ground saturation (Meese et al. 2014). They feed mainly on grasshoppers during the breeding season but may also forage upon a variety of other insects, grains, and seeds in open grasslands, wetlands, feedlots, dairies, and agricultural fields (Meese et al. 2014). The nesting season is generally from March through August.

There are eight documented CNDDB occurrences of TRBL within five miles of the Project Area (CDFW 2021). The partially-disturbed grasslands onsite provide marginal potential foraging habitat for tricolored blackbird; therefore, tricolored blackbird has low potential to occur.

Burrowing Owl. The burrowing owl (BUOW, *Athene cunicularia*) is not listed pursuant to either the California or federal ESAs; however, it is designated as a BCC by USFWS and an SSC by CDFW. This species generally occupies dry open rolling hills, grasslands, deserts, sagebrush scrub, agricultural areas, earthen levees and berms, coastal uplands, and urban vacant lots, as well as the margins of airports, golf courses, and roads (CDFG 2012; Klute et al. 2003). The species' breeding range extends across the western United States from the Pacific coast to western Nebraska, north into parts of Canada and south to Baja California and into mainland Mexico (Klute et al. 2003). Urbanization and other human-induced landscape changes are the drivers of BUOW population declines (Boal and Dykstra 2018).

BUOW have three basic habitat requirements: open, well-drained terrain; short, sparse vegetation; and underground burrows or burrow facsimiles (CDFG 2012; Klute et al. 2003) in which to take refuge and to breed. BUOW typically use burrows created by fossorial mammals, particularly the California ground squirrel (*Otospermophilus beecheyi*). In areas developed by humans, they may also use burrow surrogates, such as cement culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement (CDFG 1995, 2012). The breeding season for BUOW typically occurs between February 1 and August 31 (California Burrowing Owl Consortium 1993; CDFG 1995, 2012). During the breeding season, foraging occurs throughout the day, at dawn, dusk and during daylight hours (Poulin and Todd 2006).

There is one documented occurrence of BUOW within five miles of the Project Area (CDFW 2021). The remnant grassland and partially disturbed areas onsite provide marginal potential habitat. Burrowing owl has low potential to occur onsite.

Oak Titmouse. Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either state or federal ESAs, but are considered a USFWS BCC. 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. 2017). Nesting occurs during March through July.

There are no documented CNDDB occurrences of oak titmouse within five miles of the Project Area (CDFW 2021). However, the oak trees onsite provide potential nesting habitat for the species. Oak titmouse has potential to occur onsite.

Swainson's Hawk. Swainson's hawk (SWHA, *Buteo swainsoni*) is listed as a threatened species pursuant to the California ESA. Additionally, Swainson's hawk is designated as a BCC by USFWS. Historic declines in Swainson's hawk populations are attributed to pesticide use and rodent population reduction, along with loss of native habitat (Bechard 2010; CDFG 1994). This species nests in North America (Canada, western United States, and Mexico), including California's Central Valley. Swainson's hawk typically winters as far south as Argentina in South America and as far north as Mexico (Airola et al. 2019). However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (Bechard et al. 2010). In California, the nesting season ranges from mid-March to late August (CDFG 1994; Estep 1989).

Swainson's hawk nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas (CDFG 1994; Estep 1989). The species requires suitable foraging habitat in proximity to suitable nesting trees (CDFG 1994; Estep 1989). Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. Swainson's hawk are opportunistic foragers and would readily forage in association with agricultural mowing, harvesting, discing, and irrigating (Estep 1989), which results in a temporary increase in readily available prey items for this species.

There are six documented CNDDB occurrences of Swainson's hawk within five miles of the Project Area. Trees onsite provide potential nesting and the grassland onsite provides potential foraging habitat for the species. Swainson's hawk has potential to occur onsite.

Nuttall's Woodpecker. The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal ESAs but is considered a USFWS BCC. The species is resident from Siskiyou County south to Baja California. Nuttall's woodpecker nests in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther 2000). Breeding occurs during April through July.

There are no documented CNDDB occurrences of Nuttall's woodpecker within five miles of the Project Area (CDFW 2021). However, the scattered oak trees onsite provide potential nesting and foraging habitat. Nuttall's woodpecker has potential to occur onsite.

White-tailed Kite. White-tailed kite (*Elanus leucurus*) 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 1995). 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 1995).

There are 10 documented CNDDB occurrences of white-tailed kite within five miles of the Project Area (CDFW 2021). The oak trees onsite provide potential nesting and grassland provides potential foraging habitat. White-tailed kite has potential to occur onsite.

Yellow-billed Magpie. The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal ESAs but is considered a USFWS BCC. 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 2009). The young leave the nest at about 30 days after hatching (Koenig and Reynolds 2009). 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 2009).

There are no documented CNDDB occurrences of yellow-billed magpie within five miles of the Project Area (CDFW 2021). However, the trees onsite provide potential nesting habitat. Yellow-billed magpie has potential to occur onsite.

Mammals

Pallid Bat. The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. 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 ft) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 ft). 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. This species is not thought to migrate long distances between summer and winter sites (WBWG 2017).

There is one documented CNDDB occurrence of pallid bat within five miles of the Project Area (CDFW 2021). The oak trees and manmade structures onsite provide marginal roosting habitat. Pallid bat has low potential to occur onsite.

4.4.2.6 Wildlife Movement/Corridors

The Project Area is previously disturbed and partially developed (Figure 4.4-2). Additionally, a heavily trafficked highway exists northwest of the Project Area. The surrounding landscape is made up of previously disturbed portions of the Aerojet campus, as well as development and infrastructure along Highway 50 (see Figure 1-1). Therefore, the Project Area does not provide an important movement corridor, and development associated with the Project is not expected to adversely impact wildlife movement.

4.4.2.7 Oak Trees

An arborist survey was conducted within a large portion of the Project Area on October 20 and 30, 2020 by ECORP certified arborist Krissy Walker-Berry (ECORP 2021, Attachment C of BRA). A total of 204 trees were inventoried during the survey, including several species of oak: interior live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and blue oak (*Quercus douglasii*).

Chapter 19.12 (Preservation and Protection of Private Trees) of the Rancho Cordova Municipal Code, establishes regulations for the protection, removal, and preservation of landmark trees and protected trees within Rancho Cordova. "Landmark tree" means any trees designated by council through resolution as a vital and historical part of the city's landscape such that the trees need to be designated as landmarks for protection and preservation. "Protected tree" includes native oaks 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; and 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.

4.4.2.8 Critical Habitat

The Project Area is not located within the range of designated Critical Habitat for special-status species (ECORP 2021d).

4.4.3 Regulatory Framework

4.4.3.1 Federal Regulations

Endangered Species Act

The ESA protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits, without authorization, 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 under federal jurisdiction and removing, cutting, digging up, damaging, or destroying any listed plant in any other area in knowing violation of state law [16 U.S. Code (USC) 1538].

Under Section 7 of ESA, federal agencies are required to consult with USFWS and/or NMFS if their actions, including permit approvals and funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion (BO), USFWS and NMFS 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 the issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

Section 7 Consultation

Section 7 of ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the federal lead agency must prepare a biological assessment (BA) for the purpose of analyzing the potential effects of the proposed project on listed species and critical habitat to establish and justify an "effect determination." Often a third-party, non-federal applicant drafts the BA for the lead federal agencies. The USFWS/NMFS reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

Critical Habitat

Critical Habitat is defined in Section 3 of ESA as:

- 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
- 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 essential to the conservation of the species (16 USC 1533). 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 constituent elements). Primary constituent elements are the physical and biological features that are 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
- Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species

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 under the MBTA, 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 non-game birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or

barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

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 U.S. Army Corps of Engineers (USACE). "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to Waters of the U.S. (more than 0.5 acre of impact) may require an individual permit. Projects that only minimally affect Waters of the U.S. (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).

4.4.3.2 State and Local Regulations

California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the state as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. 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 projects under permits issued by CDFW.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and the 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. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

Native Plant Protection Act

The NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare". The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA, but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

California Fish and Game Code Special Protections for Birds

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain 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 California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.

Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.

Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests

Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic non-native species, or any part of these birds.

Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration 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." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and

wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alternation Agreement.

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 one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with 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 a Waste Discharge Requirements for these activities.

California Environmental Quality Act

In accordance with CEQA Guidelines § 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 ESA, the 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 ESA, the 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.

Species of Special Concern

SSC are defined by the CDFW 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 satisfies 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, and
- SSC are typically associated with habitats that are threatened.

Depending on the policy of the lead agency, projects that result in substantial impacts to SSC may be considered significant under CEQA.

U.S. Fish and Wildlife Service Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, USFWS published a list of BCC (USFWS 2008) for the United States. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2021), 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, non-governmental 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, 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 (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (<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 2021).

Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

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 non-listed 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, § 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. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- have a substantial adverse 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- 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;

- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state HCP.

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.

Rancho Cordova Tree Ordinance (Preservation and Protection of Private Trees)

The city council adopted Chapter 19.12 (Preservation and Protection of Private Trees) of the Rancho Cordova Municipal Code, which established regulations for the protection, removal, and preservation of landmark trees and protected trees within Rancho Cordova. "Landmark tree" means any trees designated by council through resolution as a vital and historical part of the city's landscape such that the trees need to be designated as landmarks for protection and preservation. "Protected tree" includes native oaks 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; and 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.

4.4.4 Biological Resources (IV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Project activities associated with construction of the Project, including installation of off-site utilities, could adversely affect several special-status animal species that occur or could potentially occur on or near the Project site. Implementation of Mitigation Measures **BIO-1** through **BIO-9**, below, would ensure that

Worker Environmental Awareness Training is given to all construction personnel and that, prior to the commencement of construction activities, measures are implemented in consultation with appropriate agencies to appropriately mitigate significant impacts.

Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp – Figure 4.4-2 shows the location of seasonal wetlands in the area of Project development. As shown, suitable habitat for special-status invertebrate species is present within the Project Area including habitat for vernal pool fairy shrimp, and vernal pool tadpole shrimp. Presence of federally listed large branchiopods will be assumed in onsite wetland features. As described in mitigation measure **BIO-2,** a Biological Assessment (ECORP 2020d) has been prepared and submitted to USFWS and appropriate mitigation will be determined through the Environmental Species Act (ESA) Section 7 process.

Valley Elderberry Longhorn Beetle – As mentioned in Section 4.4.1.2, a survey for VELB was conducted in 2016 and shrubs were observed onsite (Figure 4.4-3). Implementation of the Project would require removal of elderberry shrubs, and a Biological Assessment (ECORP 2020d) has been prepared and submitted to USFWS. Appropriate mitigation will be determined through the Section 7 process, as described in Mitigation Measure **BIO-3**.

Western Spadefoot Toad – Implementation of the minimization measures described in mitigation measure **BIO-4** will ensure that there are no significant impacts to western spadefoot toad.

Birds (including nesting raptors) – Suitable nesting and/or foraging habitat for several special-status birds is present within the Project Area. In addition to the special-status birds, all native birds, including raptors, are protected under the California Fish and Game Code and the Migratory Bird Treaty Act. If nesting birds are present, the Project could result in harassment to or take of nesting individuals. As such, to ensure that there are no impacts to protected birds and/or active nests, mitigation measures **BIO-5** (Nesting Birds), **BIO-6** (Raptors), **BIO-7** (Swainson's Hawk), and **BIO-8** (Burrowing owl) are recommended if Project activities would occur within the nesting season (approximately February 1-September 15).

Pallid Bat – The Project Area contains potential roosting habitat for pallid bat. To ensure that there are no significant impacts to special-status bats, the Project applicant will implement mitigation measure **BIO-9**.

With implementation of Mitigation Measures **BIO-2** through **BIO-9** the impact is considered **less than significant with mitigation incorporated.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

Less than significant impact.

No riparian habitat or sensitive natural communities were identified within the Project Area during the field surveys included in the BRA. No features that may be subject to Section 1600 of the Fish and Game Code were identified in the Project Area; therefore, a Streambed Alteration Agreement from CDFW pursuant to Section 1602 of the California Fish and Game Code is not required. Thus, this impact would be **less than significant.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) 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?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

The Project Area supports aquatic resources (seasonal wetlands and ditches) that are potential Waters of the U.S. and Waters of the State subject to verification by the USACE and RWQCB, respectively (Figure 4.4-2). The Project, as currently designed, proposes to impact aquatic resources by grading and filling the seasonal wetlands and installing rock slope protection (RSP) around new storm water drainage channel outfalls in the Aerojet Administrative Campus Ditch. Implementation of the permit authorizations described in mitigation measure **BIO-10** will reduce potential impacts to aquatic resources to a **less than significant impact with mitigation incorporated.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) 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?	☐	☐	☒	☐

Less than significant impact.

No water bodies occur onsite that would have the potential for migratory fish. Wildlife movement corridors are routes frequently utilized by wildlife that provide shelter and sufficient food supplies to support wildlife species during migration. Open space, including agricultural lands, also provides an opportunity for dispersal and migration of wildlife species.

The Project Area is previously disturbed and partially developed (Figure 4.4-2). Additionally, a heavily trafficked highway exists northwest of the Project Area. The surrounding landscape is made up of previously disturbed portions of the Aerojet campus, as well as development and infrastructure along Highway 50 (see Figure 1-1). Therefore, the Project Area does not provide an important movement

corridor, and development associated with the Project is not expected to adversely impact wildlife movement.

Migratory birds may use the semi-rural open areas and other natural habitats within the Project Area during migration and breeding, Project development would not substantially interfere with their movement, as they can move to nearby similar habitat. Thus, this impact would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Due to the presence of oak trees having a trunk diameter of at least six inches or greater onsite, the Project is subject to the City of Rancho Cordova Tree Preservation Ordinance. Implementation of mitigation measure **BIO-11** would ensure that the Project applicant complies with the City's Tree Preservation Ordinance to preserve and mitigate for trees that would be impacted as part of the Project, resulting in a **less than significant impact mitigation incorporated**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

No impact.

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that are applicable to the Project. The Project, therefore, would have **no impact** and no mitigation is required.

4.4.5 Mitigation Measures

BIO-1: **Worker Awareness Training for Special-Status Species:** Prior to start of construction activities, a qualified biologist shall conduct an education program for all persons involved with the proposed Project. The program shall consist of a presentation from the Biologist that includes a discussion of the biology and general behavior of the species discussed above, information about the distribution and habitat needs of these animals, sensitivity of these animals to human activities, and their status of legal protection.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-2: Minimize potential significant impacts to Vernal Pool Fairy and Tadpole Shrimp:

- Assume presence of Vernal Pool Fairy and Tadpole Shrimp and initiate the Section 7 consultation process with USFWS through the Clean Water Act Section 404 Process; OR conduct protocol-level surveys for these species to determine presence or absence prior to consultation.
- If presence is assumed or confirmed after protocol surveys, acquire a Biological Opinion for the Project and implement all conditions of the Biological Opinion, including purchasing compensatory mitigation for permanent impacts to branchiopod habitat. Compensatory mitigation will be determined through the Section 7 process and outlined in the Biological Opinion.

Timing/Implementation: *Prior to and during Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and Project Applicant*

BIO-3: Minimize potential significant impacts to VELB:

- Initiate Section 7 consultation process with USFWS through the Clean Water Act Section 404 process on the Project effects to ESA-listed VELB and acquire a Biological Opinion for the Project. Implement all conditions of the Biological Opinion.
- Elderberry shrubs will be avoided to the extent practicable. For any impacts to elderberry shrubs, appropriate avoidance measures and a mitigation plan will be developed in consultation with USFWS and implemented during the appropriate timeframe.
- The area surrounding avoided elderberry shrubs shall be fenced and/or flagged as close to construction limits as possible.
- As much as feasible, all activities that could occur within 165 feet of an avoided elderberry shrub will be conducted outside of the flight season of VELB (March - July).
- Herbicides will not be used within the drip line of any elderberry shrubs. Insecticides will not be used within 100 feet of an elderberry shrub and will be applied using a backpack sprayer or similar direct application method.
- The potential effects of dust on VELB will be minimized by applying water during construction activities or by presoaking work areas that will occur within 100 feet of any potential elderberry shrub habitat.

Timing/Implementation: *Prior to and During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and construction contractor working for Project Applicant*

BIO-4: Minimize potential significant impacts to western spadefoot:

- Preconstruction surveys for western spadefoot will be conducted within the limits of construction to detect adults, larvae, and/or egg masses, within 48 hours prior to the start of construction.
- If no western spadefoots are found, no further measures pertaining to this species are necessary.
- If adults, larvae, or egg masses are found, they will be relocated to suitable habitat within an on- or off-site preserve(s), in consultation with CDFW.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-5: Nesting birds. A preconstruction survey for nesting birds will be conducted by a qualified biologist within 14 days (or fewer if recommended by CDFW) of commencement of Project activities. The survey will occur within the Project Area and a 100-foot buffer. If an active nest is located, a no-disturbance buffer will be established as determined by the biologist in consultation with CDFW and maintained until the nest is confirmed to be no longer active by the biologist.

Timing/Implementation: *Prior to and During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-6: Raptors. A preconstruction survey for nesting raptors will be conducted within 14 days of commencement of Project activities by a qualified wildlife biologist within the Project Area and a 500-foot buffer. If an active nest is located, a no-disturbance buffer will be established as determined by the biologist in consultation with CDFW and maintained until a qualified biologist determines the young have fledged and are no longer reliant upon the nest for survival.

Timing/Implementation: *Prior to and During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-7: Swainson's Hawk.

- A preconstruction survey for nesting Swainson's hawk will be conducted by a qualified biologist within 14 days of commencement of Project activities within the Project Area and a 0.25-mile buffer. As described above, if Swainson's hawks are found to be nesting in the vicinity, a no-disturbance buffer will be established in consultation with CDFW and maintained until a qualified biologist determines the young have fledged and are no longer reliant upon the nest for survival.

- Mitigation for permanent impacts to SWHA foraging habitat has been purchased for the portions of the Project Area that overlap with the Glenborough Project in accordance with the CEQA Environmental Impact Report Mitigation Measures for that Project.
- Mitigation for permanent impacts to SWHA foraging habitat for the remaining portions of the Project Area is required (see Appendix B, Figure 3). Compensatory mitigation should be consistent with the Sacramento County SWHA Ordinance.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, qualified biologist working for Project Applicant, and Project Applicant*

BIO-8: **Burrowing owl.** A preconstruction survey for nesting burrowing owl will be conducted by a qualified biologist within 14 days prior to commencement of Project activities within the Project Area and a 250-foot buffer. Surveys shall be conducted at appropriate times and in appropriate weather conditions to maximize detection. If active burrowing owl burrows are found, an avoidance buffer will be immediately established, and an avoidance plan will be prepared in consultation with CDFW prior to the commencement of any ground-disturbing activities.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-9: **Pallid Bat.**

- Prior to commencement of Project activities, a qualified biologist will survey for all suitable roosting habitat (e.g., manmade structures, trees, rock outcrops) within the Project Area proposed for removal and or disturbance. If no suitable roosting habitat is identified, no further measures are necessary.
- If suitable roosting habitat is identified, 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 is required prior to initiation of construction activities.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified biologist working for Project Applicant*

BIO-10: **Waters of the U.S. and State**

- For aquatic resources within the Glenborough Permit area where mitigation has not been purchased, purchased mitigation credits as required by the Glenborough Permit.

- For aquatic resources outside of the Glenborough Permit area, a permit authorization to fill wetlands under the Section 404 of the federal Clean Water Act (Section 404 Permit) will be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Final mitigation measures will be developed as part of the Section 404 Permit process to ensure no-net-loss of wetland function and values.
- For aquatic resources outside the Glenborough Permit area, a Water Quality Certification or waiver pursuant to Section 401 of the CWA must be obtained from the RWQCB for Section 404 permit actions.
- For aquatic resources outside the Glenborough Permit area, pursuant to the Porter-Cologne Water Quality Act, a permit authorization from the RWQCB is required prior to the discharge of material in an area that could affect Waters of the State. Mitigation requirements for discharge to Waters of the State will be developed in consultation with the RWQCB.

No features that may be subject to Section 1600 of the Fish and Game Code were identified in the Study Area; therefore, a Streambed Alteration Agreement from CDFW pursuant to Section 1602 of the California Fish and Game Code is not required.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *Project Applicant, City of Rancho Cordova, USACE, RWQCB*

BIO-11: **Tree protection.** The following measures are recommended to comply with the City of Rancho Cordova's Tree Preservation Ordinance if trees will be impacted as part of the Project:

- Prior to tree removal, an arborist survey will be conducted for any areas within the Project Area not previously surveyed (see Attachment C in Appendix B).
- If the proposed Project activities occur within the dripline of, or require the removal of, any trees, a Tree Permit will be required, and the City of Rancho Cordova tree ordinance shall be consulted for tree mitigation and preservation measures. This will include the development of a tree protection plan or its equivalent. This plan will provide arborist recommendations for preserved trees and general recommendations during and after construction activities as well as specific recommendations for long term maintenance.

Timing/Implementation: *Prior to Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, qualified arborist working for Project Applicant, Project Applicant*

4.5 Cultural Resources

Information from two reports is used in this Initial Study to provide a cultural resources background setting and impact analysis. The *Cultural Resources Inventory and Evaluation Report, Easton Research Park*

West, Sacramento County, California. Prepared for Easton Development Company LLC (ECORP 2021c, Cultural Resources Inventory Report] provides information on the cultural resources found in the 105.5-acre Project Area. Subsequent to the Cultural Resources Inventory Report, ECORP prepared the *Addendum Cultural Resources Inventory, Integrity Assessment, and Finding of Effect for the Easton Research Park West Project Offsite Improvements, Sacramento County California* [(ECORP 2021d), Cultural Resources Inventory Addendum, Appendix C] to evaluate an additional 18.08 acres of proposed offsite utility improvements that had not been previously surveyed by the 2020 efforts cited above. For the Cultural Resources Inventory Addendum, the Project description, cultural and regulatory context, methods, and background research from the Cultural Resources Inventory Report are incorporated by reference. The Cultural Resources Inventory Addendum report includes the results of the 2021 records search, pedestrian survey, integrity assessment, and finding of effects statement for the 18.08-acre offsite utility improvements areas. Appendix C also contains copies of required AB-52 tribal notification and consultation letters (see section 4.18 below). Due to confidentiality guidelines, Appendix C is included under separate cover.

4.5.1 Environmental Setting

The Project Area is located south of Highway 50 in the Sacramento Valley, a semi-suburban and rural area surrounded by primarily undeveloped lands with some industrial and commercial development. Suburban residential areas are to the north, and primarily rural lands with some industrial development are to the south, east, and west of the Project Area. Elevations range from 130 to 150 feet above mean sea level. The American River is 0.5 mile to the north, and Buffalo Creek is approximately 500 feet to the south.

4.5.1.1 Mining Geology

The Sierran region claims some of the most extensive placer mining dredge fields in the U.S. In California areas dredged for placer mining are found in alluvial and fluvial deposits, such as where the American, Yuba, and Feather rivers enter the Sacramento Valley and form extensive gravel plains and terraces. Ancient gold-bearing gravels were deposited by a stream system within the American River drainage basin that existed between one million and 10 million years ago during Pliocene and early Pleistocene times. The Project Area is less than one mile south of the present American River channel and it falls within the historic American River Mining District, also known as the Folsom Mining District (District). Gold-bearing gravels within the District are either in or near the American River or at the lower contacts of the Laguna and Mehrten Formations (Clark 1970). The gravels within the Laguna Formation, which were deposited approximately three million years ago during the early Quaternary, are inter-bedded with sand, silt, clay, and cobbles and reach a depth of around 100 feet. Volcanic debris of the Mehrten Formation lies beneath these surface stream gravels. In other places, gold-bearing gravels were capped by a hard agglomerate composed predominantly of volcanic debris. In the northeasterly margin of the mining district a thin veneer of gravels rest on a slate bedrock of Jurassic age.

The gold-bearing Laguna Formation (Pliocene) underlies the Project Area, capped by Holocene alluvium, and the fact that so much of the property had been mined indicates that gold-bearing deposits were present. Dredge mining completely obliterated the Holocene alluvium in order to access the underlying Laguna Formation (Clark 1970).

Due to dredging activities in the area, the soil throughout most of the Project Area has likely been significantly altered. Because of this alteration, the dredged areas have very low potential for buried cultural resources. Significant dredge fields are located adjacent to the south of the Project Area. The slickens areas between the rows of tailings consist of silty discarded dirt that has settled with water left over from the dredging, thus creating a soil resulting from recent human actions. However, the presence of more deeply buried deposits with potential for bearing archaeological materials may be in alluvium deposited by Buffalo Creek and the American River. A low potential exists for buried pre-contact archaeological sites in the Project Area because despite the dredge impacts, pre-contact archaeological sites are likely to be located along perennial waterways such as Buffalo Creek and the American River.

4.5.1.2 Cultural Resources

A Cultural Resources Inventory Report was prepared by ECORP Consulting, Inc. (ECORP 2013b, Appendix C) for the Proposed Project to determine if cultural resources were present in or adjacent to the Project area and assess the sensitivity of the Project area for undiscovered or buried cultural resources. The cultural context of the Project area including regional and local prehistory, ethnography, and regional and Project area histories can be found in the report in Appendix C.

The analysis of cultural resources was based on a records and literature search conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University on March 29, 2013, a literature review, and a field survey on August 29, 2013. The literature search included the results of previous surveys within a 0.5-mile (800 meters) radius of the Proposed Project location.

A search of the Sacred Lands File by the NAHC showed no Native American cultural resources in the Project area.

4.5.1.3 Prehistory

California's Great Central Valley has long held the attention of archaeologists and was a focus of early research in California. The Central California Taxonomic System describes a linear, uniform sequence of cultural succession in Central California, and explicitly defined Early, Middle, and Late horizons for cultural change (Heizer 1949). Fredrickson (1968) further defined three cultural patterns: The Windmiller (named after Heizer 1949 and Lillard et al. 1939), the Berkeley, and the Augustine patterns, and assigned them to the Early, Middle, and Late horizons of the Central California Taxonomic System. These patterns were defined to reflect the general sharing of lifeways within groups in a specific geographic region. The Windmiller pattern of the Early Horizon included cultural patterns dating from 5,000 to 3,000 before present (BP); the Berkeley Pattern of the Middle Horizon (also known as the Cosumnes cultural pattern after Ragir 1972), included cultural patterns dating from 3,000 BP to AD 500, and the Augustine Pattern of the Late Horizon included the cultural patterns from AD 500 to the historic period.

Fredrickson's (1974) Paleo-Archaic-Emergent cultural sequence was redefined by Rosenthal, White, and Sutton (2007). Rosenthal et al.'s recalibrated sequence is divided into three broad periods: The Paleoindian Period (11,550 to 8,550 cal. BC); the three-staged Archaic period, consisting of the Lower Archaic (8,550 to 5,550 cal. BC), Middle Archaic (5,550 to 550 cal. BC), and Upper Archaic (550 cal. BC to

cal. AD 1,100); and the Emergent Period (cal. AD 1,100 to Historic) (Rosenthal et al. 2007). 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.

4.5.1.4 Ethnography

Ethnographically, the Project Area is in the southwestern portion of the territory occupied by the Penutian-speaking Nisenan. The territory extends 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. In the east, it extended to a general area located within a few miles of Lake Tahoe. As a language, Nisenan (meaning "from among us" or "of our side") has three main dialects – Northern Hill, Southern Hill, and Valley Nisenan, with three or four subdialects. The Valley Nisenan lived along the Sacramento River, primarily in large villages with populations of several hundred each. Individual and extended families "owned" hunting and gathering grounds, and trespassing was discouraged. Residence was generally patrilocal, but couples actually had a choice in the matter (Wilson and Towne 1978).

Politically, the Nisenan were divided into "tribelets," made up of a primary village and a series of outlying hamlets, presided over by a more-or-less hereditary chief (Kroeber 1925; Wilson and Towne 1978). Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The chief had little authority to act on his or her own, but with the support of the shaman and the elders, the word of the chief became virtually the law (Wilson and Towne 1978). Subsistence activities centered around the gathering of acorns (tan bark oak and black oak were preferred), seeds, and other plant resources. The hunting of animals such as deer and rabbits, and fishing were also an important part of normal subsistence activities.

The Spanish arrived on the central California coast in 1769 and by 1776 the Miwok territory bordering the Nisenan on the south had been explored by José Canizares. In 1808, Gabriel Moraga crossed Nisenan territory, and in 1813, a major battle was fought between the Miwok and the Spaniards near the mouth of the Cosumnes River. Though the Nisenan appear to have escaped being removed to missions by the Spanish, they were not spared the ravages of European diseases. In 1833, an epidemic – probably malaria – raged through the Sacramento Valley, killing an estimated 75 percent of the native population. The discovery of gold in 1848 at Sutter's Mill, near the Nisenan village of *Colluma* (now Coloma) on the South Fork of the American River, drew thousands of miners into the area, and led to widespread killing and the virtual destruction of traditional Nisenan culture. By the Great Depression, no Nisenan remained who could remember the days before the arrival of the European-Americans (Wilson and Towne 1978).

4.5.1.5 Historic Context

The Project Area is on the peripheries of the city of Rancho Cordova. Subsequent to the discovery of gold at Coloma, immigrants began to pour into the Sierra Nevada foothills. In the spring of 1848, while on route 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 (Kyle 2002). Mississippi Bar is 3.5 miles north of the Project Area on the northern side of the American River.

The Project Area 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. The same year, the town was being laid out and the Sacramento Valley Railroad (SVR) was completed from Sacramento to Folsom in 1856. It facilitated shipment of goods from Sacramento to the mining areas to the east. The SVR was acquired by the Southern Pacific Railroad, which extended the line to Placerville in 1888 and became part of 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 (Folsom Historical Society 2017).

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. Chief among them were Alabama Bar, Slate Bar, Sailor Bar, Bean's Bar, Mississippi Bar, and Negro Bar. Mississippi Bar is north of the Project Area on the northern side of the American River. 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 Area 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 and from that circumstance the area became known as Negro Bar. By 1855, Chinese miners were reworking abandoned diggings and a large number of them were employed at various regional mines up through the 1880s (Westwood et al. 2011).

Initially, during the early 1850s, surface deposits (usually less than three 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 (such as Buffalo Creek, 0.7 mile north of the Project Area). Ground sluicing, a technique that uses water (not under pressure) to break down gold-bearing gravels, could have occurred any time from the 1850s up until the turn of the twentieth century. Low-pressure hydraulic mining took place at Rebel Hill sometime between the mid-1850s and 1884.

The Project Area is within the boundaries of the American River Placer Mining District (ARPMD). The ARPMD consists of smaller districts such as the Alder Creek Corridor Mining District (ACCMD), Prairie Diggings Mining District, and others, and 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 ARPMD includes extensive diggings, mining camps, and canals and ditch systems, which encompass areas inland from the American River, including the Project Area.

The advent of hydraulic mining methods used during the California Gold Rush can be attributed to the inventions of Antoine Chabot and Edward E. Matteson. Chabot was a French-Canadian sailor working in diggings outside of Nevada City when he invented a novel method to move water for his ground sluicing operation. He stitched heavy canvas, such as that used for sails, and cut up saddlebags to fashion a six-inch-diameter, 100-foot hose. The successful invention inspired other miners to follow suit.

The profits from the hydraulic mines were much greater than those of other forms of mining, and it is estimated hydraulic mining produced 90 percent of California's gold for nearly three decades. It required much less manpower to gather and process much more gravels for gold extraction. However, it caused rivers and streams to be clogged with sediment, causing severe environmental damage. In addition, open mining flumes would fill with debris, causing the miners to completely abandon some operations and move on to diggings with more water available. This activity left further blight on the landscape.

Lawsuits were filed attempting to block hydraulic mining. One of these suits was Woodruff v. North Bloomfield Gravel Mining Company, which resulted in a federal court ruling in 1884 that effectively banned the practice of hydraulic mining in California. After three years of court battles, Judge Lorenzo Sawyer finally issued a decree making the practice illegal. His action led communities such as Humbug to fall into decline, and many were eventually abandoned (Brower 2006). However, there was a loophole: hydraulic mines were allowed to operate if their owners constructed tailings dams to prevent debris from getting into the watersheds of the Sacramento and San Joaquin rivers and their tributaries. The Caminetti Act was passed in 1893, creating the California Debris Commission. One could obtain a hydraulic mining license from this commission if one's mine was assayed to assure all debris dams were built in sufficient compliance with certain regulations.

The closing of the hydraulic mines had a positive environmental effect, but a deleterious financial effect on Sacramento County, and California as a whole. It is estimated that during the first year after the decision, gold production in the state dropped by $10,000,000.

Lode, or hard rock, mining seeks to recover mineral deposits that are embedded in fissures or veins. Unlike placer mining deposits, the matrix surrounding the mineral must be crushed or chemically treated in order to be released and harvested. As such, the mining activities associated with lode mining required more complex technologies, skilled labor, and capital investment. Hence, lode mining was somewhat riskier than placer mining.

The range of lode mining technologies is vast, but the oldest method for extraction of this type was through the exploration of surface veins using picks, bars, and shovels. Larger operations used wheelbarrows, ore carts, and arrastras. Square vertical shafts or horizontal adits or tunnels were the most common surface manifestations of lode mining. Archaeologically, lode mining is most often represented by the presence of shafts, adits, and waste piles. Foundations of ore processing facilities can also be observed at larger operations.

By the early 1960s all profitable mining deposits in the area had been exploited and mining activity in the Project Area 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 also creating Folsom Lake, which attracted development of homes and recreational facilities, enticing many residents and recreational visitors to the area (U.S. Bureau of Reclamation 2009).

Aerojet

Aerojet is a major rocket and missile propulsion manufacturer. Its origins began in 1936 when Dr. Theodore von Karman, director of the Guggenheim Aeronautics Laboratory at Cal Tech, was awarded a U.S. Army research project to develop rocket engines to launch aircraft. Aerojet became the first major U.S. company to develop expertise in both liquid and solid propellant rockets. The company officially formed on March 19, 1942, in Azusa, California, as Aerojet Engineering. Shortly thereafter, rapid company growth led them north to Rancho Cordova, where they found abandoned Natomas Company property that lay in disrepair following the decades of gold dredging (Aerojet 2007).

The land where Aerojet eventually set up operations had been deemed unsuitable for farming because of the extensive mine tailings, which were composed of millions of softball-sized rocks piled in furrows 50 feet high and several hundred yards long (Aerojet 2007). Aerojet found, however, that the tailings served as excellent natural barriers for rocket testing. Needing room to expand its growing rocketry business, Aerojet purchased the 7,200 acres of land in the late 1940s. It purchased the portion of the property containing the Project Area from the Natomas Company in 1952, and one year later, the Rancho Cordova plant opened. Eventually, Aerojet expanded to 25,000 acres, making it the largest facility for rocket engine development, testing, and production in the free world. At its peak, the company was virtually a city with up to 23,000 employees and boasted a bus line, fire and police departments, a waste disposal facility, medical center, cafeteria, and planning commission (ECORP 2007).

In the late 1950s, Aerojet was selected to develop and build the main engine for the Apollo Command/Service Module. In 1969, Aerojet-manufactured rocket motors sent astronauts to the moon, and in the 1970s developed the second stage motor for the MX missile, the thruster systems for the Space Shuttle, and the first U.S.-designed cluster bombs. The company continued research and development of solid and liquid propulsion systems until recently, when Aerojet announced a consolidation of its facilities across the county and opted to close and redevelop the facility into other uses (ECORP 2007).

4.5.2 Architectural Context

The four buildings within the Project Area each serve a utilitarian function for the property. The buildings on the property are vernacular utility buildings that were built using common materials and techniques known locally and do not represent a specific or unique architectural style.

4.5.3 Regulatory Framework

The National Historic Preservation Act (NHPA) and CEQA (Title 14, CCR, Article 5, §15064.5) apply to cultural resources of the historical and prehistoric periods. Any project with an effect that may cause a

substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant effect on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historical Resources (CRHR) (Public Resources Code §5024.1, Title 14 CCR, § 4852) or the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

4.5.4 Cultural Resources Analysis

The Project Area included the proposed 105.5-acre development project, an additional 18.08 acres adjacent to the northern, southwestern, and southeastern boundaries of the Project Area for storm water channels and sewer pipeline connections, and 23.52 acres for a proposed potable water line that extends eastwards from Hazel Avenue into the 1,533-acre Glenborough property. The proposed offsite potable water pipeline area within the Glenborough property had been previously surveyed under CEQA and Section 106 of the NHPA starting in 2003 (ECORP 2007). In 2011, an Environmental Impact Report (EIR) was certified for the Easton Development (that included Glenborough), and the State Historic Preservation Officer, in consultation with the USACE under Section 106, developed a Historic Property Treatment Plan (HPTP; ECORP 2016) to mitigate adverse effects to Historic Properties for Glenborough. The cultural chapter for the EIR and documentation of consultation on the HPTP are provided in Attachment B of Appendix C.

The cultural resources analysis was based on a records and literature search conducted at the North Central Information Center of the CHRIS at Sacramento State University on January 28,2020, a search of the Native American Heritage Commission's (NAHC) Sacred Lands File, a literature review, and a field survey. The field survey of the 105.5-acre Project site was conducted March 5, 2020 and November 1, 2019; and The field survey of the 18.08-acre off-site utility disturbance areas included in the Cultural Resources Inventory Addendum was conducted on June 25, 2021. The literature search included the results of previous surveys within a 0.5-mile (800-meter) radius of the entire Project location.

In addition to the official records and maps for archaeological sites and surveys in Sacramento County, the following historic references were also reviewed: Historic Property Data File (Built Environment Resources Directory) for Sacramento County (OHP 2012); *The National Register Information System* (National Park Service 2020); *Office of Historic Preservation, California Historical Landmarks* (OHP 2021); *California Historical Landmarks* (OHP 1996 and updates); *California Points of Historical Interest* (OHP 1992 and updates); *Directory of Properties in the Historical Resources Inventory* (1999); *Caltrans Local Bridge Survey* (Caltrans 2019); *Caltrans State Bridge Survey* (Caltrans 2018); and *Historic Spots in California* (Kyle 2002).

Other references examined include a RealQuest Property Search and historic General Land Office land patent records (Bureau of Land Management 2020). A search of the Sacred Lands File by the NAHC was negative for Native American cultural resources in the Project Area.

4.5.4.1 Known Historic and Cultural Resources in the Project Area

The records search, literature review, and field surveys resulted in identification of the following historic-period resources in the Project Area:

- The ARPMD (P-34-335), a regional mining district on paper, which includes not just the current Project Area but the entire Folsom region and is being treated as eligible to the CRHR for the purposes of this Project. ARPMD, the Folsom Mining District, and CA-SAC-308H are all recognized as one and the same. No features associated with the District are present within any part of the Project Area.
- Building 49013 (P-34-1900., This historic-period building was previously recorded and evaluated as not eligible in 2007 by Past Forward and ECORP as a large, metal rectangular warehouse, 100 by 250 feet, with a metal gable roof and concrete floor built in 1962. During the current inventory, the building is no longer within the Project area as it has been demolished and removed from the property sometime between 2012 and 2013.
- Building 49016 (P-34-2184). This historic-period building was previously recorded and evaluated as not eligible in 2008 by Past Forward and ECORP as a long rectangular (85 feet east-west by 240 feet north-south) corrugated steel building with a flat roof, built between 1954 and 1961. During the current inventory, the building is no longer within the Project area as it has been demolished and removed from the property sometime between 2012 and 2013.
- Building 49022 (P-34-2185). This historic-period building was previously recorded and evaluated as not eligible in 2008 by Past Forward and ECORP as a ECORP as a rectangular (20 by 65 feet) steel corrugated shed with a gable roof that has been abandoned for 15 years, built between 1954 and 1961. During the current inventory, the building is no longer within the Project area as it has been demolished and removed from the property sometime between 2012 and 2013.
- Building 49015 (P-34-2183). This historic-period building was previously recorded and evaluated as not eligible in 2008 by Past Forward and ECORP as a ECORP as a rectangular (300 by 220 feet) corrugated steel structure with a flat steel roof with a slab concrete floor built between 1954 and 1961. During the current inventory, the industrial building remains within the Project Area. The building is a typical large warehouse with large metal roll up doors, flat roof, covered loading docks at the northern and southern façades, and no windows (Figures 10 and 11). The building is currently vacant. In 2011, the USACE and State Historic Preservation Officer (SHPO) concurred with the evaluation of not eligible during consultation associated with the adjacent Glenborough at Easton and Easton Place Project.
- The Natomas-Aerojet Dredge Fields (NADF) (CA-SAC-1013H), a mining district that was previously determined not eligible for the NRHP or CRHR by SHPO as part of the adjacent Glenborough at Easton and Easton Place Project. Assuming that the reviewing agencies extend that finding to the current Project Area, the NADF does not constitute a Historical Resource under CEQA or a Historic Property under NHPA. Regardless, no evidence of mining-related features that could be associated with this resource were observed within the Project Area; and

- The Southern Pacific Railroad (P-34-455) has been previously determined eligible for the NRHP and CRHR; however, the portion of this resource within the Project Area does not retain integrity to its period of significance; the economic development of California as it relates to the growth of Folsom and Sacramento from 1907 to 1950.

4.5.4.2 Newly Identified Resources

As a result of field survey, four historic-period buildings and one historic-period roadway segment were recorded within the Project Area. Building descriptions and evaluations follow, and confidential Department of Parks and Recreation (DPR) site records are provided in Attachment D of Appendix C.

- **ER-49011 Building 49011**. This resource is a historic-period building. The Building 49011 is a large rectangular (300 by 230 feet) corrugated steel structure with a flat steel roof with a slab concrete floor built between 1954 and 1961. During the current inventory, the industrial building remains within the Project Area and currently in use. The building is a typical large warehouse with corrugated sheet metal siding, large metal roll-up doors, flat roof, and covered loading docks at the eastern-facing façade This building has not been previously evaluated for eligibility; however, it is noteworthy that none of the accompanying buildings and structures were found to be significant when formally evaluated (ECORP 2020a). ECORP's evaluation of ER-49011 using CRHR and HRHP eligibility criteria found that it is not eligible for the CRHR (ECORP 2021a).
- **ER-49020 Building 49020**. This historic-period building is a rectangular (50 by 100 feet) steel corrugated building that was built between 1952 and 1961. Building 49020 and Building 49021 are located approximately 100 feet apart. This building has not been evaluated for eligibility; however, it is noteworthy that none of the accompanying buildings and structures were found to be significant when formally evaluated (ECORP 202a0). ECORP's evaluation of ER-49020 using CRHR and NRHP eligibility criteria found that it is not eligible for the CRHR (ECORP 2021a).
- **ER-49021 Building 49021**. This historic-period building is a rectangular (50 by 100 feet) steel corrugated building that was built between 1952 and 1961. This building is of the same architectural style and construction as Building 49020. This building has not been evaluated for eligibility; however, it is noteworthy that none of the accompanying buildings and structures were found to be significant when formally evaluated (ECORP 2020a). ECORP's evaluation of ER-49021 using CRHR and HRHP eligibility criteria found that it is not eligible for the CRHR (ECORP 2021a).
- **ER-49024 Building 49024**. This historic-period building is a rectangular (200 by 100 feet) open-air steel building that was built between 1961 and 1964. This building has not been evaluated for eligibility; however, it is noteworthy that none of the accompanying buildings and structures were found to be significant when formally evaluated (ECORP 2020a). ECORP's evaluation of ER-49024 using CRHR and HRHP eligibility criteria found that it is not eligible for the CRHR (ECORP 2020a).
- **P-34-1678** consists of a segment of Folsom Boulevard, a historic-period road alignment. Review of historical topographic maps and aerials indicate that the road was likely constructed before 1914, with improvements in several decades through the 1900s. Folsom Boulevard, historically, has travelled parallel to the Southern Pacific Railroad. Originally a dirt road, it was paved around

1920. Folsom Boulevard was likely converted to the paved four-lane-road it is today in the 1980s. The segment of Folsom Boulevard within the Project Area is part of a 3.13-mile segment that was just a portion of the original road, which ran from eastern Sacramento to the City of Folsom paralleling the western side of the Sacramento Valley Railroad, providing direct access from Sacramento to Folsom in the 1850s to transport people and goods (ECORP 2021d).

For the purposes of this Project alone, the resource is being treated as eligible for both the NRHP and CRHR. As detailed in the Cultural Resources Inventory Addendum (Appendix C) ECORP assessed the significance of Project impacts to Folsom Boulevard associated with two sanitary sewer connections that would require trenching into small areas of Folsom Boulevard and provided a Finding of Effect statement pursuant to Title 36 CFR Part 800.5, Assessment of Adverse Effects, to support Section 106 consultation for the Project's anticipated Section 404 permit. This Finding of Effect also assesses the Project's impacts to a Historical Resource (as defined by CEQA) [CCR Title 14, Section 15064.5(a)].

4.5.5 Cultural Resources (V) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

The cultural resources inventory and evaluation of the Project Area (ECORP 2021c and 2021d) resulted in the following findings:

- P-34-335/CA-SAC-308H, the Folsom Mining District/ARPMD, is a 70-square-mile mining landscape that is being treated as eligible for the NRHP and CRHR. It is mapped over the Project Area but does not have any physical manifestations and, therefore, lacks sufficient integrity within the Project Area. No features associated with this District are present within any part of the Project Area (ECORP 2020a). Thus, the District would not be affected by the Project.
- P-34-1710/CA-SAC-1013-H, the NADF, has been previously recorded within the Project Area; however, it was also previously determined to be not eligible for the NRHP and CRHR by the USACE with SHPO concurrence. Moreover, no features associated with this are present within any part of the Project Area (ECORP 2020a).
- P-34-2183, Building 49015, a historic-period building previously recorded and determined to be not eligible for the NRHP or CRHR, is present within the Project Area.
- ER-49011, a historic-period building, is present within the Project Area and determined to be not eligible for the NRHP or CRHR.

- ER-49020, a historic-period building, is present within the Project Area and determined to be not eligible for the NRHP or CRHR.
- ER-49021, a historic-period building, is present within the Project Area and determined to be not eligible for the NRHP or CRHR.
- ER-49024, a historic-period building, is present within the Project Area and determined to be not eligible for the NRHP or CRHR.
- P-34-1900 (Building 49013), P-34-2184 (Building 49016), and P-34-2185 (Building 49022) have been previously determined to be not eligible for the NRHP and CRHR and were since demolished and no longer exist within the Project Area.
- The Southern Pacific Railroad (P-34-455) is a linear Historical Resource according to CEQA; however, the portion of this resource within the Project Area does not retain integrity to its period of significance and, therefore, does not contribute to the resource's eligibility, and any alteration or removal of this segment of the railroad within the Project Area would not affect the resource's eligibility overall.
- Folsom Boulevard (P-34-1678) is a linear resource being treated as a Historical Resource according to CEQA, and a Historic Property, according to Section 106, for this Project alone. ECORP applied the criteria of adverse effect and found that the Project's excavation of 4-foot-wide, shored trenches through Folsom Boulevard to install new sewer lines at the two locations would not have an adverse effect or significant impact on this resource. Because the overall road and all of its elements would remain in place, the trench and the underground jack and bore beneath the road would not alter the road's overall integrity of location and would not change the historical association that the road has with the development of the region, Sacramento and Placer Counties, and communities of Folsom, Rancho Cordova, and Sacramento. This historical association would remain with no changes after the Project is implemented. In addition, the design of the road overall, visible on the landscape and from above, would remain largely intact despite this minor temporary alteration. The alterations to this small section of road would not affect the materials and workmanship of the overall engineering structure. Therefore, although the Project would have a minor affect/impact to this historical resource, the impact would be less than significant.

Dredging and other mining activity in the area has altered the soils in the Project Area, replacing Holocene alluvium and leaving them unlikely to contain buried cultural deposits. However, a moderate potential exists for buried historic-period resources due to the robust history of mining in the Project Area and vicinity. Thus, project construction may uncover unknown archeological resources. Mitigation measures **CUL-1** and **CUL-2** will be implemented by the City of Rancho Cordova to reduce this potentially significant impact to **less than significant levels with mitigation incorporated**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

As discussed above, there are no known archaeological resources within the Project Area. However, there exists a low potential for buried pre-contact archaeological sites in the Project Area because despite the dredge impacts, pre-contact archaeological sites are likely to be located along perennial waterways such as Buffalo Creek and the American River. Thus, project construction may uncover unknown archeological resources. Mitigation measures **CUL-1** and **CUL-2** will be implemented by the City of Rancho Cordova to reduce this potentially significant impact to **less than significant levels with mitigation incorporated**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

As discussed above, there are no known dedicated cemeteries within the Project Area. However, there exists a low potential for buried pre-contact or historical human remains in the Project Area because despite the dredge impacts, pre-contact archaeological sites are likely to be located along perennial waterways such as Buffalo Creek and the American River. Thus, project construction may disturb unknown human remains. Mitigation measures **CUL-1** and **CUL-2** will be implemented by the City of Rancho Cordova to reduce this potentially significant impact to **less than significant levels with mitigation incorporated**.

4.5.6 Mitigation Measures

The following mitigation measures be adopted and implemented by the lead agency to reduce potential adverse impacts to less than significant.

CUL-1: Discovery of Unknown Archeological Resources

- If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 50-foot radius of the discovery. The qualified archaeologist shall be called upon 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, he or she 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 eligible for inclusion in the California Register of Historic Resources (CRHR) or National Register of Historic Places (NRHP). 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 eligible for or CRHR or NRHP; or 2) that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova and qualified archeologist working for Project Applicant*

CUL-2: **Discovery of Unknown Human Remains.** If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 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 Native American Heritage Commission (NAHC), who then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 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 may mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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 City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.

Timing/Implementation: *During Project construction*

Enforcement/Monitoring: *City of Rancho Cordova, Project Proponents, Sacramento County Coroner, NAHC*

4.6 Energy

4.6.1 Environmental Setting

Energy consumption is analyzed in this Initial Study due to the potential direct and indirect environmental impacts associated with the Proposed Project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants. It is noted that energy use/consumption was not analyzed in the General Plan EIR.

4.6.1.1 Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (California Energy Commissions [CEC] 2018a). The Sacramento Municipal Utility District (SMUD) provides electricity to the majority of Sacramento County, including the Project site. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. The Pacific Gas and Electric Company (PG&E) provides natural gas to most of the northern two-thirds of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona State Line. It provides 5.2 million people with natural gas across 70,000 square miles.

The California Public Utilities Commission (CPUC) regulates SMUD and PG&E. The CPUC has developed energy efficiency programs such as smart meters, low-income programs, distribution generation programs, self- generation incentive programs, and a California solar initiative. Additionally, the CEC maintains a power plant data base that describes all of the operating power plants in the state by county. Sacramento County contains 48 power plants generating electricity, of which 19 are solar-powered, five are natural gas-fired, two are biomass-powered, and two are hydro-powered (CEC 2019).

4.6.1.2 Existing Transmission and Distribution Facilities

The components of transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. The United States contains over a quarter million miles of transmission lines, most of them capable of handling voltages between 115 kilovolts (kv) and 345 kv, and a handful of systems of up to 500 kv and 765 kv capacity. Transmission lines are rated according to the amount of power they can carry, the product of the current (rate of flow), and the voltage (electrical pressure). Generally, transmission is more efficient at higher voltages. Generating facilities, hydro-electric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From there, the energy proceeds through switching facilities to the transmission lines. At various points in the system, the energy is "stepped down" to lower voltages for distribution to customers. Power lines are either high voltage (115, 230, 500, and 765 kv) transmission lines or low voltage (12, 24, and 60 kv) distribution lines. Overhead transmission lines consist of the wires carrying the electrical energy (conductors), insulators, support towers, and grounded wires to protect the lines from lightening (called shield wires). Towers must meet the structural requirements of the system in several ways. They must be able to support both the electrical wires, the conductors, and the shield wires

under varying weather conditions, including wind and ice loading, as well as a possible unbalanced pull caused by one or two wires breaking on one side of a tower. Every mile or so, a "dead-end" tower must be able to take the strain resulting if all the wires on one side of a tower break. Every change in direction requires a special tower design. In addition, the number of towers required per mile varies depending on the electrical standards, weather conditions, and the terrain. All towers must have appropriate foundations and be available at a fairly regular spacing along a continuous route accessible for both construction and maintenance. A right-of-way is a fundamental requirement for all transmission lines. A right-of-way must be kept clear of vegetation that could obstruct the lines or towers by falling limbs or interfering with the sag or wind sway of the overhead lines. If necessary, land acquisition and maintenance requirements can be substantial. The dimensions of a right-of-way depends on the voltage and number of circuits carried and the tower design. Typically, transmission line rights-of-way range from 100 to 300 feet in width. The electric power supply grid within Sacramento County is part of a larger supply network operated and maintained by SMUD.

The California Independent System Operator (CAISO) manages the flow of electricity across the high-voltage, long-distance power lines (high-voltage transmissions system) that make up 80 percent of California's and a small part of Nevada's grid. This nonprofit public benefit corporation keeps power moving to and throughout California by operating a competitive wholesale electricity market, designed to promote a broad range of resources at lower prices, and managing the reliability of the electrical transmission grid. In managing the grid, CAISO centrally dispatches generation and coordinates the movement of wholesale electricity in California. As the only independent grid operator in the western U.S., CAISO grants equal access to 26,000 circuit miles of transmission lines and coordinates competing and diverse energy resources into the grid where it is distributed to consumers. Every five minutes, CAISO forecasts electrical demand and dispatches the lowest cost generator to meet demand while ensuring enough transmission capacity for delivery of power.

CAISO conducts an annual transmission planning process that uses engineering tools to identify any grid expansions necessary to maintain reliability, lower costs or meet future infrastructure needs based on public policies. CAISO engineers design, run and analyze complex formulas and models that simulate grid use under wide-ranging scenarios, such as high demand days coupled with wildfires. This process includes evaluating power plant proposals submitted for study into the interconnection queue to determine viability and impact to the grid. The long-term comprehensive transmission plan, completed every 15 months, maps future growth in electricity demand and the need to meet state energy and environmental goals that require the CAISO grid to connect to renewable-rich, but remote areas of the Western landscape. CAISO promotes energy efficiency through resource sharing. CAISO electricity distribution management strategy designed so that an area with surplus electricity can benefit by sharing megawatts with another region via the open market. This allows the dispatch of electricity as efficiently as possible. By maximizing megawatts as the demand for electricity increases, CAISO helps keep electricity flowing during peak periods.

4.6.1.3 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all nonresidential uses in Sacramento County from 2015 to 2019 is shown in Table 4.6-1. As indicated, the demand has remained relatively constant since 2015.

Table 4.6-1. Non-Residential Electricity Consumption in Sacramento County 2015-2019

Year	Electricity Consumption (kilowatt hours)
2019	6,136,822,611
2018	6,154,586,726
2017	6,182,143,334
2016	5,989,984,321
2015	6,123,970,614

Source: CEC 2020

The natural gas consumption associated with all uses in Sacramento County from 2015 to 2019 is shown in Table 4.6-2. As indicated, the demand has increased since 2015.

Table 4.6-2. Natural Gas Consumption in Sacramento County 2015-2019

Year	Natural Gas Consumption (therms)
2019	112,001,868
2018	110,946,285
2017	109,925,151
2016	105,200,835
2015	102,835,605

Source: CEC 2020

Automotive fuel consumption in Sacramento County from 2016 to 2020 is shown in Table 4.6-3. Fuel consumption has decreased since 2016.

Table 4.6-3. Automotive Fuel Consumption in Sacramento County 2016-2020

Year	Total Fuel Consumption (gallons)
2020	557,639,300
2019	640,274,600
2018	637,162,700
2017	635,998,400
2016	624,072,500

Source: CARB 2021

4.6.2 Regulatory Framework

4.6.2.1 State

Senate Bill (SB) 350

In October 2015, the legislature approved, and the Governor signed, SB 350, which reaffirms California's commitment to reducing its greenhouse gas emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide greenhouse gas emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the CPUC, the CEC, and local publicly owned utilities.
- Reorganize the CAISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

Established in 2002 under SB 1078 and accelerated by SB 107 (2006) and SB 2 (2011), California's RPS obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS to include biodiesel; biomass; hydroelectric and small hydro (30 megawatts or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal; landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. Governor Edmund Gerald (Jerry) Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 60 percent of the total electricity sold to retail customers in California per year by December 31, 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, establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the CAISO 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 CAISO to those markets, pursuant to a specified process.

Senate Bill 100

In 2018, SB 100 (the California 100 Percent Clean Energy Act) was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045, Specifically, SB 100 sets the goal of powering the state with 100 percent clean and carbon free electricity by 2045.

4.6.3 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

Less than significant impact.

The impact analysis focuses on the sources of energy that are relevant to the Proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. For the purpose of this analysis, the amount of electricity and natural gas estimated to be consumed by the Project is quantified and compared to that consumed by all non-residential land uses in Sacramento County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Sacramento County.

The analysis of electricity gas and natural gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see Appendix A), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Sacramento County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Energy consumption associated with the Proposed Project is summarized in Table 4.6-4.

Table 4.6-4. Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Building Energy Consumption		
Electricity Consumption[1]	19,237,800 kilowatt-hours	0.313 percent
Natural Gas[1]	0 therms	0.000 percent
Automotive Fuel Consumption		
Project Construction		
Demolition & Grading Year One	46,305 gallons	0.008 percent
Demolition & Grading Year Two	43,941 gallons	0.007 percent
Demolition & Grading Year Three, Stormwater Drainage & Sewer Connection	72,906 gallons	0.013 percent
Phase 1 Building Construction, Year One	77,143 gallons	0.013 percent

Table 4.6-4. Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Phase 1 Building Construction, Year Two	78,030 gallons	0.014 percent
Phase 2 Building Construction, Year One	80,887 gallons	0.014 percent
Phase 2 Building Construction, Year Two	80,394 gallons	0.014 percent
Phase 3 Building Construction, Year One	86,404 gallons	0.015 percent
Phase 3 Building Construction, Year Two	95,074 gallons	0.017 percent
Phase 4 Building Construction, Year Two	66,798 gallons	0.011 percent
Phase 4 Building Construction, Year Two	67,882 gallons	0.012 percent
Project Operations[2]	312,986 gallons	0.056 percent

Source: [1]CalEEMod; [2]Climate Registry 2016; [3]EMFAC2021 (CARB 2021)
Notes: The Project increases in electricity and natural gas consumption are compared with all of the non-residential buildings in the Sacramento County, respectively, in 2019, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2020, the most recent full year of data.
Project natural gas consumption accounts for implementation of SMAQMD Tier 1 BMPs (see Section 4.8 below).

Operations of the Proposed Project would consume electricity from lighting, space and water heating, and landscape maintenance activities. As shown in Table 4.6-4, the annual electricity consumption due to operations would be 19,237,800 kilowatt-hours resulting in an approximate 0.313 percent increase in the typical annual electricity consumption attributable to all non-residential uses in Sacramento County. However, this is potentially a conservative estimate. In September 2018 Governor Brown Signed Executive Order (EO) B-55-18, which established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net zero carbon dioxide (CO_2) emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for greenhouse gas emission reduction. Governor's Executive Order B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." Furthermore, as described in detail under Section 4.8, Greenhouse Gas Emissions, the Project is required to be designed and constructed without natural gas infrastructure and therefore would not consume natural gas resources once operational. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project site. The fuel expenditure necessary to construct the physical building and infrastructure would be temporary, lasting only as long as Project construction. As further indicated in Table 4.6-4, Project construction is anticipated to span several years with the greatest estimated single-year fuel use of 95,074 gallons. This would increase the annual countywide gasoline fuel use in the county by 0.017 percent. As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel

fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

The Project is estimated to generate approximately 2,080 daily trips (Fehr & Peers 2021). As indicated in Table 4.6-4, this would equate to a consumption of approximately 312,986 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.056 percent. The amount of operational fuel use was estimated using CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Sacramento County. This analysis conservatively assumes that all of the automobile trips projected to arrive at the Project during operations would be new to Sacramento County. Further, a liberal approach was taken for vehicle trip estimation to ensure potential impacts due to operational gasoline usage were adequately accounted for. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

For these reasons, this impact would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Less than significant impact.

All future buildings associated with the Proposed Project be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the CCR (Title 24). Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years; the 2016 standards became effective January 1, 2017. The 2019 Title 24 updates went into effect on January 1, 2020. The 2019 Energy Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 Energy Standards are a major step toward meeting Zero Net Energy. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.

For these reasons, this impact would be **less than significant**.

4.6.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Environmental Setting

Rancho Cordova and the surrounding area, except for the banks of the American River, are predominantly flat with slopes generally not exceeding two percent. The Project Area is generally flat with little to no slope. Elevation is approximately 140-150 feet above mean sea level (AMSL).

Gold-bearing gravels within the District are either in or near the American River or at the lower contacts of the Laguna and Mehrten Formations (Clark 1970). The gravels within the Laguna Formation, which were deposited approximately three million years ago during the early Quaternary, are inter-bedded with sand, silt, clay, and cobbles and reach a depth of around 100 feet. Volcanic debris of the Mehrten Formation lies beneath these surface stream gravels. In other places, gold-bearing gravels were capped by a hard agglomerate composed predominantly of volcanic debris representing a local mud-flow facies of the Miocene Mehrten formation.

The gold-bearing Laguna Formation (Pliocene) underlies the Project Area, capped by Holocene alluvium, and the fact that so much of the property had been mined indicates that gold-bearing deposits were present. Dredge mining completely obliterated the Holocene alluvium in order to access the underlying Laguna Formation (Clark 1970). Due to dredging activities in the area, the soil throughout most of the Project Area has likely been significantly altered.

Based on previous investigations, subsurface geologic materials consist of spoils from historical gold dredging operations. The dredged material (mostly clayey/silty gravels and cobbles) extends from the surface to a depth of approximately 27 to 30 feet below ground surface (bgs) (Stantec 2020). The dredged area appears thin to the north, near the railways and Folsom Boulevard. Geologic materials beneath the dredged material typically consist of finer-grained materials with lenses of sandy silt and poorly graded fine sand.

4.7.1.1 Geomorphic Setting

The Aerojet properties south of U.S. Highway 50, including the Project properties, are located within the Sacramento Valley portion within the Great Valley Geomorphic Province (Great Valley), which includes the area known as the Great Central Valley of California. The Great Valley extends 400 miles north to south and 60 miles east to west and is encompassed by the Coast Ranges (metamorphic), the Klamath Ranges (metamorphic), the Cascade Range (volcanic), and the Sierra Nevada Range (granitic and metamorphic). The Great Valley consists of an elongated structural trough that has been filled with a sequence of sedimentary deposits to depths greater than 20,000 feet ranging in age from Jurassic to recent. Geophysical evidence suggests that the Great Valley is underlain at depth with granitic rocks of the Sierra Nevada Province. The majority of rocks and deposits found within the Great Valley Geomorphic Province are sedimentary. The age of these rocks and deposits ranges from Upper Jurassic (between 154 and 135

million years ago) to recent (California Geological Survey [CGS] 2002). At the latitude of the site, the Sacramento Valley is approximately 45 miles wide.

The underlying geomorphology in the majority of the Project Area is quaternary alluvium and marine deposits dating from Pliocene to Holocene, and the southeastern corner of the Project Area is Plio-Pleistocene loosely consolidated shale, sandstone, and gravel deposits (Jennings et al. 1977).

4.7.1.2 Site Soils

According to the USDA's National Resources Conservation Service (NRCS) via the Web Soil Survey database (NRCS 2021), four soil types are located within the Project Area, as shown in Table 4.7-1: Urban Land Natomas Complex (228) 0 to 2 percent slopes, well-drained soils derived from alluvium; Xerorthents, dredge tailings (245) 2 to 50 percent slopes, found on channels, floodplains, and toeslopes; Natomas Loam (181), 0 to 2 percent slopes, comprised of deep, well-drained soils on low streams and terraces formed in alluvium derived from mixed rock sources; and Urban Land (227).

The Web Soil Survey also identifies drainage, flooding, erosion, runoff, frost action, and the linear extensibility potential for the Project soils. According to this survey, the Project soils are moderately well drained and somewhat excessively drained, have a low to moderate runoff potential, and have no potential for flooding or frost action. The Project site soils also have a slight to moderate erosion potential and low to moderate linear extensibility (shrink-swell) (NRCS 2021).

Table 4.7-1. Project Area Soil Characteristics

Soil (Map Unit Symbol, Map Unit Name)	Percentage of Site	Drainage	Flooding Frequency Class	Frost Action[1]
228, Urban Land Natomas Complex, 0 to 2 percent slopes	7	ND	None	None
245, Xerorthents Dredge Tailings 2 to 50 percent slopes	1	Somewhat excessively drained	None	None
181, Natomas Loam, 0 to 2 percent slopes	48	Well drained	None	None
227, Urban Land	44	ND	ND	ND
	Runoff Potential[2]	**Linear Extensibility[3]**	**Erosion Hazard[4]**	
228, Urban Land Natomas Complex, 0 to 2 percent slopes	A(low)	ND	Slight	
245, Xerorthents Dredge Tailings 2 to 50 percent slopes	A (low)	1.5%, low	Slight	
181, Natomas Loam, 0 to 2 percent slopes	C (moderate)	3.1% (low-moderate)	Slight	
227, Urban Land	ND	ND	ND	

Table 4.7-1. Project Area Soil Characteristics				
Soil (Map Unit Symbol, Map Unit Name)	**Percentage of Site**	**Drainage**	**Flooding Frequency Class**	**Frost Action[1]**

Source: NRCS 2021
Notes:
ND = No data in Soil Survey Report for this parameter

1. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.
2. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation.
   Group A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet.
   Group B: Soils having a moderate infiltration rate when thoroughly wet.
   Group C: Soils having a slow infiltration rate when thoroughly wet.
   Group D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.
3. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%, moderate if 3 to 6%, high if 6 to 9%, and very high if more than 9%. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.
4. The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.

4.7.1.3 Regional Seismicity and Fault Zones

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one which has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term sufficiently active was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term well-defined, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2011).

The Project Area is situated relatively equidistant from major faults in Northern California and Nevada and is not within or adjacent to an Alquist-Priolo Earthquake Fault Zone or a seismic hazard zone. The nearest known active fault mapped is the Dunnigan Hills fault, located approximately 19 miles northwest of the City of Sacramento, which is estimated to be capable of producing an earthquake with a maximum possible Richter Scale magnitude of 6.0 (County of Sacramento 2008. The nearest branches of the active San Andreas Fault system are the Antioch, Green Valley and Concord faults, which are approximately 50

miles southwest of the Project Area. Other major active faults are the Hayward and Calaveras faults to the southwest, the Healdsburg-Rogers Creek fault to the west, the Bear Mountain and New Melones faults to the east, and the Stockton and Greenville faults to the south. Active faulting has not been mapped through or near the Project Area. No known late Quaternary faults pass near or trend directly toward the Project Area as designated by the Alquist-Priolo Earthquake Fault Zone Act (California Geological Survey 2011). Because no major active faults transect the County, surface rupture due to faulting in the project area is not expected to occur.

4.7.1.4 Paleontological Resources

According to the Easton Project Draft EIR (County of Sacramento 2008) for the development adjacent east of the Project site, the closest fossil locality to the Project area is approximately 8 miles northward near Roseville. Only 13 known localities occur within Sacramento County and none of these are within the Project area (University of California Museum of Paleontology 2021). Because a documented formation sensitive to paleontological resources (Laguna Formation) exists within the Project area, paleontological resources may be expected to occur within the project area. The Laguna Formation is exposed in western and eastern extents of the project area and may also underlie the mining tailings. The Laguna Formation has produced significant fossil remains at many localities within the Central Valley (County of Sacramento 2008) and is considered to have high sensitivity.

The General Plan Draft EIR did not identify any paleontological resources with the Rancho Cordova Planning Area; however, the EIR did indicate that development under the City of Rancho Cordova General Plan could impact undiscovered paleontological resources, though the likelihood of such paleontological resources existing in the Planning Area is considered low.

4.7.2 Regulatory Framework

4.7.2.1 City of Rancho Cordova General Plan

General Pan policies designed to reduce erosion are as follows:

Policy NR.5.5: Minimize erosion to stream channels resulting from new development in urban areas.

- Action NR.5.5.2: Require development within newly urbanizing areas to incorporate runoff control measures into their site design or to participate in an area-wide runoff control management effort consistent with standards developed by the Public Works Department.

Policy CR-5.3: (Best Management Practices) – Require the use of design techniques and best management practices to reduce storm water runoff levels, improve infiltration to replenish groundwater sources, and reduce pollutants close to their source.

- Action NR.5.5.3: Encourage new development to incorporate features such as grassy swales, multi-use retention or detention basins, and integrated drainage

systems to enhance water quality. Work with the Cordova Recreation and Park District to establish standards for integrating retention/detention basins into park sites and create examples of desirable and innovative natural drainage features.

- Action NR.5.5.4: Establish and require the use of best management practices to protect receiving waters from the adverse effects of construction activities, sediment and urban runoff

The following General Plan policies and action items are identified in the General Plan Safety Element address soil and geologic stability:

Policy S.3.2: The City shall ensure that new structures are protected from damage caused by geologic and/or soil conditions to the greatest extent feasible.

- Action S.3.2.1: Continue to require that all new construction projects complete a geotechnical report or conduct other appropriate analysis to determine the soils characteristics and associated development constraints.
- Action S.3.2.2: Impose the appropriate mitigation measures for new development located in seismic and geologically sensitive areas.

4.7.3 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause 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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐

i) No impact.

The Proposed Project site is not located within an Alquist-Priolo Earthquake Zone (CGS 2011). There would be **no impact** related to fault rupture.

ii) Less than significant impact.

According to CGS' Earthquake Shaking Potential for California mapping, the Proposed Project site is located in an area with a low likelihood of experience ground shaking (CGS 2016). During most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016) and structural damage. A soils report and a geotechnical report would be required by the City of Rancho Cordova prior to issuance of a building permit to inform the final grading plan design and design of foundations for the Project. These requirements would ensure that the Project complies with the California Building Code. Therefore, impacts would be **less than significant**.

iii) **Less than significant impact.**

Liquefaction occurs when loose sand and silt saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

- Loss of bearing strength – soils liquefy and lose the ability to support structures
- Lateral spreading – soils slide down gentle slopes or toward stream banks
- Flow failures – soils move down steep slopes with large displacement
- Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking
- Flotation – floating of light buried structures to the surface
- Settlement – settling of ground surface as soils reconsolidate
- Subsidence – compaction of soil and sediment

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. DOC provides mapping for areas susceptible to liquefaction in California. According to this mapping, the Project site is not located in an area identified for the risk of liquefaction (CGS 2020). Additionally, a geotechnical report would be required by the City for the Project to inform the final grading plans and foundation design. As such, the Proposed Project would result in less than significant impacts with regard to seismic-related ground failure, including liquefaction.

iv) **Less than significant impact.**

The Project Area is of minimal elevation gain and the Area does not have steep hillsides or other formations susceptible to landslides during a seismic event. As such, the potential for landslides would be a **less than significant impact**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Less than significant impact.

As shown in Table 4.6-1, the Project Area's soils have a slight erosion potential. Any future construction involving grading, excavation, and soil hauling, would disturb soils and potentially expose them to wind and water erosion. However, a soils report would be prepared to inform final grading plans.

In addition, any development involving clearing, grading, or excavation that causes soil disturbance of 1 or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, is subject to National Pollutant Discharge Elimination System (NPDES) State General Permit (Order No. 2009-0009-DWQ) provisions. Because the Project would grade more than 100 acres, it would require preparation and approval of a Storm Water Pollution Prevention Plan (SWPPP) that provides a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. The SWPPP would consider the full range of erosion control best management practices including any additional site-specific and seasonal conditions. Erosion control best management practices include, but are not limited to, the application of straw mulch, hydroseeding, the use of geotextiles, plastic covers, silt fences, and erosion control blankets, as well as construction site entrance/outlet tire washing. The State General Permit also requires that those implementing SWPPPs meet prerequisite qualifications that would demonstrate the skills, knowledge, and experience necessary to implement SWPPPs. NPDES requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development. In addition, the Project would be required to use best management practices such as using straw wattles onsite near storm drain inlets to control runoff from all new development and thus limit erosion.

Project compliance with NPDES and SWPPP requirements would ensure that soil erosion and loss of topsoil would result in **a less than significant impact.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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.

As discussed previously, the Project Area has little potential for landslides.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. One indicator of potential lateral expansion is frost action. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing (NRCS 2021). As indicated in Table 4.7-1, the Web Soil Survey identifies the Project site as having soils with no frost action potential. Additionally, as discussed in Item a) iii) above, the Project Area is not identified as being susceptible to liquefaction. As such, the potential for impacts due to lateral spreading would be less than significant.

According to the USGS Areas of Land Subsidence in California webpage, the City of Rancho Cordova, including the Project Area, is not located in an area of land subsidence (USGS 2021). As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils would settle without any additional applied pressure when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil. The collapse potential of the Project Area soil must be determined for consideration in the foundation design.

A geotechnical report and a soils report would be required by the City prior to issuance of building permits to inform the final grading plans and foundation design. Therefore, impacts would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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.

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Expansive soils can be determined by a soil's linear extensibility. There is a direct relationship between linear extensibility of a soil and the potential for expansive behavior, with expansive soil generally having a high linear extensibility. Thus, granular soils typically have a low potential to be expansive, whereas clay-rich soils can have a low to high potential to be expansive. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent, moderate if three to six percent, high if six to nine percent, and very high if more than nine percent. If the linear extensibility is

more than three, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in Table 4.7-1, the Project site soils exhibit linear extensibility values of 1.5 and 3.1 percent. Soils with linear extensibility at this range correlate to having a moderate expansion potential. Despite the shrink-swell potential identified for Project site soils, standard procedures used in the construction of concrete footings as required by the California Building Code would reduce this potential impact.

Additionally, General Plan Action S-3.2.1 mandate that a soils report, prepared by a licensed soils engineer, be required for all new nonresidential development projects in the City. Soils reports must evaluate the shrink-swell potential of sites and recommend measures to minimize such hazards through recommend geotechnical special provisions. A soils report and geotechnical report would be required by the City prior to issuance of building permits to address any site-specific expansive soil hazards. As such, impacts would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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.

Because the Project would be required to connect to the City's wastewater collection and treatment plant. It would not use a septic system or other wastewater disposal system and, therefore, would have **no impact** relative to Item e).

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

The Project is located within an area containing surface dredge tailings from previous mining activities. The dredging tailings at the surface throughout the Project Area are highly unlikely to uncover significant fossil vertebrate remains. However, should deep excavations extending down past the older dredge tailings or landfill material (into the Laguna Formation) be required, there is a possibility to encounter significant vertebrate fossils requiring implementation of Mitigation Measure **GEO-1** to reduce impacts to **less than significant with mitigation incorporated**.

4.7.4 Mitigation Measures

GEO-1: **Discovery of Unknown Paleontological Resources.** If any paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the area shall be isolated using orange or yellow fencing until the City of Rancho Cordova is notified and the area is cleared for future work. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resources. In addition, in the event of an inadvertent find, sediment samples should be collected and processed to determine the small fossil potential on the Project Site. If the Project applicant resumes work in a location where paleontological remains have been discovered and cleared, the Project applicant will have a paleontologist onsite to observe any continuing excavation to confirm that no additional paleontological resources are in the area. Any fossil materials uncovered during mitigation activities should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

This section addresses greenhouse gas emissions generated by the Project, and mitigation measures to mitigate impacts identified as potentially significant. This assessment is based on the *Air Quality and Greenhouse Gas Assessment for the Easton Research Park West Project* prepared by ECORP (2021b) which is included with this Initial Project as *Appendix A*.

Certain gases in the earth's atmosphere, classified as greenhouse gases (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 4.8-1 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 4.8-1. 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]

Table 4.8-1. Greenhouse Gases	
Greenhouse Gas	**Description**
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.

4.8.1.1 Sources of Greenhouse Gas Emissions

In 2020, CARB released the 2020 edition of the California GHG inventory covering calendar year 2018 emissions. In 2018, California emitted 425.3 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 2018, accounting for approximately 30 percent of total GHG emissions in the state. This sector was followed by the industrial sector (21 percent) and the electric power sector including both in-state and out-of-state sources (15 percent) (CARB 2020b). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

4.8.2 Regulatory Framework

4.8.3 State

4.8.3.1 Executive Order S-3-05

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.

4.8.3.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires 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 outlines measures to meet the 2020 GHG reduction goals. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by the end of 2020.

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 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.

4.8.3.3 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. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

4.8.3.4 Senate Bill 100 of 2018

In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

4.8.3.5 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The Building and Efficiency 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 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards.

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CalGreen Building Standard (CalGreen), and establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. Like Part 6 of Title 24, the CalGreen standards are periodically updated, with increasing energy savings and efficiencies associated with each code update. 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 that can be adopted by local jurisdictions and may be incorporated as mandatory standards in future code cycles.

4.8.3.6 Phase I and 2 Heavy-Duty Vehicle GHG Standards

CARB has adopted a new regulation for GHG emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the USEPA rule for new trucks and engines nationally. Existing heavy-duty truck vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the USEPA adopted their new rule for heavy-duty trucks and engines. The USEPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year 2014 with stringency levels increasing through model year 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The USEPA rule does not regulate trailers. CARB staff has worked jointly with the USEPA and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal GHG emission standards for medium-duty trucks and heavy-duty truck vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty truck vehicles, including trailers. In February 2019, the Office of Administrative Law approved the Phase 2 Heavy-Duty Vehicle GHG Standards and became effective April 1, 2019. The Phase 2 GHG standards are needed to offset projected vehicle miles traveled (VMT) growth and keep heavy-duty truck CO_2 emissions declining. The federal Phase 2 standards establish for the first time, federal emissions requirements for trailers hauled by heavy-duty tractors. The federal Phase 2 standards are more technology-forcing than the federal Phase 1 standards, requiring manufacturers to improve existing technologies or develop new technologies to meet the standards. The federal Phase 2 standards for tractors, vocational vehicles, and heavy-duty pick-up trucks and vans would be phased-in from 2021-2027, additionally for trailers, the standards are phased-in from 2018 (2020 in California) through 2027.

4.8.3.7 Governor's Sustainable Freight Action Plan

Under the Governor's Sustainable Freight Action Plan strategy, CARB is working with agency partners and stakeholders to implement a broad program that includes regulations, incentives, and policies designed to support the transformation to a more sustainable freight system and reduce community impacts from

freight operations in California. The Governor's Sustainable Freight Action Plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California's environmental, energy, mobility, safety and economic needs. The plan also identifies and initiates corridor-level freight pilot projects within the state's primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities. The plan seeks to improve the state freight system efficiency 25 percent by "increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030" as well as to deploy over 100,000 zero-emission freight vehicles and equipment and maximizing near-zero equipment and equipment powered by renewable energy by 2030.

4.8.4 Local

4.8.4.1 Sacramento Area Council of Government Metropolitan Transportation Plan/Sustainable Communities Strategy

The Sacramento Area Council of Government's (SACOG) 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).

4.8.4.2 Sacramento Metropolitan Air Quality Management District

The SMAQMD has primary responsibility for developing and implementing rules and regulations to maintain the NAAQS and attain the CAAQS, permitting new or modified sources, developing air quality management plans, and adopting and enforcing air pollution regulations for all projects in the SVAB. The AB 32 Scoping Plan does not specify an explicit role for local air districts with respect to implementing statewide GHG reduction strategies, but it does state that CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, but also via their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents.

The SMAQMD has recommended an approach for assessing a proposed development's GHG emissions. Specifically, SMAQMD recommends a comparison of a project's annual construction GHG emissions to a significance 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. If a threshold is exceeded, then the project may have a cumulatively considerable contribution to a significant cumulative environmental impact, and all feasible mitigation is required.

4.8.5 Greenhouse Gas Emissions Impact Assessment

4.8.5.1 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's 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 § 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) of the CEQA Guidelines require a lead agency to 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 § 15130(f)). 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.

Per CEQA Guidelines § 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 § 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 significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 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. Specifically, the Project is first compared to the SMAQMD GHG significance thresholds for construction and operations. The SMAQMD has developed and adopted an update to its land development project GHG thresholds, which require a project to demonstrate consistency with CARB's 2017 Climate Change Scoping Plan. The significance threshold for the construction phase is 1,100 metric tons of CO_2e per year. With regard to operational emissions, the SMAQMD's technical support document, *SMAQMD Greenhouse Gas Thresholds for Sacramento County* (2020b), identifies operational measures that should be applied to all projects estimated to exceed a screening level threshold of 1,100 metric ton of CO_2e annually in order to demonstrate consistency with the 2017 Climate Change Scoping Plan. The measures target GHG emissions inventory areas where state measures did not fully achieve reductions, allowing for local supportive measures. These measures are known as Tier 1 and Tier 2 BMPs. 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[2], 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:

[2] 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.

- Office projects must achieve a 15 percent reduction in vehicle miles traveled (VMT) per worker compared to existing average VMT per capita for the County.
- Residential projects must achieve a 15% reduction in VMT per resident compared to 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.

Second, the Project is assessed for consistency with the 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).

4.8.5.2 Emissions Calculation Methodology

GHG emissions-related impacts were assessed in accordance with methodologies recommended by the SMAQMD. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2016.3.2. 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 GHG emissions were calculated using a combination of model defaults for Sacramento County, Project Site plans as well as the estimated traffic trip generation rates and fleet mix provided by Fehr & Peers (2021).

4.8.6 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Construction-Generated Greenhouse Gas Emissions

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 4.8-2 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. The Project is anticipated to begin in early 2022 and would be phased over a 20-year buildout period with two buildings and associated features being constructed in each phase.

Table 4.8-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Demolition and Grading Year 1	470
Demolition and Grading Year 2	446
Demolition and Grading Year 3 & Stormwater Drainage and Sewer Connection	740
Building Construction Phase 1 (Building 1 & 2) Year 1	783
Building Construction Phase 1 (Building 1 & 2) Year 2	792
Building Construction Phase 2 (Building 3 & 4) Year 1	821
Building Construction Phase 2 (Building 3 & 4) Year 2	816
Building Construction Phase 3 (Building 5 & 6) Year 1	877
Building Construction Phase 3 (Building 5 & 6) Year 2	965
Building Construction Phase 4 (Building 7 & 8) Year 1	678
Building Construction Phase 4 (Building 7 & 8) Year 2	689
SMAQMD Annual Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**No**

Source: CalEEMod version 2016.3.2; EMFAC 2017. Refer to Attachment A in Appendix A for Model Data Outputs.

As shown in Table 4.8-2, Project construction would not exceed the SMAQMD construction threshold for GHG emissions. Once construction is complete, the generation of these GHG emissions would cease.

Operation-Generated Greenhouse Gas Emissions

Operations 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 4.8-3.

Table 4.8-3. Unmitigated Operational-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/Year)
Area Source	0
Energy	4,699
Mobile	3,217
Waste	926
Water	502
Total	**9,344**
SMAQMD Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**Yes**

Source: CalEEMod version 2016.3.2. Refer to *Attachment A* in Appendix A for Model Data Outputs.
Notes: Emission projections predominately based on CalEEMod model defaults for Sacramento County. Total trips generated by the Project and feet mix provided by Fehr & Peers (2021).

As shown in Table 4.8-3, the Proposed Project's operational GHG emissions would be approximately 9,344 metric tons of CO_2e per year, which exceeds the SMAQMD significance threshold of 1,100 metric tons of CO_2e per year.

As addressed in the SMAQMD *Greenhouse Gas Thresholds for Sacramento County* (2020), all new development predicted to generated more than 1,100 metric tons of CO_2e annually must demonstrate consistency with the GHG targets within the County through various mitigation measures. This includes implementation of BMP Tier 1. As previously discussed, 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, except all electric vehicle capable spaces shall instead be electric vehicle ready.

Table 4.8-4 shows long-term mitigated operational GHG emissions attributed to the Project with the implementation of BMP Tier 1.

Table 4.8-4. Mitigated Operational-Related Emissions Greenhouse Gas Emissions	
Emission Source	**CO_2e (Metric Tons/Year)**
Area Source	0
Energy	3,654
Mobile	3,217
Waste	926
Water	502
Total	**8,299**
SMAQMD Significance Threshold	*1,100*
Exceed SMAQMD Threshold?	**Yes**

Source: CalEEMod version 2016.3.2. Refer to Attachment A in Appendix A for Model Data Outputs.
Notes: Emission projections predominately based on CalEEMod model defaults for Sacramento County. Total trips generated by the Project and feet mix provided by Fehr & Peers (2021). Only BMP 1 was implemented due to modeling software constraints. Project electricity use is increased to account for the increased reliance on it due to lack of natural gas use. .

As shown in Table 4.8-4, the Proposed Project's operational GHG emissions associated with energy sources would be reduced with the imposition of BMP 1; however, the total operational GHG emissions associated with the Project would still exceed the SMAQMD significance threshold of 1,100 metric tons of CO_2e per year, resulting in a significant impact unless mitigation is incorporated.

Projects that continue to 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 vehicle miles traveled (VMT) per worker compared to existing average VMT per capita for the County.
- Residential projects must achieve a 15% reduction in VMT per resident compared to existing average VMT per capita in the County.
- Retail projects must achieve no net increase in total VMT.

The Project is proposing the construction of a warehouse campus and does not qualify as an office, residential or retail project. As such the Project would not comply with Tier 2 BMPs.

If a project cannot comply with Tier 2 BMPs the purchasing and retiring GHG/carbon offsets from a registry approved by the SMAQMD may be required. As previously mentioned, 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.

Thus, mitigation measure **GHG-1** is necessary in order to reduce Project potential impacts to a **less than significant with mitigation incorporated** level in accordance with SMAQMD guidance.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Less than significant impact.

Project GHG Emissions Consistency with the Metropolitan Transportation Plan/Sustainable Communities Strategy 2035 (MTP/SCS)

As previously described, SACOG's MTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks. As shown in Table 4.8-3 and Table 4.8-4, GHG emissions resulting from Project-related transportation sources is one of the most potent source 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 "Developing Community" in the MTP/SCS (SACOG 2020, Appendix E3), it is included in an area where urban development is predicted by SACOG. According to the MTP/SCS, land uses in Developing Communities are typically situated on vacant land at the edge of existing urban or suburban development. Developing communities are considered prime for the next increment of urban expansion. Transportation options in Developing Communities often depend, to a great extent, on the timing of development and can be expected to improve as the density of development in the area increases. Therefore, the Project is consistent with the MTP/SCS and it can be assumed that regional mobile emissions would decrease in line with the goals of the MTP/SCS with implementation of the future development within the Project area. As such, the impact is **less than significant**.

4.8.7 Mitigation Measures

GHG-1: **Greenhouse Gas Emissions Reductions.** In coordination with the Sacramento Metropolitan Air Quality Management District and City of Rancho Cordova Planning Department, the Project applicant shall purchase greenhouse gas emissions/carbon offsets to counterbalance the Project operational greenhouse gas emissions exceeding the annual significance threshold from a Sacramento Metropolitan Air Quality Management District-approved registry, including:

(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.

The specific amount of offset credits necessary to reduce potential GHG emission-related impacts to less than significant levels shall be determined through consultation with the

Sacramento Metropolitan Air Quality Management District and City of Rancho Cordova Planning Department.

Timing/Implementation:	*Prior to Project construction*
Enforcement/Monitoring:	*City of Rancho Cordova Planning Department; Sacramento Metropolitan Air Quality Management District*

Implementation of mitigation measure **GHG-1** would ensure a less than significant GHG impact in accordance with SMAQMD guidance.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, § 25501 as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the CCR as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Most hazardous materials regulation and enforcement in Sacramento County is managed by the Environmental Compliance division of the Sacramento County Environmental Management Department (Environmental Compliance). Environmental Compliance is charged with the responsibility of enforcement of pertinent California health laws, rules, and regulations, and is responsible for responding to incidents involving any release or threatened release of hazardous materials. Environmental Health programs and services strive to prevent human injury and illness and promote well-being by identifying and evaluating environmental sources and hazardous agents; and limiting exposures to hazardous physical, chemical, and biological agents in air, soil, food, and other environmental media or settings that may adversely affect human health. Environmental Compliance is also responsible for requiring all business that use hazardous

materials to comply with the State-required hazardous materials business plan submittal and registration with the California Environmental Reporting System.

Under Government Code § 65962.5, both the California Department of Toxic Substance Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their website (DTSC 2021).

4.9.1.1 Regulatory Framework

Federal, State, And Local Regulations

Many agencies regulate hazardous substances. At the federal level, the principal agency regulating the generation, transport and disposal of hazardous waste is the USEPA, under the authority of the Resource Conservation and Recovery Act (RCRA). The USEPA regulates hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). California regulations governing hazardous materials are as stringent as (and in some cases, more stringent than) federal regulations. The state has been granted primacy (primary responsibility for oversight) by the USEPA to administer and enforce hazardous waste management programs. State regulations also have detailed planning and management requirements to ensure that hazardous materials are handled, stored, and disposed of properly to reduce human health and environmental risks. California regulations pertaining to hazardous waste management are published in the CCR, previously called the California Administrative Code. The CCR is updated annually and incorporates all legislation and final regulations enacted during the year, as well as specifying the agencies responsible for enforcing the various regulations.

The Sacramento County Environmental Management Department, Certified Unified Program Agency (CUPA) regulates the use, storage and disposal of hazardous materials in Sacramento County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities. The CUPA oversees remediation of certain contaminated sites resulting from leaking underground storage tanks.

Resource Conservation and Recovery Act. The RCRA of 1976 (substantially amended in 1984), administered by the USEPA, is the principal federal legislation regulating hazardous waste. The RCRA imposes reporting, permitting, and operational control requirements on businesses or individuals that generate, treat, store, or dispose of hazardous materials or hazardous waste. The RCRA is implemented by Title 40 of the CFR. The 1984 amendments to the RCRA involve stringent monitoring of landfills and underground storage tanks for hazardous materials and hazardous wastes.

Comprehensive Environmental Response, Compensation and Liability Act. In response to the need to clean up hazardous waste sites created before implementation of the RCRA, Congress enacted CERCLA in 1980. CERCLA is commonly referred to as "Superfund". Subsequently, abandoned hazardous waste sites have to be inspected, cleaned up, and disposed of properly.

Superfund Amendments and Reauthorization Act. The risk of exposure to hazardous waste as a result of RCRA and CERCLA was addressed in the Superfund Amendments and Reauthorization Act (SARA) of 1986. As a result of SARA, OSHA published hazardous waste cleanup regulations in 29 CFR 1910.120.

Department of Toxic Substances Control. 22 CCR gives the DTSC responsibility for regulating hazardous waste management at the State level. The DTSC regulates the treatment, storage, and disposal of hazardous waste in accordance with 22 CCR and the RCRA. The DTSC administers the state and federal Superfunds for cleanup of major hazardous waste contamination sites.

Regional Water Quality Control Board. 23 CCR charges the nine Regional Water Quality Control Boards (RWQCBs) with responsibility for overseeing water quality control. The RWQCBs are responsible for protecting actual or potential beneficial uses of water, including municipal, industrial, and agricultural water supplies and recreation. Each RWQCB has authority to supervise hazardous waste cleanup at sites referred by local agencies and in cases where water quality is affected or threatened. Either the DTSC or the RWQCB may be responsible for cleanup of sites of significant contamination by hazardous wastes. The two agencies often work together to ensure that their requirements are consistent and are implemented as intended.

California Occupational Safety and Health Administration. Health and safety regulations applying to the investigation and cleanup of sites contaminated with hazardous waste are enforced by the California Occupational Safety and Health Administration under 8 CCR and the adopted federal regulations (29 CFR 1910).

4.9.1.2 Subsurface Conditions

The Project area was formerly used for manufacturing of rocket motors and chemical storage.

During standard use of chemicals during manufacturing, minor, incidental releases of volatile organic chemicals (VOCs) to soil and groundwater occurred. The most frequently-detected VOCs identified in shallow vadose zone soil vapor included trichloroethylene (TCE), tetrachloroethylene (PCE), and acetone. The Project Area (APN 072-0231-125, referred to as the Central 49000 Area of Perimeter Groundwater Operable Unit OU-5) was included in the definition of the Aerojet Superfund Site during the 1986 listing on the National Priorities List (NPL), as indicated in the Remedial Action Completion Report Soil Vapor Extraction System Central 49000 Area [(RAC Report) Stantec 2020]. In accordance with CERCLA, Aerojet conducted a Remedial Investigation to evaluate the nature and extent of chemical releases and determine the residual risks posed by these chemicals to human health and the environment. Several portions of the Project Area required remediation to reduce the residual risks to acceptable levels based upon future land use. The USEPA issued its Record of Decision in 2012 identifying the necessary remedial actions, which included soil vapor extraction to reduce concentrations of VOCs in soil and engineering/administrative controls in the form of Land Use Covenants. The Land Use Covenants must include restrictions on use of groundwater and vapor mitigation for all habitable structures.

Between 2012 and 2021, Aerojet has been implementing the USEPA identified remedial actions. The soil vapor extraction has been implemented and the Agencies (USEPA, DTSC, and RWQCB) are reviewing the

RAC Report to determine if they concur. Aerojet is currently working with the Agencies on the language for the Land Use Covenants. Prior to redevelopment, the Area must receive USEPA's approval that all remedial actions have been completed to USEPA's satisfaction.

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Less than significant impact.

Businesses that sell and store hazardous materials are subject to the Hazardous Material Business Plan program, which is regulated by the Environmental Health as part of the Certified Unified Program. The program requires the preparation of a document that provides an inventory of hazardous materials on-site, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and what to do in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released.

The Proposed Project would allow of the construction of over 1.46 million square feet of light industrial uses. However, business that use hazardous materials are subject to routine inspection by federal, state, and local regulatory agencies with jurisdiction over hazardous materials. For instance, California Health and Safety Code Section 25290.1(a) mandates that all fuel storage tanks installed after 2004 meet durability, structural integrity, and size requirements to greatly reduce the likelihood of hazardous waste leakage or combustion. All businesses that use hazardous material use are also required to comply with applicable provisions of Title 49 CFR Parts 100–185 and all amendments through December 9, 2005 (Hazardous Materials Regulations). Hazardous materials must be stored in designated areas designed to prevent accidental release to the environment. Further, businesses that store hazardous materials are subject to the Hazardous Material Business Plan program, which is regulated by Sacramento County Environmental Health as part of the Certified Unified Program. The program requires the preparation of a document that provides an inventory of hazardous materials onsite, emergency plans and procedures in the event of an accidental release, and training for employees on safety procedures for handling hazardous materials and in the event of a release or threatened release. These plans are routine documents that are intended to disclose the presence of hazardous materials and provide information on what to do if materials are inadvertently released.

While future Project operation may involve the routine transport, use, or disposal of hazardous materials. These materials are regulated by a number of different state and federal agencies and safety regulations are in place to limit the potential for accidental release. All hazardous materials located at the Project site would be required to be handled in accordance with city, state, and federal regulations. would assist in

reducing the potential for hazardous materials releases from residential uses Therefore, the impact is **less than significant.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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?	☐	☐	☒	☐

Less than significant impact.

The Project, as a distribution center with multiple warehouses, would involve the transport and use of limited quantities of miscellaneous hazardous substances including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. These chemicals would be brought to the Project site, as well as transported along area roadways. Federal and state laws regulate the handling, storage, and transport of these and other hazardous materials, as well as the mechanisms to respond and clean up any spills along local and regional roadways. Any use of hazardous materials would require the hazardous materials to be utilized, stored, and transported pursuant to state and federal safety regulations and adhere to General Plan policies and actions regarding hazardous materials. Therefore, the Project would have a **less than significant impact** in this area.

would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

Less than significant impact.

There are no schools within 1/4 mile of the Project Site. The nearest school is Natomas Station Elementary School located in the City of Folsom approximately 1.5 miles northeast of the Project site. Therefore, **no impact** would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Under Government Code § 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified that the Proposed Project site is located on a hazardous materials site. The Project Property is part of the Aerojet Superfund Site (NPL Site), which USEPA, pursuant to section 105 of the "CERCLA, 42 U.S. Code. section 9605, placed on the NPL), by publication in the Federal Register on September 8, 1983 (40 CFR Part 300). As such, USEPA determined (which determination was concurred with by RWQCB and the DTSC) that: (a) in its decision document entitled "Interim Record of Decision for Groundwater and Final Record of Decision for Soil for the Perimeter Groundwater Operable Unit (OU-5)" dated February 15, 2011 ("OU 5 ROD") that groundwater remediation be undertaken in accordance with section 2.12.3 of the OU 5 ROD. Groundwater remediation and monitoring under/on and in the vicinity of the Property is ongoing and being conducted pursuant to a Statement of Work for Remedial Design and Remedial Action for Groundwater at the Perimeter Groundwater Operable Unit (OU 5) developed in accordance with the Unilateral Administrative Order for the Performance of Remedial Design and Interim Remedial Action for Groundwater (USEPA Docket No. 9-2011-16) and approved by USEPA on or about September 19, 2011. Chemicals of Concern, including TCE, perchlorate and N-Nitrosodimethylamine, have been found in the regional groundwater aquifers, including beneath and in the vicinity of the Property. Groundwater is not anticipated to be present within the first 15 feet below ground surface in the vicinity of the Property.

Between 2012 and 2021, Aerojet has been implementing the USEPA identified remedial actions. The soil vapor extraction has been implemented and the Agencies are reviewing the RAC Report to determine if they concur. Aerojet is currently working with these Agencies on the language for two Land Use Covenants that would include restrictions on use of groundwater and vapor mitigation for all habitable structures.

The Regulatory Agencies have concluded that the Project Property, when used in compliance with the Environmental Restrictions of the land use covenants related to groundwater and vapor mitigation, does not present an unacceptable threat or risk to present and future human health or safety or the environment. Thus, with implementation of **HAZ-1** the project impacts in this area are **less than significant with mitigation incorporated**.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) 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, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No impact.

The Project is not located within two miles of a public airport nor is it located in the vicinity of a private airstrip. The closest public or private airport is the Mather Airport, located approximately four miles to the west, and the Project is not within the coverage area in the Mather Airport Land Use Compatibility Plan. Therefore, the Project Area is more than 2 miles from a public or private airport. **No impact** would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Less than significant impact.

The Project Site is located on private property within the access-controlled portion of Aerojet land holdings. Project activities primarily include phased construction of the distribution center, including installation and connection to existing utility pipes within Folsom Boulevard, and heavy-duty trucks utilizing nearby roadways. Construction within Folsom Boulevard, and possibly Hazel Avenue extension during successive phases of Project Development, would require that the Project construction contractor(s) prepare and implement a Traffic Control Plan prior to construction in accordance with City and Sacramento County requirements. Because project construction and operations would be primarily restricted to the parcels south of Folsom Boulevard, and related activities would not physically interfere with any emergency response or evacuation plans, impacts would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Less than significant impact.

The Project would be conducted entirely on Aerojet-controlled land and no residences are located within or near by the Project site. The closest existing residential neighborhood is located in the City of Rancho Cordova/Gold River development approximately 1.5 miles northwest of the Project. As discussed in Section 4.20 Wildfire, the Project site is not located in or near state responsibility areas, or lands classified as very high fire hazard severity zones. The Project site is not located within a heavily wooded area, nor is it surrounded by wildlands or forests. According to the Fire Hazard Severity Zones in Local Responsibility Area map published by California Department of Forestry and Fire Protection (CAL FIRE 2007. The nearest Very High Fire Hazard Severity Zones are approximately 11 miles to the east, in Cameron Park and Sprekelsville of El Dorado County. the Project site is located in a Moderate Fire Hazard Severity Zone in Sacramento County (CAL FIRE 2007).

Because the majority of the Project site is vegetated with grassland with scattered trees and forbs, would be completely developed with paved areas, buildings, stormwater detention basins, and landscaped areas, and is in close proximity to Folsom Boulevard with easy access to fire protection services by Sacramento Metro Fire Department fire stations, the risk of injury from wildfires would be **less than significant**.

4.9.3 Mitigation Measures

HAZ-1: **Compliance with Environmental Restrictions in Land Use Covenant for Subsurface Contamination.** Prior to redevelopment, the Project applicant must receive USEPA's approval that all remedial actions have been completed to USEPA's satisfaction. The Project applicant must also comply with all restrictions and requirements contained in any land use covenants approved and executed by Aerojet and applicable federal and state regulatory agencies which may include USEPA, RWQCB, and DTSC. General components of the expected land use controls may include, but not necessarily be limited to:

- Restrictions on future site use to industrial/commercial purposes only;
- Prohibitions on groundwater extraction other than for remediation;
- Requirements that excavation or construction work below ground surface at the site may only be performed under a permit program that mitigates potential exposures and properly manages any contaminated soil that is disturbed; and
- Requirements for any vertical development (buildings) to include a vapor mitigation system and potentially indoor air monitoring if required by the Agencies.

Details of these land use controls will be proposed and approved by the Agencies before the overall remedy will be deemed complete.

Timing/Implementation:	*Prior to and during Project construction and during project operations*
Enforcement/Monitoring:	*City of Rancho Cordova Planning Department, USEPA, RWQCB, DTSC*

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Regional Hydrology

Surface Water

The Project site is located in the Sacramento Valley, at the southern end of the Sacramento River hydrologic region. The climate in this region generally consists of cool, wet winters and warm, dry summers. Average annual rainfall is approximately 24 inches per year (WSC 2021; Western Region Climate Center 2020).

According to the California Department of Water Resources (DWR), the state has been subdivided into ten hydrologic regions (DWR 2021a). Biggs is located in the northcentral portion of the Sacramento River Hydrologic Region, which covers approximately 17.4 million acres (27,200 square miles) and includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Placer, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties.

Geographically, the Sacramento River Hydrologic Region extends south from the Modoc Plateau near the Oregon border to the Sacramento-San Joaquin River Delta. The Sacramento River Hydrologic Region is the main water supply for much of California's urban and agricultural areas. Annual runoff in the Sacramento River Hydrologic Region averages about 22.4 million acre-feet (AF), which is nearly one-third of the state's total natural runoff. Major water supplies in the region are provided through surface storage reservoirs. Shasta Lake is one of the two largest surface water projects in the region. In total, the region has 43 reservoirs with a combined capacity of almost 16 million AF (WSC 2021). However, according to DWR, as of June 13, 2021, the Sacramento Hydrologic Region has received only about 46 percent of the average rainy season precipitation in 2021, through June 13, 2021. All of the major reservoirs that serve the Sacramento Hydraulic Region, the Shasta, Oroville, New Bullard's, and Folsom reservoirs, are between 34 percent and 57 percent capacity as of June 13, 2021 (DWR 2021b).

Groundwater

The South American Groundwater Basin (California DWR Basin No. 5-21.65) underlies the Project area, south of the American River. Under the Sustainable Groundwater Management Act (SGMA), the South American Basin is a high-priority groundwater basin due to declining groundwater levels but is not experiencing conditions of critical overdraft (DWR 2021c). The Groundwater Sustainability Agency (GSA) is the Sacramento Central Groundwater Authority. A Groundwater Sustainability Plan (GSP) that provides details regarding how groundwater would be managed in the basin must be submitted to the California DWR by January 31, 2022.

According to the RAC Report (Stantec 2020) free-flowing groundwater was encountered at approximately 58 to 60 feet bgs between the base of a shallow fine-grained and perched groundwater zone in all of the 22 borings completed during the 2013 Pre-Design assessment investigations The deeper groundwater unit is presumed to be associated with the top portion of hydrostratigraphic Layer B.

The groundwater in both of the aquifer zones has been affected by former rocket manufacturing and testing activities conducted many decades ago. Groundwater plumes of industrial solvents (primarily TCE) and rocket fuel by-products (perchlorate and N-Nitrosodimethylamine) occur underneath the Project site both from former (removed) on-site sources and from upgradient source areas to the northeast (Stantec 2020). The results from previous groundwater sampling reported TCE, cis-1,2-DCE and PCE as the most frequently detected VOCs in the shallow and deep groundwater samples at the Project site. The highest concentrations of VOCs were reported in the sample collected from the deeper groundwater zone at 38D-SP36-WP-D (duplicate December 11, 2020 sample) which reported TCE at 8,700 micrograms per liter (µg/L), cis-1,2-DCE at 9,500 µg/L, PCE at 73 µg/L and 1,1-DCE at 39 µg/L. This well point is located near the vicinity of the removed solvent sump associated with removed building 49-008.

4.10.1.2 Project Area Hydrology and Onsite Drainage

The Project site is located on mostly level terrain between situated at an average elevational range of 125 feet AMSL. The Project Area is located 0.5 miles south of the lower American River and the Nimbus Dam and Lake Natoma. Folsom South Canal is approximately one-third mile to the west, and Buffalo Creek is approximately 500 feet to the south. The Sacramento River is approximately 16 miles to the west. Buffalo Creek flows southwesterly south of the Project area and is largely ephemeral and intermittent, which is typical of areas that experience dry summers and cool, wet winters, as in this part of the Central Valley.

The Project Area contains two small seasonal wetlands and two manufactured ditches in the southwesternmost portion and the northeastern portion of the Project Area classified as other waters of the US (See Section 4.4.2).

Buffalo Creek is the primary receiving water for the Project, flowing east to west approximately 500 feet south of the Project, and draining into the American River. Buffalo Creek drains a 470-acre area. Buffalo Creek between the Aerojet administrative complex and the American River is an improved, unlined trapezoidal drainage and flood control channel (County of Sacramento 2008). Runoff from the Project area is conveyed through a series of drain inlets, storm drain pipes, road culverts, and unlined ditches that drain the Aerojet administrative complex. Runoff from the drainage system discharges into a channel on the west side of Nimbus Road approximately 2,400 feet south of Folsom Boulevard (Aerojet Administrative Channel) that runs along the southern Project area boundary. The runoff from Aerojet Administrative Channel drains to Buffalo Creek.

As mapped by the Federal Emergency Management Agency (FEMA, 2021) National Flood Hazard Layer, the Project site is in Flood Zone X, indicating that the site is an area of minimal flood hazard. Flood Zone X includes areas outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance flood (Flood Insurance Rate Maps 06067C0250H and 06067C0114H).

4.10.2 Regulatory Framework

Relevant federal, state, and local laws and regulations pertaining to the protection of groundwater quality, water and sediment quality, and protection of the public from flooding and other hydrologic hazards are discussed below.

4.10.2.1 Federal

Floodplain Development

FEMA is responsible for determining flood elevations and floodplain boundaries based on USACE studies and approved agency studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps (FIRMs), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas (SFHAs).

Clean Water Act

The federal CWA was enacted with the primary purpose of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters. The USEPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs such as the NPDES Program, to the State Water Resources Control Board (SWRCB) and the RWQCBs.

CWA Section 303(c)(2)(b). Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body's designated beneficial use. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numeric standards. Water quality standards applicable to the Proposed Project are listed in the Basin Plan (RWQCB 2018).

CWA Section 303(d). Section 303(d) of the CWA requires that States develop a list of water bodies that do not meet water quality standards (i.e., impaired water bodies), establish priority rankings for waters on the list, and develop action plans, called TMDLs, to improve water quality.

CWA Section 401. Section 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. Therefore, a Water Quality Certification under Section 401 of the CWA must accompany the USACE permit that must be issued for the Project pursuant to Section 10 of the Rivers and Harbors Act.

National Pollutant Discharge Elimination System Program

The CWA prohibits discharging "pollutants" through a "point source" into "Waters of the United States" unless they have an NPDES permit. The permit contains limits on what can be discharged, creates monitoring and reporting requirements, and implements other provisions to ensure that the discharge does not diminish water quality and/or people's health.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. Pursuant to the SDWA, legally enforceable standards have been set to protect public health.

National Toxics Rule and California Toxics Rule

In 1992, pursuant to the CWA, USEPA promulgated the National Toxics Rule (NTR) criteria to establish numeric criteria for priority toxic pollutants for California. The NTR established water quality standards for 42 priority pollutants not covered at that time under California's statewide water quality regulations. In May 2000, USEPA issued the California Toxics Rule (CTR), which promulgated numeric criteria for additional priority pollutants. The CTR documentation (Volume 65, pages 31682–31719 of the Federal Register [65 FR 31682–31719], May 18, 2000), along with amendments in February 2001 "carried forward" the previously promulgated criteria of the NTR, thereby providing a single document listing of water quality criteria for 126 priority pollutants for California surface waters.

Federal Antidegradation Policy

The federal antidegradation policy is designed to protect existing uses and the level of water quality necessary to protect existing uses. The federal policy directs states to adopt a statewide policy that includes the following primary provisions (40 CFR 131.12):

1. Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

2. Where the quality of waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the state finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

3. Where high quality waters constitute an outstanding national resource, such as waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

4.10.2.1 State

Porter-Cologne Water Quality Control Act and Waste Discharge Requirements

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Act, California must adopt water quality policies, plans, and objectives (synonymous with the term "criteria" used by USEPA) that ensure beneficial uses of State waters are reasonably protected. The Porter-Cologne Water Quality Control Act requires the nine RWQCBs to adopt water quality control plans that define the beneficial uses of the water bodies throughout the region to be protected, the water quality objectives necessary for reasonable protection of the beneficial uses, and a program of implementation for achieving the water quality objectives. In addition, the act authorizes the State Water Resources Control Board (SWRCB) and RWQCBs to issue and enforce waste discharge requirements for discharges of waste to surface waters and land. The Feather and Yuba Rivers are within the jurisdiction of the Central Valley RWQCB.

Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin

The *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin* (Basin Plan) (RWQCB 2018) defines the beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for waters of the Sacramento River and San Joaquin River basins. The Basin Plan contains specific numeric water quality objectives for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, temperature, turbidity, and trace elements, as well as numerous narrative water quality objectives, which are applicable to certain water bodies or portions of water bodies.

State Water Resources Control Board Resolution No. 68-16: Statement of Policy with Respect to Maintaining High Quality Waters in California

The goal of SWRCB Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality Waters in California") is to maintain high quality waters where they exist in the State. Resolution No. 68-16 states, in part:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The SWRCB has interpreted Resolution No. 68-16 to incorporate, and be consistent with, the federal antidegradation policy (RWQCB 2016).

Municipal Regional Stormwater NPDES Permit

The Municipal Stormwater (MS4) NPDES Permitting Program requires that Permittees (i.e., cities, counties) reduce pollutants and runoff flows from new development and redevelopment into their municipal separate storm sewers (MS4) using BMPs to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that result in the capture, infiltration, and treatment of storm water runoff. The Central Valley RWQCB adopted a Regionwide MS4 Permit on June 23, 2016 under Order No. R5-2016-0040. Municipal Stormwater NPDES Permitting Programs require that a new development project or redevelopment of a project site results in no net hydromodification of the site.

Statewide National Pollutant Discharge Elimination System Storm Water Permit for General Construction Activity

The SWRCB has issued a general NPDES permit for stormwater discharges associated with construction activity of greater than one acre in size—Order 2009-0009-DWQ, as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ (General Construction Permit). The General Construction Permit requires the preparation of a SWPPP that identifies and describes the BMPs to be implemented at construction sites to control pollution from stormwater runoff. Coverage is obtained by submitting an NOI, risk assessment, post-construction calculations, a site map, the SWPPP, and a signed certification statement by the legally responsible person to the SWRCB prior to construction.

Title 22 of the California Code of Regulations

Maximum contaminant levels (MCLs) that shall not be exceeded in water supplied to the public have been established in California Code of Regulations Title 22, Division 4. This section is equivalent to the federal Safe Drinking Water Act.

4.10.2.1 Local

City of Rancho Cordova Grading and Erosion Control Ordinance

The City of Rancho Cordova adopted the Sacramento County Department of Water Resources (DWR) Grading and Erosion Control Ordinance (Chapter 16.44 of the existing County code), which 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 ordinance also addresses grading, filling, land excavation, construction activities and drainage as they relate to a particular project. The ordinance applies to any development project resulting in the excavation of 350 cubic yards of soil or more. The ordinance also ensures compliance with the City's National Pollutant Discharge Elimination System (NPDES) Permit, which is issued by the California Regional Water Quality Control Board (CRWQCB). The City of Rancho Cordova is co-permittee on a NPDES Permit along with Sacramento County and the cities of Sacramento, Folsom, Galt, and Citrus Heights, and Elk Grove. The ordinance requires a separate permit for work on each site unless sites are contiguous, have the same ownership, and are included in the approved plan. The ordinance sets forth performance standards and a permit can be denied, based on the following findings:

a) The applicant has failed to provide sufficient or adequate plans, information or other data necessary to allow determinations respecting compliance with the provisions of Chapter 16.44 or Sacramento County Specifications;

b) The environmental review has not been completed, or other provisions of this code or of state law pertaining to environmental review have not been satisfied, or the activity will have significant adverse environmental impacts, which cannot be substantially mitigated. Where the activity will have significant adverse impacts, the Administrator may approve the permit in accordance with Chapter 16.44, Title 20, and CEQA (1970).

c) The proposed activity will violate provisions of Chapter 16.44, Sacramento County Specifications, or state or federal laws, and such violation cannot be resolved by the imposition of conditions pursuant to Section 16.44.170.

d) The proposed activity will adversely affect surrounding properties and public rights-of-way, the water quality of watercourses, and existing drainage (SCC 102 Section 3, 1995; SCC Section 2, 1993)

Rancho Cordova General Plan

The following General Plan policies and action items would assist in reducing surface water quality impacts of the Project:

Action NR.3.3.1: Work with affected local, state and federal agencies to determine if natural creek corridors can and should accommodate storm flows or if separate storm water conveyance structures are necessary.

Policy NR.5.3: Protect surface and ground water from major sources of pollution, including hazardous materials contamination and urban runoff.

Action NR.5.3.3: Install appropriate signage to deter the discharge of hazardous materials into storm drains.

Policy NR.5.4: Prevent contamination of the groundwater table and surface water, and remedy existing contamination to the extent practicable.

Action NR.5.4.2: Require clean-up of contaminated ground and surface water by current and/or past owners or polluters.

Policy NR.5.5: Minimize erosion to stream channels resulting from new development in urban areas.

Action NR.5.5.2: Require development within newly urbanizing areas to incorporate runoff control measures into their site design or to participate in an area-wide runoff control management effort consistent with standards developed by the Public Works Department.

Action NR.5.5.3: Encourage new development to incorporate features such as grassy swales, multi-use retention or detention basins, and integrated drainage systems to enhance water quality. Work with the Cordova Recreation and Park District to establish standards for integrating retention/detention basins into park sites and create examples of desirable and innovative natural drainage features.

Action NR.5.5.4: Establish and require the use of best management practices to protect receiving waters from the adverse effects of construction activities, sediment and urban runoff.

4.10.3 Hydrology and Water Quality (X) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐

Less than significant impact.

4.10.3.1 Construction Stormwater Quality

Construction would result in disturbance of more than one acre of land. Thus, compliance with the SWRCB general permit to discharge storm water associated with construction activity is required. The general permit is known as the SWRCB, Order No. 2009-0009-DWQ (as amended by Orders 2010-0014-DWQ and 2012-006-DWQ), NPDES General Permit No. CAS000002, WDRs for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit). AR would be required to submit a Notice of Intent for coverage under the General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP).

The SWPPP would need to address any Project-related activities that have the potential to release pollutants, including sediment, in stormwater, such as:

- Excavation work;
- Material stockpiling;
- Waste and soil screening;
- Loading and hauling of waste and construction materials; and
- Winterization of incomplete activities.

The SWPPP must identify the Best Management Practices (BMPs) that would be implemented during construction and the final closure fieldwork to ensure that polluted stormwater runoff does not leave the site. The SWPPP would also need to include a monitoring program to document the effectiveness of the BMPs. Compliance with the SWPPP and implementation of the BMPs would prevent unacceptable degradation of surface water quality.

The City adopted the Sacramento County Department of Water Resources (DWR) Grading and Erosion Control Ordinance (Chapter 16.44 of the existing County code), which 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 ordinance also addresses grading, filling, land excavation, construction activities and drainage as they relate to a particular project. The ordinance applies to any development project resulting in the excavation of 350 cubic yards of soil or more. The ordinance also ensures compliance with the City's NPDES Permit, which is issued by the California Regional Water Quality Control Board (RWQCB). The City of Rancho

Cordova is co-permittee on a NPDES Permit along with Sacramento County and the cities of Sacramento, Folsom, Galt, and Citrus Heights, and Elk Grove. The ordinance requires a separate permit for work on each site unless sites are contiguous, have the same ownership, and are included in the approved plan.

4.10.3.2 Stormwater Quality-Post Construction

Developed or redeveloped impervious surfaces that are equal or in excess of 1.0 acre (e.g., building rooftops, flat works, parking areas, or other disturbed areas for all phases of the work), shall comply with the following requirements of the City's Grading and Erosion Control Ordinance:

- The improvement plans shall incorporate all applicable post construction stormwater quality measures; including source control, treatment control, low impact development, hydromodification management, and full capture trash control measures into the site improvement plans in conformance with the most recent version of the *Stormwater Quality Design Manual for the Sacramento Region*. The applicant shall prepare and submit a Post-Construction Stormwater Quality Control Plan that includes details and sizing calculations of all the proposed post construction stormwater quality measures. 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. (Prior to approval of improvement plans.)*

The Project's conceptual site layout would result in an increase in impervious surfaces from development of 1.48 million square feet of buildings and associated paved parking lots and streets. In compliance with the City's Grading and Erosion Control Ordinance and the City's overarching National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (MS4), unlined stormwater retention basins would be constructed on the property to capture and treat storm water runoff. As shown on Figure 2-2, drainage and conveyance facilities that flow into unlined ditches and channels adjacent to the property would be constructed as part of the Project to eventually collect storm water that is captured during storm events and treated on the property. A Storm Drainage Evaluation for the Project was prepared in Appendix E (MacKay and Somps 2021) to demonstrate that the Project would result in no net hydromodification of the Project site and that storm water would be treated.

Compliance with the NPDES requirements and the City's Grading and Erosion Control Ordinance described above would reduce construction and post-construction water quality impacts associated with implementation of the Proposed Project to a **less than significant impact.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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.

Future development within the Project Area would receive water from the City of Folsom's municipal water supply. The City of Folsom's primary source of potable water supply for the Project would be from surface waters (Folsom Reservoir). Due to the proximity near the edge of groundwater basins, and low yield of the groundwater aquifer underlying the City, groundwater is not a significant water supply.

Non-potable industrial-use water and water used during Project construction would be supplied from the Aerojet industrial water supply system. That system currently has an available excess capacity for short term water demand of up to 1.5 million gallons per day. The Aerojet industrial water supply system receives treated groundwater from the Aerojet groundwater extraction and treatment system AB (GET) wells. Pumping of these wells would occur for several decades to comply with regulatory orders for groundwater cleanup. The GSA for the South American Groundwater Basin must submit a GSP that provides details regarding how groundwater would be managed in the basin by January 1, 2022. A GSP for this groundwater basin is not currently posted on the DWR SGMA website. While the specific contents of the GSP are unknown at this time, the regulatorily-required pumping by Aerojet for groundwater cleanup would need to be included in any GSP prepared for the basin. Thus, temporary use of excess water from the Aerojet industrial water supply system for project would have no impact on available groundwater supplies and would not impede sustainable management of the groundwater basin.

As shown on Figure 2-2, the Project's conceptual site layout would result in an increase in impervious surfaces from development of 1.48 million square feet of buildings and associated paved parking lots and streets. Unlined stormwater retention basins, drainage and conveyance facilities that flow into unlined ditches and channels would be constructed as part of the Project. As a result of routing the stormwater runoff from the impervious areas, there would be no substantial reduction in groundwater recharge as a result of the project. There would be **a less than significant impact**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 that would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☐	☒

Less than significant impact.

i-iii) The Aerojet Administrative Channel for stormwater conveyance from the Aerojet Administration area to the west of the Project is located just outside the southern Project boundary, and flows into Buffalo Creek.

Future construction activities within the Project Area would result in soil disturbances and increase impervious surfaces on the Project site. The drainage patterns on the Project Site would be altered due to construction of new onsite and offsite stormwater drainage facilities, including several stormwater detention basins and stormwater basin overflow channels that flow into the Aerojet Administrative Channel, as described in the project description, and shown on Figures 2-2 and 2-4. A Storm Drain Evaluation for the Project is shown in Appendix E. Prior to submittal of Final Subdivision Map and improvement plans to the City, the project applicant would prepare and submit a detailed final drainage study based upon the final design of the Project that includes but is not limited to: a pre- and post-project drainage analysis of the project and project impacts, identification of offsite project impacts or required offsite improvements, delineation of existing and expected post project 100-year floodplain, identification of needed FEMA map revisions (if applicable), and identification of proposed connections to the City's Storm Drainage System with adequate supporting calculations. The drainage study for the Project would conform to the requirements of the Sacramento City/County Drainage Manual (Volume 2), County of Sacramento Improvement Standards (Section 9), and all other applicable standards.

The Project would incorporate several measures that would prevent erosion, siltation, or flooding. For those activities that disturb one-acre or more of land, an NPDES Construction General Permit would be required prior to the start of construction. To comply with the requirements of the NPDES Construction General Permit, these projects would be required to file a Notice Of Intent with the State of California and submit a SWPPP defining BMPs for construction and post-construction-related control of the Proposed Project site runoff and sediment transport. Requirements for the SWPPP include incorporation of both erosion and sediment control BMPs. SWPPPs generally include the following applicable elements:

- Diversion of offsite runoff away from the construction area,
- Prompt revegetation of proposed landscaped areas,
- Perimeter straw wattles or silt fences and/or temporary basins to trap sediment before it leaves the site,

- Regular sprinkling of exposed soils to control dust during construction during the dry season,
- Installation of a minor retention basin(s) to alleviate discharge of increased flows,
- Specifications for construction waste handling and disposal,
- Erosion control measures maintained throughout the construction period,
- Preparation of stabilized construction entrances to avoid trucks from imprinting debris on city roadways,
- Contained wash out and vehicle maintenance areas,
- Training of subcontractors on general construction area housekeeping,
- Construction scheduling to minimize soil disturbance during the wet weather season, and
- Regular maintenance and storm event monitoring.

While additional runoff may occur from Project development of impervious surfaces, that additional runoff would be managed in engineered detention basins and outlet channels that would convey the water to unlined drainage channels where it would percolate to the subsurface, without flooding any onsite or offsite facilities.

The stormwater detention and conveyance facilities would be designed with capacities that meet or exceed the regulatory requirements for runoff rates and volumes. These facilities would not impede or redirect flood flows on the Project site or in other offsite areas not designed to retain the stormwater.

As discussed above, the Project would result in **less-than-significant impacts** related to substantial erosion or siltation on- or offsite; substantial increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

iv) FEMA flood hazard maps 06067C0250H and 06067C0114 indicate that the entire Project Area is in unshaded Zone X. The Project site is not located within a flood zone. Therefore, implementation of The Proposed Project would have **no impact** related to impeding or redirecting flood flows.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Less than significant impact.

The Project site is not located in a flood hazard area, based on Federal Emergency Management Agency (FEMA 2021), so it is not subject to inundation by flooding.

The Project is not located near the ocean, so it is not subject to inundation by tsunami.

There are no open water bodies, such as ponds or lakes, adjacent to or on the Project site.

The project area is not located within the 100-year floodplain of the American River; however, it is located downstream of a major dam (Folsom Dam), which is 4 miles to the northeast. The Project area would likely be inundated in the event Folsom Dam fails (County of Sacramento 2008). Although Folsom Dam has a low probability of failing, Folsom Reservoir does not currently have storage or release capacity for flood occurrences at a greater interval than a 100-year recurrence level. If a flood from Folsom Dam were to inundate the Project area, there would be a low risk that pollutants would be released, because the planned Project facilities are not expected to store or generate large quantities of chemicals and pollutants.

Therefore, the project would not expose people or structures to a significant loss, injury, or death involving flooding as a result of the failure of a dam. Impacts would be considered **less than significant**, and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

No impact.

The Central Valley RWQCB has adopted a Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin Rivers to identify and protect beneficial uses of surface waters in the region (California RWQCB 2018). The Basin Plan sets forth beneficial uses and numeric water quality objectives for surface water in the project vicinity. Beneficial uses serve as the basis for determining the water quality criteria needed to protect or enhance the uses. In general, beneficial uses are those uses, users, or activities that benefit from the presence of the water and could be adversely affected if water quality were degraded. Beneficial use designation and water quality objectives are reviewed and modified, as necessary, at least once every three years. Existing beneficial uses of the receiving waters within the project vicinity are defined for Lake Natoma and the American River as:

- Municipal and domestic water supply
- Irrigation water for agriculture
- Hydropower
- Water contact recreation
- Non-contact water recreation
- Warm-water freshwater habitat

- Cold-water freshwater habitat
- Fish spawning
- Wildlife habitat

The Basin Plan defines specific water quality objectives necessary to protect and maintain the beneficial uses of Lake Natoma and the lower American River (California RWQCB 2018.

Section 303(d) of the Clean Water Act requires the identification of water bodies that do not meet, or are not expected to meet, water quality standards (i.e., impaired water bodies). The affected water body, and associated pollutant or stressor, is then prioritized in the 303(d) List. The Clean Water Act further requires the development of a Total Maximum Daily Load (TMDL) for each listing. In 2008, California began integrating the 303(d) List of Impaired Waters and the 305(b) Water Quality Assessment Report into a single report (Integrated Report). The 2016 Section 303(d) Integrated Report indicates that the American River from Nimbus Dam to its confluence with the Sacramento River is impaired by pesticides, PCBs, mercury, and toxicity from unknown sources (State Water Resources Control Board 2016). TMDLs have not been developed for these pollutants.

The water quality of Buffalo Creek reflects seasonal periods of little or no flow and the channelized nature of the drainage system, and it typically does not show evidence of oil and grease or other urban pollutants (County of Sacramento 2008). Buffalo Creek is also not listed on the State Water Resources Control Board's Section 303(d) List of impaired Water Bodies. Project construction and operations would not, involve pollutants for which the American River is listed as impaired, and thus, would not conflict with Basin Plan water quality objectives.

As discussed above, industrial and construction water needed for the project would be sourced from the Aerojet industrial water supply system. The industrial water supply system receives water from the Aerojet GET AB Facility. That system currently has an excess capacity of 1.5 million gallons per day (GPD). Operation of the GET facility would occur for several decades to comply with regulatory orders and requirements for groundwater cleanup at the Aerojet facility. Thus, operation of the GET facility and the water supply system would need to be included in any water quality control plans and sustainable groundwater management plans that address the area of the project. Operation of the GET facility and the industrial water supply system would not be affected by the Project.

Based on the above analysis there would be **no impact** related to obstruction or implementation of any water quality control plan or sustainable groundwater management plan.

4.10.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.11 Land Use and Planning

4.11.1 Environmental Setting

4.11.1.1 Project Site and Surrounding Uses

As discussed above in Section 2 Project Description, the approximately 105-acre Project site is located within the City of Rancho Cordova on the former Aerojet campus, at the southwest corner of the Folsom Boulevard/Nimbus Road Intersection, south of the Highway 50 Hazel Avenue exit (see Figure 1.1-1). The Project Site is bounded on the north by Folsom Boulevard, on the east by Nimbus Road, and on the south and west by largely undeveloped land. Regional access is provided by Highway 50, and site access is provided via the Hazel Avenue interchange, Hazel Avenue, and Folsom Boulevard.

The Hazel Avenue interchange project would elevate Hazel Avenue above Folsom Boulevard and the light-rail tracks and create a jug handle road to provide circulation between Hazel Avenue and Folsom Boulevard. The jug handle would intersect Folsom Boulevard west of the proposed Hazel Avenue overcrossing and intersect Hazel Avenue at the future Atlanta Street extension into Easton Place, located south of Folsom Boulevard. As a result of the interchange project, the Hazel Avenue/Folsom Boulevard Intersection would be grade separated and turning movements between these two streets would shift to the jug handle. In addition, Hazel Avenue would be widened and extended south to the future Easton Valley Parkway.

The project vicinity is a semi-suburban rural area surrounded primarily by undeveloped lands with some industrial and commercial development. Suburban residential areas are located to the north across Highway 50, and primarily rural lands with some industrial development, mainly associated with current and former Aerojet operations, are to the south, east, and west of the Project site. This includes the Easton Project-Easton Place & Glenborough at Easton (Glenborough Project) planned for mixed-use development located immediately east of the Project site within unincorporated Sacramento County jurisdiction.

4.11.2 Regulatory Framework

4.11.2.1 City of Rancho Cordova General Plan

The City of Rancho Cordova General Plan was adopted June 26, 2006 (City of Rancho Cordova 2006a). The General Plan is the fundamental document governing land use development in the incorporated areas of the City. The Project site is located within the Aerojet SPA and is zoned light industrial. The northern portion of the Project site consists of formerly developed industrial areas, which includes paved areas and foundations of several warehouses historically used by Aerojet and now removed. A total of five vacant industrial buildings and one active industrial building remains on the site.

The following General Plan Land Use Element policies apply to the proposed Project:

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

Policy LU.1.4: Promote high quality, efficient, and cohesive land utilization that minimizes negative impacts (e.g., traffic congestion and visual blight) and environmental hazards (e.g. flood, soil instability) on adjacent neighborhoods and infrastructure and preserve existing and future residential neighborhoods from encroachment of incompatible activities and land uses.

Policy LU.2.2: Promote new development and redevelopment in accordance with the building blocks concepts of neighborhoods, villages, and districts.

Policy LU.2.3: Encourage the clustering of similar uses into areas or districts that have common needs and that are compatible with one another, in order to maximize their efficiency and identity for Rancho Cordova

Policy LU.5.1: Improve the character and quality of existing development through the revitalization of blighted and underutilized development.

Policy LU.6.4: Revitalize Folsom Boulevard consistent with the Folsom Boulevard *Planning Area.*

4.11.3 Land Use and Planning (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

No impact.

The project area is undergoing redevelopment, including the planned US-50/Hazel Avenue Interchange Improvement Project. The proposed tentative map has been designed to complement this planned transportation improvement. For example, as discussed above, the tentative map accommodates Jug Handle Road which ensures future access to the elevated Hazel Avenue and connectivity with the surrounding community. Therefore, the Project would not physically divide an established community and there would be **no impact** in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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?	☐	☐	☐	☒

No impact.

The Project as proposed is consistent with the Aerojet SPA and existing light industrial zoning. Further, the Project is guided by, and would not conflict with, those General Plan Land Use Element policies listed above. **No impact** would occur.

4.11.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Mineral Resources

4.12.1 Environmental Setting

During the Gold Rush Era, Folsom Gold Mining District was mined mainly for gold by drift mining, small-scale surface placer mining, and ground sluicing. By the mid-1940s, bucket-line dredges operated at the Folsom Gold Mining District and dredged approximately 60 percent of the Aerojet property, including portions of the Project area (County of Sacramento 2008). The dredge tailings, evidenced by this past activity, consist of cobbles, coarse gravel, and sand mostly devoid of soil fines. Presently, no mining activity takes place in the project area. The area is not located within an Aggregate Resource Area or Resource Conservation Area as identified by the Sacramento County General Plan Land Use Diagram (County of Sacramento 2008) nor are any important mineral resources known to be located on the project area.

Neither the City, Mineral Resources Data System, nor the California DOC Division of Mine Reclamation (DMR), identify the Project Area as a mineral resource zone (DOC 2015; Rancho Cordova 2006b).

4.12.2 Regulatory Framework

4.12.2.1 State

The state-mandated Surface Mining and Reclamation Act of 1975 (SMARA) requires the identification and classification of mineral resources in areas within the State subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land using the following Mineral Resource Zone classifications:

MRZ-1: Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.

MRZ-2: Areas where adequate information indicates that mineral deposits are present, or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic- geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.

MRZ-3: Areas containing mineral occurrences of undetermined mineral resource significance.

MRZ-4: Areas where available information is inadequate for assignment to any other MRZ category. (DOC 2015

4.12.3 Mineral Resources (XII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☐	☐	☒

No impact.

While the Project site is located in a region known to contain high value aggregate resources, according to the Rancho Cordova General Plan Figure 4.8-1, Mineral Resource Zones and Aggregate Operations Within the General Plan Planning Area, the Project site is not located within a mapped Mineral Resource Zone. Furthermore, the site does not accommodate existing mining operations. The fact that the Project site was previously developed and currently supports five existing buildings and foundations from former buildings further reduces its potential for use as a mineral extraction site. Therefore, Project development would not result in the loss of availability of a known mineral resource and there would be **no impact**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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?	☐	☐	☐	☒

No impact.

As discussed under response a) above, the Project site is not identified as a Mineral Resource Zone by the Rancho Cordova General Plan or as a mineral resource recovery site by City or DMR. There would be **no impact** to designated locally-important mineral resource recovery sites.

4.12.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.13 Noise

This section addresses noise and groundborne vibration issues present or with the potential to occur in the Project Area, potential direct and indirect Project impacts on sensitive receptors, and mitigation measures to mitigate impacts identified as potentially significant. This assessment is based on the *Noise Assessment for the Easton Research Park West Project* prepared by ECORP (2021e) which is included with this document as *Appendix D*.

4.13.1 Environmental Setting

4.13.1.1 Fundamentals of Sound and Environmental Noise

Addition of Decibels

The decibel (dB) scale is logarithmic, not linear; 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 3 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 3 dB). Under the dB scale, three sources of equal loudness together would produce an increase of 5 dB.

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 (Federal Highway Administration [FHWA] 2011). 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 3 dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (FHWA 2006. 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 dBA 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 5 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 of 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 length-wise 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 structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 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.

4.13.1.2 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 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 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)** is 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 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 approximately 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 approximately 1 to 2 dBA.

4.13.1.3 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 would 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 dBA noise levels, 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.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

4.13.1.4 Effects of Noise on People

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 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.

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.

4.13.2 Environmental Groundborne Vibration Fundamentals

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 one second period (ECORP 2021e).

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.

4.13.3 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 parks, historic sites, cemeteries, and 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.

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 parks, historic sites, cemeteries, and 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 Project Site is generally surrounded by commercial and industrial development, with a residential mobile home park (Twilight RV and Mobile Home Park) located northeast of the Project Site boundary. Potential residential land uses are currently approved for development directly east of and adjacent to the Project Site, beyond Nimbus Road (soon to be Hazel Avenue once the *Hazel Avenue/US-50 Interchange Project* construction is completed). Surrounding land uses include retail, commercial space, a gas station, restaurants, recreation (Monster Mini Golf), residential (mobile home park), and transient lodging (Comfort Inn and Suites) uses to the north beyond Folsom Boulevard and the railroad traversing parallel to the Project Site's northern boundary; Schnitzer Steel Recycling Center and a furniture retail store to the west; undeveloped land to the south; and undeveloped land to the east beyond Nimbus Road (soon to be Hazel Avenue) with a handful of parking lots, an Aerojet industrial facility, and a car dealership beyond. The nearest existing noise-sensitive receptors to the Project Site include the Comfort Inn and Suites, located immediately north of the Project Site beyond Folsom Boulevard and the Sacramento Regional Transit Railroad (SRTRR); and the mobile home park, located approximately 691 feet northeast of the

Project Site. Additionally, future noise sensitive receptors include residences planned for development in the approved Easton Project -Easton Place and Glenborough at Easton Land Use Master Plan, located approximately 98 feet east of the Project Site beyond Nimbus Road/Hazel Avenue (or 176 feet distant in areas designed as the future Hazel Avenue *Ultimate* [modified] roadway scenario [MacKay and Somps 2021]).

4.13.3.1 Existing Ambient Noise Environment

The City of Rancho Cordova and the Project vicinity are impacted by various noise sources that vary widely for several reasons, such as changes in traffic volumes, seasonal activities, population density, or environmental conditions. It is subject to typical urban noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Mobile sources of noise, especially cars and trucks traversing Folsom Boulevard and US-50, are the most common source of noise in the Project vicinity. Industrial land uses in the vicinity are also substantial contributors of noise, such as the Schnitzer Steel Recycling Center east of the Project Site. Other sources of noise are the various land users (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the Project vicinity that generate stationary-source noise.

According to the Rancho Cordova General Plan Environmental Impact Report (City of Rancho Cordova 2006c), the roadway segment on Folsom Boulevard between Sunrise Boulevard and Hazel Avenue, which traverses the Project Site's northern boundary, has an average daily traffic count of 13,300 vehicles. According to the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108), which calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions; this amount of roadway traffic on Folsom Boulevard generates an ambient noise level of 64 dBA L_{dn} at 100 feet from the centerline.

Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Additionally, infrequent or intermittent noise is associated with vehicles including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises are combined with typical urban noise and are regulated by a variety of agencies.

The Project Site is affected by existing railway noise. The SRTRR railway corridor traversing the northern boundary of the Project Site extends from the Sacramento Valley Station junction in Downtown Sacramento to the Historic Downtown Folsom Station in Folsom. The SRTRR is a light rail transit line used primarily to transit passengers going between Sacramento and Folsom, with numerous stops in between. According to the *City of Rancho Cordova General Plan Environmental Impact Report* Noise Element (2006a), this railway generates day-night noise levels of 60 dBA L_{dn} at a distance of 270 feet from the at-grade intersection and 67 dBA L_{dn} at a distance of 100 feet from the at-grade intersection. Project operations would largely occur over 100 feet from this railway at the nearest proposed building.

The Project Site is located outside of any airport land use plan. Furthermore, the Project site is located beyond two miles from any airport or airstrip. The Sacramento Mather Air Force Base is the closest airport, located approximately six miles southwest of the Project Site. Thus, the ambient noise environment of the Project area is not heavily influenced by aircraft noise.

The American National Standards Institute (ANSI) Standard 12.9-2013/Part 3 "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present" (2013) provides a table of approximate background sound levels in L_{dn}, daytime L_{eq}, and nighttime L_{eq}, based on land use and population density. The ANSI standard estimation divides land uses into six distinct categories. Descriptions of these land use categories, along with the typical daytime and nighttime levels, are provided in Table 3-1 of Appendix D. At times, one could reasonably expect the occurrence of periods that are both louder and quieter than the levels listed in Table 3-1 in Appendix D. ANSI notes, "95% prediction interval [confidence interval] is on the order of ±10 dB." The majority of the Project area would be considered ambient noise Category 2 or 3.

4.13.4 Regulatory Framework

4.13.4.1 Federal

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.

Federal Interagency Committee on Noise (FICON)

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 noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related 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 CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL.

4.13.4.2 State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting noise-sensitive land uses, 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 Office of Planning and Research (2017, 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.

State OPR 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.

4.13.4.3 Local

Rancho Cordova General Plan Noise Element

The goal of the Noise Element of the General Plan is to identify the major sources of noise within the City and discuss the City's role in ensuring comfortable and safe noise levels throughout the community. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, noise considerations would influence the general distribution, location, and intensity of future land use. The result is that effective land use planning and mitigation can alleviate the majority of noise problems. The Rancho Cordova General Plan Noise Element includes the following goals, policies, and actions regarding noise that are applicable to the Proposed Project:

Goal N-1: *Ensure that all new development will be free of noise disturbances.*

Policy N-1.1: Establish standards and policies consistent with those in Tables N-1 [shown here as Table 4.13-1] to govern maximum sound levels in new development.

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.

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.

Policy N.1.6: Ensure that comfortable noise levels and adequate privacy are maintained in higher density development.

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 projects that may

include the use of temporary noise barriers, temporary relocation of noise-sensitive land uses or other appropriate measures.

Table 4.13-1. City of Rancho Cordova Noise Level Performance Standards for New Projects Affected by or Including Non-Transportation Noise Sources

Stationary Noise Source	Noise Level Descriptor	Daytime Maximum (7:00 a.m. to 10:00 p.m.)	Nighttime Maximum (10:00 p.m. to 7:00 a.m.)
Typical	Hourly L_{eq}, dB	55	45
Tonal, impulsive, repetitive, or consist primarily of speech or music	Hourly L_{eq}, dB	50	40

Source: City of Rancho Cordova General Plan Noise Element, 2006
Notes: The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.

Policy N.1.1: Establish standards and policies consistent with those in Tables N-1 and N-2 [shown here as Tables 4.13-1 and 4.13-2] to govern maximum sound levels in new development.

Policy N.1.5: Mitigate noise created by the construction of new transportation noise sources (such as new roadways or new light rail service) to the maximum extent feasible to comply with the City's standards.

Policy N.1.6: Ensure that comfortable noise levels and adequate privacy are maintained in higher density development.

Policy N.2.4: Emphasize site planning and project design when noise mitigation measures are required.

Table 4.13-2. City of Rancho Cordova Noise Level Performance Standards for Maximum Transportation Noise Exposure

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
All Residential	60[3]	45	NA
Residential 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)	60[3]	40[5]	NA
Transient Lodging – Motels, Hotels	60[4]	45	NA

Table 4.13-2. City of Rancho Cordova Noise Level Performance Standards for Maximum Transportation Noise Exposure

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Hospitals and Nursing Homes	60[3]	45	NA
Theaters and Auditoriums, Music Halls	NA	NA	35
Churches, Meeting Halls,	60[3]	NA	40
Office Buildings	NA	NA	45
Schools, Libraries, Museums	NA	NA	45
Playgrounds, Neighborhood Parks	70	NA	NA

Source: City of Rancho Cordova General Plan Noise Element, 2006
Notes:
NA: Not Applicable;

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.
2. As determined for a typical worst-case hour during periods of use.
3. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL 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 increase protection against sleep disturbance for residences located near railroad tracks.

Rancho Cordova Municipal Code

The City's regulations with respect to noise are included in Chapter 6, *Health and Sanitation*, of the City Code. Section 6.68.090, *Noise Control - Exemptions*, of Chapter 6 states that exemptions from City noise standards include noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and on Fridays commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday; and on each Sunday after the hour of 8:00 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which would not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

For all construction activity conducted outside of the previously discussed exempt hours, the following standards apply:

Chapter 6 – Noise Control

Sec. 6.68.070. - Exterior Noise Standards.

A. The following noise standards, unless otherwise specifically indicated in this chapter, shall apply to all properties within a designated noise area:

Table 4.13-3. City of Rancho Cordova Exterior Noise Standards

Noise Area	City Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, RD-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7:00 a.m. to 10:00 p.m. (Daytime) 10:00 p.m. to 7:00 a.m. (Nighttime)	55 dBA (L_{eq}) 50 dBA (L_{eq})

Sacramento County General Plan Noise Element

While the Project Site is located under the jurisdiction of the City of Rancho Cordova, there are residential land uses approved for future development in the Project vicinity but within unincorporated areas of Sacramento County (Easton/Glenborough Place future development site) and thus within the jurisdiction of the County of Sacramento. The Noise Element of the County of Sacramento General Plan provides a basis for comprehensive local policies to control and abate environmental noise and to protect the citizens of unincorporated Sacramento County from excessive noise exposure. Fundamental goals of the Noise Element include providing sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process, developing strategies for abating excessive noise exposure through cost-effective mitigation measures in combination with appropriate zoning to avoid incompatible land uses, to protect those existing regions of the unincorporated County whose noise environments are deemed acceptable and also those locations throughout the community are deemed "noise sensitive", and to protect existing noise-producing commercial and industrial uses in the unincorporated County from encroachment by noise-sensitive land uses. Per Policy NO-8, *Construction Noise*, noise associated with construction activities must adhere to the County Code requirements, specifically Section 6.68.090(e) which addresses construction noise within the County. Per Table 2 [shown here as Table 4.12-4] of the County General Plan, the maximum allowable exterior Daytime/Nighttime median noise standard as experienced by residential land uses is 55/50 dBA, respectively. The Policy NO-1 provides a not-to-be-exceeded standard of 60 dB L_{dn}/CNEL for new transportation noise sources at residential outdoor activity areas. However, if the best available noise-reduction technology cannot achieve the 60 dB L_{dn}/CNEL standard, then an exterior noise level of 65 dB L_{dn}/CNEL may be allowed in outdoor activity areas.

The Sacramento County General Plan Noise Element includes the following goals, policies, and actions regarding noise that are applicable to the Project vicinity:

Goal 1: *To protect the existing and future citizens of Sacramento County from the harmful effects of exposure to excessive noise. More specifically, to protect existing noise-sensitive land uses from new uses that would generate noise levels which are incompatible with those uses,*

and to discourage new noise-sensitive land uses from being developed near sources of high noise levels.

Goal 2: *To protect the economic base of Sacramento County by preventing the encroachment of noise-sensitive land uses into areas affected by existing noise-producing uses. More specifically, to recognize that noise is an inherent by-product of many land uses and to prevent new noise-sensitive land uses from being developed in areas affected by existing noise-producing uses.*

Goal 4: *To provide sufficient noise exposure information so that existing and potential future noise impacts may be effectively addressed in the land use planning and project review processes.*

The Sacramento County General Plan Noise Element includes the following goals, policies, and actions regarding noise associated with traffic noise that are applicable to the Project vicinity:

Traffic and Railroad Noise Sources

NO-1: The noise level standards for noise-sensitive areas of new uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1 (shown here as Table 4.12-4). Where the noise level standards of Table 1 (shown here as Table 4.12-4) are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 (shown here as Table 4.12-4) standards.

The Sacramento County General Plan Noise Element includes the following goals, policies, and actions regarding non-transportation noise applicable to the Project vicinity:

Non-Transportation Noise Sources

NO-5 The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2 [shown here as Table 4.12-5]. Where the noise level standards of Table 2 are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 standards within sensitive areas.

NO-6 Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 [shown here as Table 4.12-5] at existing noise-sensitive areas in the project vicinity.

NO-7 The "last use there" shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of

compliance with the Table 2 [shown here as Table 4.12-5] standards at the property line of the generating use in anticipation of the future neighboring development.

Table 4.13-4. County of Sacramento Noise Standards for New Uses Affected by Traffic and Railroad Noise

New Land Use	Sensitive[1] Outdoor Area - L_{dn}	Sensitive Interior[2] Area – L_{dn}	Notes
All Residential	65	45	5
Transient Lodging – Motels, Hotels	65	45	3, 5
Hospitals and Nursing Homes	65	45	3, 4, 5
Theaters and Auditoriums	NA	35	3
Churches, Meeting Halls, Schools, Libraries, etc.	65	40	3
Office Buildings	65	45	3
Commercial Buildings	NA	50	3
Playgrounds, Neighborhood Parks	70	NA	3
Industrial	65	50	3

Source: Sacramento County General Plan Noise Element, 2006
Notes:
NA: Not Applicable;
1. Sensitive areas are defined in acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (L_{max}) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

Table 4.13-5. County of Sacramento Non-Transportation Noise Standards

Receiving Land Use	Community Noise Exposure (Median L_{50}, or L_{eq} dB)		
	Outdoor Area[2]		Interior[3]
	Daytime	Nighttime	Day and Night
All Residential	55	50	35
Transient Lodging – Motels, Hotels	55	NA	35
Hospitals and Nursing Homes	55	NA	35
Theaters and Auditoriums	NA	NA	30

Table 4.13-5. County of Sacramento Non-Transportation Noise Standards

Receiving Land Use	Community Noise Exposure (Median $L_{50,}$ or L_{eq} dB)		
	Outdoor Area[2]		Interior[3]
	Daytime	Nighttime	Day and Night
Churches, Meeting Halls, Schools, Libraries, etc.	55	NA	35
Office Buildings	60	NA	45
Commercial Buildings	NA	NA	45
Playgrounds, Neighborhood Parks	65	NA	NA
Industrial	60	NA	50

Source: Sacramento County General Plan Noise Element, 2006

Notes:

NA: Not Applicable;

1. The Table 2 [shown here as Table 4.13-5] standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2 [shown here as Table 4.13-5], then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Sacramento County Municipal Code

The County's regulations with respect to noise are included in Chapter 6, Health and Sanitation, of the County Code. Section 6.68.090, *Noise Control - Exemptions*, of Chapter 6 states that exemptions from County noise standards include noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Fridays commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions

which would not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

For all construction activity conducted outside of the previously discussed exempted hours, the following standards apply:

Sec. 6.68.070. - Exterior Noise Standards.

The following noise standards, unless otherwise specifically indicated in this article, shall apply to all properties within a designated noise area:

Table 4.13-6. County of Sacramento Exterior Noise Standards

Noise Area	City Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, RD-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7:00 a.m. to 10:00 p.m. (Daytime) 10:00 p.m. to 7:00 a.m. (Nighttime)	55 dBA (L_{eq}) 50 dBA (L_{eq})

4.13.5 Noise (XIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in 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?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

4.13.5.1 Construction Noise Impacts

Onsite Construction Noise

Onsite 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 and those activities required in the offsite stormwater drainage and sewer connection infrastructure component of the Project. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, 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 onsite construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest noise-sensitive receptors to the Project Site consist of the Comfort Inn and Suites, located approximately 140 feet north of the Project Site beyond the Gold Line Railway and Folsom Boulevard; and future residential buildings associated with the Glenborough and Easton Place Land Use Master Plan, which would be located approximately 98 feet east of the Project Site and beyond Hazel Avenue. As previously discussed, the approved *Hazel Avenue/U.S. 50 Interchange Project* is anticipated to expand the vehicle access to the area, resulting in the widening of Hazel Avenue to either a 98 feet (4-lane arterial) or 176 feet (6-lane *Ultimate* thoroughfare [modified]) right-of-way. For conservative purposes, the closer distance of 98 feet was applied in this analysis. The next-nearest residence (existing) sits approximately 691 feet northeast of the Project Site across Folsom Boulevard at the Twilight RV and Mobile Home Park.

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 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 located approximately 1,000 feet from the property line at the nearest noise-sensitive receptor (future residents of Glenborough and Easton Place) for the demolition and grading phases. For building construction, paving and architectural coating, the Project Site center varies between 375 and 2,600 feet distant for each phase (see Table 5-1 and Attachment A for individual phase distances to receptors). As previously described, the City and County Code exempts construction activities from noise standards when conducted during the hours of 6:00 a.m. and 8:00 p.m. on Mondays through Fridays, and between the hours of 7:00 a.m. and 8:00 p.m. on Saturdays and Sundays.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, the construction equipment noise levels were calculated using the RCNM for the construction process and compared against the National Institute for Occupational Safety & Health (NIOSH) construction-related noise level threshold of 85 dBA and the City and County nighttime standards of 55 and 50 dBA for construction activities conducted outside of exempted hours.

Due to the anticipated phasing of building construction consisting of the construction of two buildings per phase and associated infrastructure and parking, each phase was modeled with a site center centralized between the two buildings and construction noise-generated is evaluated for each sensitive receptor distance closest to each individual Project construction phase site centers. Additionally, because noise associated with the offsite underground infrastructure work required during the stormwater drainage and sewage connection component of the Project would occur over 4,000 feet from the nearest noise sensitive receptor, impacts associated with this component are addressed qualitatively. The anticipated short-term construction noise levels generated for the necessary construction equipment are presented in Table 4.13-7.

As shown in Table 4.13-7, at no time would construction noise exceed the NIOSH standard of 85 dBA intended to prevent physical damage to the ear. However, construction, if conducted during the non-exempt nighttime hours, would exceed the City and County nighttime exterior noise thresholds of 55 dBA during the hours of 8:00 p.m. and 10:00 p.m. and 50 dBA during the hours of 10:00 p.m. and 6:00 a.m. at the nearest future residential receptors, located 176 feet from construction activities, and thus would result in an inconsistency with the applicable noise standard.

Mitigation is required to reduce construction noise as experienced by noise-sensitive receptors to levels below these thresholds. Noise barriers or enclosures can provide a sound reduction of 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2000). To be effective, 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 the case of Project construction, an enclosure/barrier would only be necessary at the area of the construction site where noise producing activities are being performed.

As such, implementing mitigation measure **NOI-1** is required to reduce impacts **to less than significant levels with mitigation incorporated** for construction activities conducted after 8:00 p.m. and before 6:00 a.m. on weekdays and between 8:00 p.m. and 7:00 a.m. on weekends.

For construction activities associated with the offsite stormwater and sewage infrastructure component of the Project, individual construction equipment would not exceed City or County nighttime standards given its distance from sensitive receptors being over 4,000 feet.

Table 4.13-7. Construction Average (dBA) Noise Levels at Nearest Receptor							
Equipment	**Estimated Exterior Construction Noise Level @ Nearest Residence (dBA L_{eq})**	**NIOSH Construction Noise Standards (dBA L_{eq})**	**Exceeds NIOSH Standard at Nearest Sensitive Receptor?**	**City and County Nighttime Construction Noise Standards (dBA L_{eq})**			
				8:00 p.m. – 10:00 p.m. Daily	**Exceeds Standard?**	**10:00 p.m. – 6:00 a.m. Daily (10:00 p.m. – 7:00 a.m. Weekends)**	**Exceeds Standard?**
Demolition @ 1,000 Feet Distant							
Combined Demolition Equipment (3 Excavators, 1 Concrete/Industrial Saw, 2 Rubber Tired Dozers)	**60.4**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Grading @ 1,000 Feet Distant							
Combined Grading Equipment (1 Grader, 1 Rubber Tired Dozer, 2 Tractor/Loader/Backhoes,2 Scrapers)	**61.5**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Phase 1 – Building Construction, Paving, Architectural Coating @ 2,600 Feet Distant							
Combined Phase 1 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**55.1**	*85*	**No**	*55*	**Yes**	*50*	**Yes**

Table 4.13-7. Construction Average (dBA) Noise Levels at Nearest Receptor							
Equipment	**Estimated Exterior Construction Noise Level @ Nearest Residence (dBA L_{eq})**	**NIOSH Construction Noise Standards (dBA L_{eq})**	**Exceeds NIOSH Standard at Nearest Sensitive Receptor?**	**City and County Nighttime Construction Noise Standards (dBA L_{eq})**			
				8:00 p.m. – 10:00 p.m. Daily	**Exceeds Standard?**	**10:00 p.m. – 6:00 a.m. Daily (10:00 p.m. – 7:00 a.m. Weekends)**	**Exceeds Standard?**
Phase 2 – Building Construction, Paving, Architectural Coating @ 1,486 Feet Distant							
Combined Phase 2 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**59.9**	*85*	**No**	*55*	**Yes**	*50*	**Yes**
Phase 3 – Building Construction, Paving, Architectural Coating @ 930 Feet Distant							
Combined Phase 3 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**64.0**	*85*	**No**	*55*	**Yes**	*50*	**Yes**

Table 4.13-7. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level @ Nearest Residence (dBA L_{eq})	NIOSH Construction Noise Standards (dBA L_{eq})	Exceeds NIOSH Standard at Nearest Sensitive Receptor?	City and County Nighttime Construction Noise Standards (dBA L_{eq})			
				8:00 p.m. – 10:00 p.m. Daily	Exceeds Standard?	10:00 p.m. – 6:00 a.m. Daily (10:00 p.m. – 7:00 a.m. Weekends)	Exceeds Standard?
Phase 4 – Building Construction, Paving, Architectural Coating @375 Feet Distant							
Combined Phase 4 Equipment (1 Crane, 3 Forklifts, 1 Generator, 3 Tractor/Loader/Backhoes, 1 Welder Torch, 1 Roller, 1 Paving Equipment, 1 Air Compressor)	**71.9**	*85*	**No**	*55*	**Yes**	*50*	**Yes**

Source: Construction noise levels were calculated by ECORP Consulting, Inc. using the FHWA RCNM (FHWA 2006). Refer to Attachment A for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2016.3.2. 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. The distance to the nearest sensitive receptor was calculated from the center of the Project site (or center of Project phase) consistent with FTA (2018) recommendations. Building construction, paving and architectural coating are assumed to occur simultaneously.

Offsite Construction Worker and Material Haul Truck Traffic Noise

Project construction would result in additional traffic on adjacent roadways over the time period that construction occurs. The Project is expected to generate approximately 4,534 trips (worker, vendor, and material hauling trips combined) over the course of the Project's anticipated buildout period. According to the 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). As stated in the *Local Transportation Analysis* (Fehr & Peers 2021, Appendix F), 100 percent of Project construction traffic is expected to exit onto Nimbus Road and head north toward Folsom Boulevard. The roadway segment of Folsom Boulevard, west of Hazel Avenue (Proposed Project roadway segment), experiences approximately 18,400 vehicles per day, while the roadway section of Folsom Boulevard east of Hazel Avenue to Aerojet Road experiences approximately 16,600 vehicles per day. The majority of Project traffic is expected to also use US-50 to and from the Project Site. According to the Caltrans 2019 Traffic Counts (Caltrans 2020c), the roadway segment of US-50 traversing near the Project Area experiences traffic counts between 130,600 to 139,000 trips daily. Project construction would not instigate traffic trips at rates great enough to consistently double traffic on Project vicinity roadways, like Folsom Boulevard, and therefore generate a perceptible noise level increase. Thus, noise from offsite construction traffic would be a **less than significant impact.**

Operational Noise Impacts

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 noise-sensitive receptors to the Project Site include the Comfort Inn and Suites (existing) located immediately north of the Project Site beyond Folsom Boulevard and the Gold Line light rail; and future residential receptors included in the approved Easton Place/Glenborough & Easton Place Land Use Master Plan, located approximately 98 feet east of the Project Site beyond Nimbus Road/Hazel Avenue (or 176 feet distant in areas designed as the future Hazel Avenue *Ultimate* [modified] roadway scenario [MacKay and Somps 2021]).

Project Operational Offsite Traffic Noise

Project operations would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project area. The Project's contribution to traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise sensitive residential land uses) were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) and based on the traffic volumes identified by Fehr & Peers (2021). The total number of operational trips generated by the Project are expected to reach 2,080 daily. Table 4.13-8 shows the calculated offsite roadway noise levels under existing traffic levels compared to existing traffic levels plus the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the noise standards promulgated by the City and County (see Tables 4.13-2 and 4.13-4 above).

Specifically, for all residences within the City limits (Twilight Mobile Home Park), the following exterior noise standard shall apply pursuant to the City of Rancho Cordova's Noise Element:

- Where it is not possible to reduce noise in outdoor activity areas to the 60 dB Ldn/CNEL standard or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with Table 4.13-2 in Section 4.13.4.2 of this analysis.

For all transient lodging (Comfort Inn and Suites north of the Project Site beyond Folsom Boulevard) within the City limits, the following interior noise standard shall apply pursuant to the City of Rancho Cordova's Noise Element:

- 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 of 45 dB L_{dn}/CNEL shall apply.

For all residences (existing and future) located within County limits, the following exterior noise standard shall apply pursuant to Sacramento County's Noise Element:

- For all residential land uses affected by traffic and railroad noise, an exterior noise level of 65 dBA L_{dn}/CNEL shall apply.

As previously described, neither the City nor the County regulate traffic related noise levels for new Projects where the existing conditions already exceed the applicable standards. In the case that existing traffic noise already exceeds the applicable standard at a sensitive receptor under existing conditions, FICON's measure of substantial increase for transportation noise exposure would be employed, as described in Section 4.13.4.1 above. FICON's measure of substantial increase for transportation noise exposure is as follows:

- If the existing ambient noise levels at existing noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project-related 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 CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase and the resulting noise level would exceed acceptable exterior noise standards; or
- If the existing noise levels already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL

Table 4.13-8 shows the calculated offsite roadway noise levels under existing traffic levels compared to existing traffic levels plus the Project.

Table 4.13-8. Existing Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		dBA Increase	Noise Standard (dBA CNEL)	Exceed Standard ?
		Existing Conditions	Existing + Project Conditions			
Hazel Avenue						
North of Tributary Point Drive	Residential	64.4	**64.5**	+0.1	65	**No**
South of Folsom Boulevard	Residential	43.1	**49.6**	+6.5	60	**No**
Highway 50						
East of Hazel Avenue	Residential	67.4	**67.4**	0.0	>1.5	**No**
West of Hazel Avenue	Residential	65.9	**65.9**	0.0	65	**No**
Folsom Boulevard						
East of Hazel Avenue	Residential	59.8	**59.8**	0.0	60 (City) 65 (County)	**No**
West of Hazel Avenue	Residential/ Transient Lodging	57.6 (37.6 interior)	**57.6** **(37.6 interior)**	0.0	65/45 (interior)	**No**
Tributary Point Drive						
East of Hazel Avenue	Residential	54.2	**54.2**	0.0	60	**No**

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise Emission Levels in conjunction with the trip generation rate identified by Fehr Peers 2021. Refer to Attachment B for traffic noise modeling assumptions and results.

Notes: A total of 3 intersections were analyzed in the Local Transportation Analysis; however, all roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 4.13-8, no roadway segment would experience traffic noise beyond the City or County significance standards as a result of the Project. In the case for residences located along US-50, which are already experiencing noise levels exceeding the 65 dBA threshold, FICON's significance threshold of a maximum 1.5 dBA CNEL increase over existing conditions is applied. With regards to the Comfort Inn and Suites located adjacent to the Project's northern boundary beyond Folsom Boulevard, only the interior noise levels are addressed as hotel parking lots are not considered sensitive land uses. The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (HMMH 2006). Thus, the interior noise experienced within the adjacent hotel would be at least 20 dBA less than that experienced outside, resulting in interior noise

levels well below the 40 dBA interior noise standard for transient lodging land uses [57.6 dBA – 20 = 37.6 dBA]. Thus, offsite operational traffic noise would be a **less than significant impact**.

Operational Stationary Noise

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Warehouse campuses, such as that proposed by the Project, are typically associated with excessive, ongoing operations-related noise that would lead to substantial permanent increases in ambient noise levels. Specifically, the sound of idling trucks and backup beepers would be a substantial source of noise in the Project vicinity. Additional operational stationary noise generated by the Project would come from voices and warehouse truck activities as drivers and employees move in and out of the parking lot. Parking lot noise would be the focus of the operational noise analysis due to their proximity to the existing residences.

The City of Rancho Cordova's stationary source noise regulations are contained in Policy N.1.1 and presented in Table N-1 [shown here as Table 4.13-1] *Noise Level Performance Standards for Stationary Noise Exposure*. Table N-1 shows a typical hourly L_{eq} standard of 55 dB for daytime noise levels, and a nighttime standard of 45 dB for new projects that are affected by or include non-transportation noise sources. Noise-sensitive receptors affected by these standards include the Twilight RV and Mobile Home Park residences.

The County of Sacramento's stationary source noise regulations are contained in Table 2 [shown here as Table 4.13-5] *Non-Transportation Noise Standards* of the County General Plan. Table 2 shows an exterior Daytime/Nighttime median noise standard of 55/50 dBA, respectively, as experienced by residential land uses. Noise-sensitive receptors affected by these County stationary noise source standards include the future residences to be located at the Easton/Glenborough development site.

As previously described, the nearest noise sensitive land use considered in this analysis would be the future residences of Easton/Glenborough Place, to be located adjacent to the Project Site beyond the future Hazel Avenue roadway expansion project. There are also noise-sensitive receptors within the mobile home park, located 687 feet northeast of the Project Site boundary. Thus, the Project would be subject to a 55 dBA exterior noise standard during daytime operations for both City- and County- affected land uses; and a 50 dBA exterior standard during Project nighttime operations at the future adjacent residential land uses of Easton/Glenborough Place; and a 45 dB nighttime noise standard for the mobile home park residential land use.

The most intense land use which could potentially occur at the site was modeled using the SoundPLAN 3D noise model, which accounts for the operation of eight warehouse buildings, with 1,486,000 sf of total warehouse campus space and associated parking lot activities. As previously stated, The SoundPLAN 3D noise model 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. Primary Project noise sources include semi-trucks idling and maneuvering, the use of backup beepers, and standard parking lot and warehouse campus activities. The actual future development on the site would likely be less intensive and therefore would generate less noise then presented in this analysis.

The results of this model can be found in Attachment C of Appendix D. The most dominant noise sources for these locations would consist of backup beepers, trucks maneuvering within the designated internal parking areas, trucks leaving the warehouse campus, and any idling vehicles during drop-off or pickup waiting periods. Additional noise sources anticipated for these locations are the employee parking areas and their associated activities (car doors opening and closing, music, people talking, internal circulation, etc.). A reference measurement was taken, on June 23, 2021 by ECORP Consulting, Inc., of a food distribution warehouse for noise levels associated with truck maneuvering activities near loading docks (see Attachment C for all reference measurements inputted into the SoundPLAN model to represent the noise sources within the Project Site). Placement of all noise sources, for modeling purposes, were based off the proposed Project Site plan and the Easton/Glenborough Place Land Use Master Plan.

Table 4.13-9 shows the predicted Project noise levels at five locations in the Project vicinity, as predicted by SoundPLAN. Also, see Figure 4 in Appendix D for a visual representation of Project noise propagation. Locations 1 and 2 represent noise levels at the Project-side of the hotel and the residences located at the mobile home park, respectively. Locations 3-5 represents the future residences of the approved Easton/Glenborough Place development site, located approximately 100 feet east of the Project Site beyond the future Hazel Avenue.

Table 4.13-9. Modeled Operational Noise Levels

Site Location	Location	Modeled Operational Noise Attributed to the Project (L_{eq} dBA)	City and County Daytime Standards (dBA L_{eq})
1	**Comfort Inn & Suites –** Directly North of Project Site Across Folsom Boulevard Level 1 Level 2 Level 3	 52.2 dBA 50.3 dBA 42.7 dBA	*55 dBA*
2	**Nearest Existing Sensitive Receptor** – Residences to the northeast at the Twilight Mobile Home Park, Beyond Folsom Boulevard	28.0 dBA	*55 dBA*
3	**Future Sensitive Receptors -** Residences of Easton/Glenborough Place, Across Future Hazel Avenue at the Folsom Boulevard/Hazel Avenue Intersection	48.0 dBA	*55 dBA*
4	**Future Nearest Sensitive Receptor -** Residences of Easton/Glenborough Place, Across Future Hazel Avenue between Folsom Boulevard and the future Hazel Avenue/Jughandle Road Intersection	49.3 dBA	*55 dBA*
5	**Future Sensitive Receptors -** Residences of Easton/Glenborough Place, Across Future Hazel Avenue at the Hazel Avenue/Jughandle Road Intersection	43.5 dBA	*55 dBA*

Source: Stationary source noise levels were modeled by ECORP using SoundPLAN 3D noise model. Refer to Attachment C for noise modeling assumptions and results.

As shown in Table 4.13-9, Project noise generated onsite would propagate to 28.0 dBA at the nearest existing residential receptors and to 49.3 dBA at the nearest future noise-sensitive receptors included in the approved Easton Project- Easton Place and Glenborough at Easton development project. Therefore, the Project would not surpass the City or County noise standards at these nearest sensitive receptors, and Project impacts from operational stationary noise would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Less than significant impact.

Construction-Generated Vibration

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Once operational, the Project would not be a source of groundborne vibration. 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. Pile drivers are not anticipated to be necessary for Project construction in the case of the Proposed Project. 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 construction equipment are summarized in Table 4.13-10.

Table 4.13.10. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 20 Feet (inches per second)
Vibratory Roller	0.210
Large Bulldozer/Caisson Drilling	0.124
Loaded Trucks	0.106
Rock Breaker	0.115
Jackhammer	0.049
Small Bulldozer/Tractor	0.004

Table 4.13.10. Representative Vibration Source Levels for Construction Equipment	
Equipment Type	**Peak Particle Velocity at 20 Feet (inches per second)**

Source: FTA 2018; Caltrans 2020a

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structure of concern to the construction site would be the residences to be located east of and adjacent to the Project Site, beyond future Hazel Avenue, with the closest physical building to be located approximately 98 feet away from the Project site boundary.

Based on the representative vibration levels presented for various construction equipment types in Table 4.13-10 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential Project construction vibration levels at the nearest offsite structure, located 188 feet distant from the center of the Project site. The FTA provides the following equation:

$$[PPVequip = PPVref \times (25/D)^{1.5}].$$

Table 4.13-11 presents the expected Project related vibration levels at a distance of 98 feet.

Table 4.13-11. Project Construction Vibration Levels at 98 Feet							
Receiver PPV Levels (in/sec)[1]					**Peak Vibration**	**Threshold**	**Exceed Threshold**
Large Bulldozer/ Caisson Drilling/ Hoe Ram	**Loaded Trucks**	**Jack Hammer**	**Small Bulldozer/ Tractor**	**Vibratory Roller**			
0.016	0.014	0.008	0.000	0.027	**0.027**	*0.20*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 4.12-10 (FTA 2018). Distance to the nearest structure of concern is approximately 98 feet measured from Project Site boundary.

As shown, groundborne vibrations attenuate rapidly from the source due to geometric spreading and material damping. Geometric spreading occurs because the energy is radiated from the source and spreads over an increasingly large distance while material damping is a property of the friction loss which occurs during the passage of a vibration wave. As shown in Table 4.13-11, the nearest structures at 98 feet distant from the center of the construction site would not experience groundborne levels in exceedance of the recommended standard, even in the rare case that vibratory roller equipment is used. In addition, Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Thus, impacts resulting from generation of excessive groundborne vibration or groundborne noise levels are **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) 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?	☐	☐	☐	☒

No impact.

The Project site is located approximately 6.12 miles northeast of the Mather Air Force Base, located in the western part of the City; and 9.60 miles east of the Sacramento McClellan Airport, located in northern Sacramento. Although aircraft flight patterns may cover the Project site, noise from aircraft is not a significant issue in the City. The Project Site is greater than two miles of the airports' noise contours (Airport Land Use Commission 1992). Aircraft noise does not significantly impact the City and the Proposed Project would not expose people visiting or working on the Project site to excess airport noise levels.

For this reason, **no impact** would occur.

4.13.6 Mitigation Measures

NOI-1: **Nighttime construction noise impacts.** In the case that construction occurs between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and between 8:00 p.m. and 7:00 a.m. on weekends, a temporary noise barrier or enclosure shall be positioned between construction equipment and all residences within 2,600 feet of construction activities in a manner that breaks the line of sight between the construction equipment and these residences, to the extent feasible. The temporary noise barrier shall have a sound transmission class (STC) of 25 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. The temporary noise barrier can consist of a solid plywood fence at least 7/16-inch in thickness and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket, attached to chain link fencing or some other support structure. The length, height, and location of the temporary noise barrier shall be adequate to assure proper acoustical performance. Specifically, the barrier must completely break the line of sight between construction equipment and all residential properties less than 2,600 feet of construction activity, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

In order to qualify as a noise-sensitive receptor at the time of construction, such residential dwellings would be required to physically house individuals during the time Project construction activities occur.

4.14 Population and Housing

4.14.1 Environmental Setting

According to the California Department of Finance (May 2021), which provides estimated population and housing unit demographics by year throughout the State, the City of Rancho Cordova's 2021 estimated population is 79,662. No housing exists or is planned on the Project site.

4.14.2 Regulatory Framework

There are no relevant local, State, or federal regulations applicable to population and housing given that no housing exists or is planned on the Project site.

4.14.3 Population and Housing (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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)?	☐	☐	☒	☐

Less than significant impact.

The Proposed Project does not include the construction of any new homes; however, it does include a proposed tentative map that if approved would lead to development of light industrial and warehouse uses that would create a limited number of new jobs. While the addition of new employment opportunities could increase the City's population, it is anticipated that the majority of new employees would likely be existing residents of the City or surrounding area. As such, the proposed Project is unlikely to result in a demand for new housing. The impact is **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No impact.

No persons or residences would be displaced or removed as a result of the Proposed Project, and the Project would have **no impact** in this area.

4.14.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.15 Public Services

4.15.1 Environmental Setting

Public services include fire protection, police protection, parks and recreation, and schools. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time.

4.15.1.1 Police Services

The Rancho Cordova Police Department (RCPD) provides law enforcement services within the City limits via contract with the Sacramento County Sheriff's Department (SCSD). The RCPD is located at 2897 Kilgore Road in the City of Rancho Cordova. According to the Rancho Cordova General Plan, the RCPD is comprised of approximately 55 sworn officers and 7 non-sworn staff who are dedicated to serving the City of Rancho Cordova. RCPD enforces State statutes, as well as City codes and ordinances. Any calls for service occurring outside of the City's boundaries, but within the unincorporated area of Sacramento County, are handled by SCSD. Any 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

4.15.1.2 Fire Services

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. SMFD encompasses approximately 417 square miles in the southern portion of Sacramento County and includes both urban and rural areas. SMFD is the largest district in the County of Sacramento and the seventh largest local fire agency in the State of California. SMFD has 42 fire stations with approximately 673 paid personnel on its staff. The nearest fire station to the Project site is Station 63 located at 12395 Folsom Boulevard. The District includes 39 engine companies, 5 truck companies, 12 medic transportation units, 8 historical fire apparatus, 5 crash/rescue units, and various watercraft response units. In the Rancho Cordova General Plan Planning Area, SMFD currently has seven fire stations. With the recent addition of the seventh station, the SMFD expanded its personnel base within the Planning Area to approximately 108 employees, which includes 90 line personnel, 8 chief officers and 10 other support related personnel. (City of Rancho Cordova 2006b).

4.15.1.3 Schools

The Folsom Cordova Unified School District (FCUSD) boundaries cover the majority of the General Plan Planning Area. FCUSD encompasses Sunrise Boulevard North Planning Area, Sunrise Boulevard South Planning, Westborough Planning Area, Rio Del Oro Planning Area, Aerojet Planning Area, Glenborough Planning Area and portions of Folsom Boulevard Planning Area, Grant Line West Planning Area, Mather Planning Area, Jackson Planning Area, East Planning Area, and Countryside/Lincoln Village Planning Area.

FCUSD encompasses approximately 98 miles in eastern Sacramento County and includes a portion of the Cities of Rancho Cordova and Folsom, and a small parcel (in the American River Canyon) located near the unincorporated community of Orangevale. The district is made up of 30 schools, with 19 elementary schools, four middle schools, two high schools, plus continuation high schools, adult education and other service centers. Based on current facilities, the FCUSD has a capacity of approximately 18,265 students. Most schools in the Planning Area are below capacity allowing for more students. On a district level, FCUSD is operating at or near capacity for elementary and high schools. The school district has experienced considerable growth in the past few years.

4.15.1.4 Parks

The Cordova Recreation and Park District (CRPD) has the primary responsibility for providing and maintaining recreation facilities and services within the City. CRPD owns and maintains 18 neighborhood parks, 6 community parks, 4 community swimming pools, the Cordova Community Center at Hagan Community Park on Chase Drive, the Cordova Senior Center on Routier Road, Mather Sports Complex, the Cordova Public Shooting Center on Douglas Road, and the Cordova Golf Course on Jackson Road.

4.15.1.5 Other Public Facilities

Other local public facilities found in Rancho Cordova include facilities such as libraries and city administration and operations buildings.

4.15.2 Regulatory Framework

There are no relevant local, State, or federal regulations applicable to the Project given that the Project will not result in an increase in population from a residential development.

4.15.3 Public Services (XV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) result in substantial adverse physical impacts 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 any of the public services:	☐	☐	☒	☐
Fire Protection?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

a) Fire and Police Protection – Less than significant impact.

Schools, Parks and Other Public Facilities – No impact.

4.15.3.1 Fire Protection

Development of the Project site would result in a need for fire protection services to respond to any potential incidents that may occur at the site. However, the Project site is located in a developed part of the City that currently receives fire service. While the proposed light industrial and warehouse use could potentially require services, it would not result in the need for new fire personnel or facilities, as services can adequately be provided by existing personnel out of existing facilities. Therefore, this impact is **less than significant**.

4.15.3.2 Police Services

Development of the Project site could potentially result in a need for police protection services to respond to any potential incidents that may occur at the site. However, the Project site is located in a developed part of the City that currently receives police service. While the proposed light industrial and warehouse use could require services, it would not result in the need for new police personnel or facilities, as services can adequately be provided by existing personnel out of existing facilities. Therefore, this impact is **less than significant.**

4.15.3.3 Schools

The proposed Project does not propose any housing and would not include any other components that would result in an increased demand for schools. As such, there would be no need for additional facilities to maintain acceptable service ratios for schools. **No impact** would occur.

4.15.3.4 Parks

The proposed Project does not propose any housing or population that would require additional recreational facilities and would not include any other components that would result in an increased demand for parks. As such, there would be no need for additional facilities to maintain acceptable service ratios for parks. **No impact** would occur.

4.15.3.5 Other Public Facilities

The proposed Project does not propose any housing or population that would require additional demand on other public services, such as libraries or city buildings. As such, there would be no need for additional facilities to maintain acceptable service ratios. **No impact** would occur.

4.15.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Recreation

4.16.1 Environmental Setting

Recreational opportunities for both youth and adults are varied in Rancho Cordova. A well-rounded variety of programs and activities is available to Rancho Cordova residents at City, school, and private recreational facilities. The CRPD has the primary responsibility for providing and maintaining recreation facilities and services within the city. Existing park facilities are described above in Section 4.14.1.4 Parks.

4.16.2 Regulatory Framework

There are no relevant local, State, or federal regulations applicable to the Project given that the Project does not include or allow for the creation of recreational facilities.

4.16.3 Recreation (XVI) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☐	☐	☒

No impact.

The deterioration of parkland infrastructure is partly related to use level which is driven by the local population and recreation demand. Given that the Proposed Project would not result in a significant or direct population increase, the Project would not generate increase recreational facility use that would lead to premature deterioration facilities. Therefore, the proposed Project would not increase the use of park and recreational facilities resulting in substantial physical deterioration. There would be **no impact**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

No impact.

The Proposed Project does not include or allow for the creation of recreational facilities. As such, the Proposed Project would have no impact due to construction and expansion of recreational facilities. **No impact** would result.

4.16.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Transportation

As a result of Senate Bill (SB) 743, the City updated its transportation evaluation of land development projects to address the required shift from a Level of Service (LOS) analysis to a vehicle miles travelled (VMT) analysis for CEQA transportation impacts.

The City provides VMT screening criteria for development projects based on project characteristics and/or project location. Projects may be screened out of VMT impacts using project size, VMT efficiency maps, transit availability, and provision of affordable housing. A project that meets at least one of the VMT screening criteria would have a less than significant VMT impact. The Project is located within 1/2-mile of

the Sacramento Regional Transit Gold Line Hazel light rail station. Therefore, the project is screened from VMT analysis.

4.17.1 Environmental Setting

Sacramento Regional Transit

Sacramento Regional Transit is the public transit service provider in Rancho Cordova, the County of Sacramento, and the City of Sacramento. They currently operate a fleet of buses and a light rail network with facilities and services in the City of Rancho Cordova. Sacramento Regional Transit is the primary transit operator in the study area, operating both light rail transit and bus transit service. The Project Site is located west of the Hazel Light Rail Station along the Gold Line light-rail service, which operates between Downtown Sacramento and Folsom. The Gold Line light-rail service operates from 5:00 AM to 11:30 PM on weekdays, with shorter service windows on weekends and holidays. While the Gold Line operates with 15-minute headways during weekday peak hours west of the Sunrise station, it operates with 30-minute headways in the study area at the Hazel Light Rail Station. The light rail stations include park-and-ride facilities and bike racks. The project is about a 1,200-foot walk to the Hazel Light Rail Station, measured from the southwest corner of the Hazel Avenue/Folsom Boulevard intersection.

SacRT's Hazel Express (Route 109) commuter bus also operates in the study area. The Hazel Express is an express commuter route that connects Oak Avenue in Orangevale to Downtown Sacramento. This route operates at 30-minute intervals during the AM and PM peak hours only, with AM peak hour travel toward Downtown Sacramento and PM peak hour travel toward Orangevale. The closest bus stop to the Project Site serving this route is at Hazel Avenue and Gold County Boulevard, which is about a half-mile walk from the Project Site measured from the southwest corner of the Hazel Avenue/Folsom Boulevard intersection. The Rancho Cordova Transit Master Plan. designates the City's preferred transit system and is an implementing plan of the General Plan.

Bicycle/Pedestrian System

Class II bike lane facilities (designated with appropriate signing and striping) exist along Folsom Boulevard near the Project site. The Jedediah Smith Memorial Trail provides north-south bicycle and pedestrian access over US-50 to Folsom Boulevard near the Aerojet Road off-ramp. Sidewalks are present along Folsom Boulevard and at the Folsom boulevard/Hazel Avenue intersection at the northeastern corner of the Project. At Hazel Avenue/Folsom Boulevard Intersection, crosswalks with push-button pedestrian activation are present on north, east, and west legs. The Rancho Cordova Pedestrian Master Plan establishes polices, programs, and projects to improve the pedestrian system with the City of Rancho Cordova.

Hazel Avenue/U.S. Route 50 (US-50) Interchange Project

The County of Sacramento (County), in cooperation with Caltrans and the City of Rancho Cordova, is proposing the Hazel Avenue/U.S. Route 50 (US-50) Interchange Project to modify the existing interchange, and extend and grade-separate Hazel Avenue over Folsom Boulevard and the Sacramento Placerville Transportation Corridor Joint Powers Authority rail corridor. The project also includes:

- Construction of a portion of an eastbound auxiliary lane on US-50 from Hazel Avenue to the Folsom Boulevard Overcrossing, also known as the Natoma Overhead.
- The modification of the existing Aerojet Road off-ramp from US-50.
- Reconstruction of the US-50 westbound loop on-ramp.
- Reconstruction of the US-50 eastbound diagonal off-ramp, and both eastbound on-ramps.
- Eastbound US-50 on- and off-ramp auxiliary lanes, from west of the Hazel Avenue eastbound off-ramp, and from the loop on-ramp extending to the Folsom Boulevard interchange.
- Roadway and pedestrian improvements constructed along approximately 2,300 feet of Folsom Boulevard. Improvements include sidewalks, street lighting, and landscaping along the north side of Folsom Boulevard, and landscaping and lighting along the south.

Under Alternative 1, a jug handle road would provide circulation between Hazel Avenue and Folsom Boulevard. The jug handle would intersect Folsom Boulevard west of the proposed Hazel Avenue overcrossing and intersect Hazel Avenue at the future Atlanta Street extension into Easton Place, located south of Folsom Boulevard. As a result of the interchange project, the study intersection of Hazel Avenue/Folsom Boulevard would be grade separated and turning movements between these two streets would shift to the jug handle. The Hazel Avenue interchange project documentation also indicates that Hazel Avenue would be widened and extended south to the future Easton Valley Parkway.

The primary purpose of the proposed project is to modify the existing interchange to reduce congestion, improve traffic operations, accommodate travel demand due to planned and approved developments, and improve safety of all modes of travel, including bicycles and pedestrians. Project documentation in the form of a Draft Environmental Impact Report/Environmental Assessment was prepared for this project in compliance with both the CEQA and National Environmental Policy Act [(NEPA) Caltrans and County of Sacramento 2020]. The County is the lead agency under CEQA, and Caltrans is the lead agency under NEPA. This project is needed for the following reasons:

- Existing and forecasted traffic operations and congestion are below acceptable operating standards at the Hazel Avenue/US-50 interchange.
- Planned and approved developments identified by the adopted Sacramento County General Plan and the SACOG's Regional Transportation Plan, including the increased traffic volumes associated with the proposed Easton Project, would increase the traffic volumes at the Hazel Avenue/US-50 interchange beyond acceptable operating standards.
- Implementation of mitigation identified in the Easton Project Final Environmental Impact Report (EIR) (County of Sacramento 2008) is required in order to accommodate the increased traffic volumes associated with that development. The Easton Project mitigation includes reconstruction of the Hazel Avenue/US-50 interchange as well as grade separation of Hazel Avenue over Folsom Boulevard and the light rail tracks. The Easton Project would contribute its fair share of funding to the improvements.

The Transportation and Traffic analysis section of Draft EIR/EA for this project concluded that: In 2022 the Hazel Avenue/Folsom Boulevard intersection (Intersection #4) would be removed. A new street, Jughandle Road, would intersect Folsom Boulevard west of Hazel Avenue and Hazel Avenue south of Folsom Boulevard, creating two new intersections. Both new intersections would operate at an acceptable LOS under all build alternatives.

4.17.2 Regulatory Framework

4.17.2.1 Regional Transportation Plans

The City's General Plan Circulation Element relates closely to several other plans and programs, including the following:

Sacramento Area Council of Governments (SACOG) Blueprint Plan.

SACOG adopted its Preferred Blueprint Scenario in December 2004, which is a regional vision to accommodate the projected growth and long-term needs of the region over the next 50 years. The Blueprint Plan is intended to guide land use and transportation choices as the region's population is projected to grow from its current population of 2 million to over 3.8 million and the amount of jobs is projected to double to nearly 1.9 million by 2050.

Regional Metropolitan Transportation Plan (MTP)

The MTP is a 23-year long-range plan for transportation improvements in the greater six-county Sacramento region. The MTP establishes goals, policies, programs, and projects that would meet the mobility needs of the Sacramento region. SACOG is the metropolitan planning organization responsible for developing the MTP every three years.

4.17.2.2 City of Rancho Cordova 2006 General Plan

Regional access to the Project site is provided by US-50, a major eight-lane highway that serves local, regional, and interstate commuters, spanning west from downtown Sacramento and east to South Lake Tahoe. Access to the Project site from the north is via Hazel Avenue. Folsom boulevard, a major east-west arterial, borders the Project site to the north and runs west to Sacramento and East to Folsom and continues northeast around Folsom Lake to Auburn. The entrance to the southern portion of the Project property is controlled through Aerojet access gates and a guard station. Access to the site must be prearranged and authorized by appropriate Aerojet personnel.

The City of Rancho Cordova General Plan contains the following transportation goals and policies related to construction and operation of commercial and industrial development, which may result from the Proposed Project:

Policy C.1.2: Seek to maintain operations on all roadways and intersections at Level of Service D or better at all times, including peak travel times, unless maintaining this Level of Service would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals. Congestion in excess of Level of Service D may be

accepted in these cases, 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. Please see Policy C.1.3 for additional policy guidance related to this issue.

Policy C.1.4: Discourage the creation of private roadways, except when the roadways are constructed to public roadway standards and private maintenance is assured, or are used in an affordable residential development.

Policy C.1.5: Design the circulation system serving the City's industrial areas to safely accommodate heavy truck traffic.

Policy C.1.9: In an effort to reduce automobile traffic and congestion and increase use of other travel modes, support the use of trip reduction programs.

Goal C.2: Establish an extensive, complete, smooth, interconnected, and continuous pedestrian and bicycle network that is a safe and attractive option for local or regional trips or recreation and that connects to the City's neighborhoods, parks and schools, employment areas, and retail centers.

Policy C.2.5: Provide safe and convenient bicycle access to all parts of the community.

Policy C.2.8: Promote bicycling and walking as a safe and attractive activity. Educate all road users to share the road and interact safely.

- Action C.2.8.5 - Provide signage, alternative routes, etc. during construction activities affecting bikeways to ensure the safety of cyclists.
- Action C.2.3.2 – Require and site pedestrian crossings of major roads at key intersections and at locations that provide priority and efficiency to the pedestrian, even at the expense of improved vehicular circulation.
- Action C.2.3.3 – Ensure safe, efficient pedestrian connections are made between the sidewalk, parking areas, and entrances to stores, offices, and other uses as part of development design review.

Goal C.3: : Establish a viable transit system that connects all parts of the City and links with regional destinations.

Policy C.3.3: Promote the integration of transit facilities into new development.

- Action C.3.3.1 – Require new development and redevelopment to include public transit stations, especially light rail stations, and to promote pedestrian activity and connection between public transit and retail, office, and residential uses.

Policy C.3.4: Promote the establishment and use of employee shuttles that help reduce trips on City roads.

- Action C.3.4.1 – Encourage and accept employee shuttles as a viable mitigation measure for trip reduction when proposed development cannot otherwise mitigate potential impacts to City streets.

Goal C.4: Accept and support other transportation modes of benefit to the City, including air and rail transit.

Policy C.5.2: Require proposed new development projects to analyze their contribution to increased traffic and to implement improvements necessary to address their impact on facilities not covered by a fee program.

Policy C.5.3: Assess fees sufficient to cover the fair share portion of all new development impacts on the local and regional transportation system.

4.17.3 Transportation (XVII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐

Less than significant.

The Project development as a warehousing campus qualifies as a light industrial land use consistent with the land use designations used for the project property in the Rancho Cordova General Circulation Element, SACOG Blueprint Plan and MTP. The Project would not alter any of the roadways and intersections contained in the General Plan circulation element, and accommodates elements and features included in the Hazel Avenue/US Route 50 Interchange Project such as Jughandle Road and a partial widening of Hazel Avenue south of Folsom Boulevard to two lanes while maintaining right-of-way for the ultimate 6-lane Hazel Avenue Widening.

The Project would not conflict with the City of Rancho Cordova Bicycle Master Plan, as it would not disrupt the existing Class II bicycle paths along Folsom Boulevard, and is not in an area shown for future bicycle paths/trails in the Plan. The Plan shows a future bicycle path on Easton Valley Parkway south of the Project site. This Project does not include construction of Easton Valley Parkway accept at the intersection of Hazel Avenue.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐

Less than significant impact.

SB 743 was signed into law in 2013, with the intent to better align CEQA practices with statewide sustainability goals related to efficient land use, greater multimodal choices, and greenhouse gas reductions. The provisions of SB 743 became effective Statewide on July 1, 2020. Under SB 743, impacts would be determined by changes to Vehicle Miles Traveled (VMT). VMT measures the number and length of vehicle trips made on a daily basis. VMT is a useful indicator of overall land use and transportation efficiency, where the most efficient system is one that minimizes VMT by encouraging shorter vehicle trip lengths, more walking and biking, or increased carpooling and transit.

Because of SB 743, for a CEQA analysis, determining the potential for exceeding a City's LOS thresholds transportation/traffic impacts is no longer valid and VMT thresholds are used instead. The City's VMT screening criteria for development projects based on project characteristics and/or project location. Projects may be screened out of VMT impacts using project size, VMT efficiency maps, transit availability, and provision of affordable housing. A project that meets at least one of the VMT screening criteria would have a less than significant VMT impact. The Project is located within 1/2-mile of the Sacramento Regional Transit Gold Line Hazel light rail station. Therefore, the project is screened from VMT analysis. Thus, this impact would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) 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.

The Project is close to a potentially dangerous intersection at the new Jughandle Road where it meets Folsom Boulevard in close proximity to the Hazel Avenue/Folsom Boulevard signalized intersection. However, the proposed Hazel Avenue/U.S. Route 50 (US-50) Interchange Project would modify the existing interchange, to improve the safety of the interchange as well as movement of traffic through the area. Therefore, impacts would be **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in inadequate emergency access?	☐	☐	☒	☐

Less than significant impact.

Access to the Project site is provided via Folsom Boulevard and Hazel Avenue, just south of US-50, that would provide adequate emergency access upon Project completion. Development of the Project site would include the construction additional driveway entrances/exits off Folsom Boulevard and the extended Hazel Avenue at Atlanta Street and Easton Valley Parkway. These entrances/exists would provide emergency access redundancy. A **less than significant impact** would occur.

4.17.4 Mitigation Measures

No mitigation measures are required.

4.18 Tribal Cultural Resources

This section describes the affected environment and regulatory setting for Tribal Cultural Resources (TCRs) in the Project Area. The following analysis of the potential environmental impacts related to TCRs is derived primarily from the following sources:

- California NAHC Sacred Lands File Search, January 29, 2020;
- Confidential Cultural Resources Inventory and Evaluation Report for Easton Research Park West (ECORP 2020a), and Confidential Addendum Cultural Resources Inventory, Integrity Assessment, and Finding of Effect for the Easton Research Park West Project Offsite Improvements (ECORP 2021 – Appendix C);
- Ethnographic overviews of the Nisenan (Beals 1933; Kroeber 1925; Littlejohn 1928; Wilson and Towne 1978).
- Confidential AB-52 tribal consultation record between the City of Rancho Cordova and Shingle Springs Band of Miwok Indians(Appendix C).

4.18.1 Environmental Setting

4.18.1.1 Ethnographic, Religious, and Cultural Context

The following information is drawn from ECORP 2020 and ECORP 2021.

Prior to the arrival of European-Americans in the region, the project was part of a territory occupied by the Penutian-speaking Nisenan. As a language group, Nisenan (meaning "from among us" or "of our side") are generally divided into three groups based on dialect differences: the Northern Hill (mountain) Nisenan in the Yuba River drainage; the Valley Nisenan along the Sacramento River; and the Southern Hill (foothills) Nisenan along the American River.

The ethnographic Nisenan lived in family or household groups that were combined into distinct village or hamlet groups, each largely composed of members of the same extended family. These family lineage groups were important political and economic units that combined to form tribelets. Tribelet populations of Valley Nisenan were as large as 500 persons, while foothill and mountain tribelets ranged between 100 and 300 persons. Each tribelet had a chief or headman who exercised political control over all villages within it. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The role of chief seems to have been an advisory role with little direct authority, but with the support of the shaman and the elders, the word of the chief became virtually the law. The office of tribelet chief was hereditary, and tribelets assumed the name of the head village where the chief resided.

Nisenan practiced seasonal migration, moving from one area or elevation to another to harvest plants, fish, and hunt game across different ecosystems nearby each other. During most of the year, Nisenan usually lived in permanent villages located below about 2,500 feet that generally had a southern exposure, were surrounded by an open area, and were located above, but close to watercourses.

The availability of resources influenced the location of Nisenan permanent villages, since they acquired a proportion of their food resources from the general surrounding area. During the summer, small base camps were established at higher altitudes in proximity to a water source, from which they would venture out to acquire natural, faunal, and plant resources.

Communally organized Nisenan task groups exploited a wide variety of resources. Communal hunting drives were set up to obtain deer, quail, rabbits, and grasshoppers. Bears were hunted in the winter when their hides were at their best condition. Runs of salmon in the spring and fall provided a regular supply of fish, while other fish such as suckers, pike, whitefish, and trout were obtained with snares, fish traps, or with various fish poisons such as soaproot. Birds were caught with nooses or large nets and were also occasionally shot with bow and arrow. Game was prepared by roasting, baking, or drying. In addition, salt was obtained from a spring near modern-day Rocklin.

Acorns were gathered in the fall and stored in granaries for use during the rest of the year. Although acorns were the staple of the Nisenan diet, they also harvested a variety of roots which were eaten raw, steamed, baked, or dried and processed into flour cakes to be stored for winter use. Buckeye, pine nuts, hazelnuts, and other edible nuts further supplemented the diet. Key resources such as acorns, salmon, and deer were ritually managed through ceremonies to assure a successful harvest that could feed everyone in the village.

Trade was important with goods traveling from the coast and valleys up into the Sierra Nevada and beyond to the east. Coastal items like shell beads, salmon, salt, and foothill pine nuts were traded for resources from the mountains and farther inland, such as bows and arrows, deer skins, and sugar pine nuts. In addition, obsidian was imported from the north.

Nisenan built residential dwellings, ceremonial structures, semi-subterranean sweat lodges, and menstruation huts. The typical hill and mountain dwelling was the conical bark house made by overlapping three or four layers of bark with no interior support. A thatched house was used at lower elevations, consisting of a conical framework of poles that was covered by brush, grass, or tules. Semi-

subterranean earth lodge roundhouses were also built by hill and mountain groups and used for ceremonial gatherings, assemblies, local feasts, and for housing visitors.

Flaked- and groundstone tools were common among the Nisenan and included knives, arrow and spear points, club heads, arrow straighteners, scrapers, rough cobble and shaped pestles, bedrock mortars, grinding stones (metates), pipes, charms, and short spears. Beals (1933) also noted that certain colored stone points were considered lucky and could be traded for four or five other projectile points. In addition, obsidian was highly valued and imported. Littlejohn (1928) also noted that soapstone was used for bowl mortars, although informants of Wilson and Towne (1978) claimed that neither they nor their ancestors made mortars.

Wood was used for a variety of tools and weapons, including both simple and sinew-backed bows, arrow shafts and points, looped stirring sticks, flat-bladed mush paddles, pipes, and hide preparation tools. Cordage was made from plant material and was used to construct fishing nets and braided and twined tumplines. Soaproot brushes were commonly used during grinding activities to collect meal or flour. Specialized food processing and cooking techniques included the grinding and leaching of ground acorn and buckeye meal; burning of *umbelliferae*, a plant with cabbage-like leaves, to obtain salt; and roasting various foods in earth ovens. Both foothill and valley groups used the bedrock mortar and pestle (both rough cobble and shaped) to grind acorns, pine nuts, seeds, other plant foods, and meat. A soaproot brush was used to sweep ground meal into mortar cups and collect flour. Fist-sized heated stones were used to cook or warm liquid-based foods such as acorn gruel and pine nut meal. Whole acorns were stored in granaries, and pine nuts were stored in large pine bough covered caches.

Nisenan groups managed many wild plants, primarily by controlled burning, which removed underbrush and encouraged growth of edible grasses, seed producing plants, and other useful plant resources. The use of fire as an aid in hunting is also frequently mentioned in the ethnographic literature relating to the Nisenan. In the lower foothills in the Valley oak zone, herbaceous vegetation was annually burned by the Nisenan to remove and limit its growth while facilitating the growth of oaks for harvesting acorns. The annual fires destroyed seedlings but did not harm established oak trees. Beals (1933) also noted that the Nisenan regularly burned the land, primarily for the purpose of driving game, and consequently created much more open stands of timber than currently exist in the area.

Nisenan used baskets for a variety of tasks, including storage, cooking, serving and processing foods, traps, cradles, hats, cages, seed beaters, and winnowing trays. Basket making methods included both twining and coiling, and baskets were decorated with a variety of materials and designs. Other woven artifacts include tule matting and netting made of milkweed, sage fibers, or wild hemp.

The Spanish arrived on the Central California coast in 1769, but early contact was not centered around Nisenan territory. There are no records of Nisenan groups being removed to the missions. They did, however, receive escapees from the missions, as well as pressure of displaced Miwok populations on their southern borders. The first known occupation by European-Americans was marked by American and Hudson Bay Company fur trappers in the late 1820s establishing camps in Nisenan territories.

In 1833 a deadly epidemic (probably malaria) swept through the Sacramento Valley and had a devastating effect on Nisenan populations. Entire villages were lost and surviving Nisenan retreated into the hills. An

estimated 75 percent of their population was wiped out, and only a handful were left to face the gold miners and settlers who were soon to follow. John Sutter settled in Nisenan territory in 1839, and through force and persuasion he coerced most of the remaining Valley Nisenan to be on peaceful terms.

The mountain Nisenan groups encountered Europeans in their territory but were not adversely affected by the epidemics and early settlers. The discovery of gold, however, led to their territory being overrun within a matter of a few years. James Marshall's 1848 gold discovery was in the middle of Nisenan territory, and thousands of miners were soon living in the area. This dynamic led to widespread killing, destruction, and persecution of the Nisenan and their culture. The few survivors were relegated to working in agriculture, logging, ranching, or domestic pursuits. A native culture resurgence occurred around 1870 with influence from the Ghost Dance revival, but by 1890s the movement had all but ended in dissolution.

The turn of the twentieth century was fraught with deplorable conditions for the surviving Nisenan populations, marked by low educational attainment, high unemployment, poor housing and sanitation, and prevalence of alcoholism. The 1960 U.S. census (California State Advisory Commission of Indian Affairs 1966 as cited in Wilson and Towne 1978) reported 1,321 Native Americans resided in the counties originally held as Nisenan territory, but none had tribal affiliation. Sacramento County listed 802 Native Americans, of which only four were known descendants of the Valley Nisenan. El Dorado, Placer, Yuba, and Nevada counties had several Nisenan families in the 1970s who are descended from mountain groups and could speak the language and retained knowledge of traditional lifeways.

Despite enduring the countless hardships and marginalization, modern descendant groups still practice Nisenan customs. Many modern Native American populations participate in pan-Indian activities and celebrations. Nisenan descendants continue to be active in social movements and organizations that seek to improve the Native American situation and thrive in the dominant America culture.

4.18.2 Regulatory Framework

4.18.2.1 Assembly Bill 52

In 2015, AB 52 amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the PRC defines California Native American tribes 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 the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the PRC defines TCRs for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
    c. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as a Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

In accordance with Section 21082.3(c)(1) of the PRC, "… information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is 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 subdivision (r) of Section 6254 of, and Section 6254.10 of, the Government Code, and subdivision (d) of Section 15120 of Title 14 of the CCR, without the prior consent of the tribe that provided the information." Therefore, the details of tribal consultation summarized herein are provided in a confidential administrative record (Appendix C) and not available for public disclosure without written permission from the tribes.

4.18.3 Tribal Consultation

At the time the City was ready to initiate CEQA review, it had received written requests to receive project notices from the four following California Native American Tribes, which identified themselves as being traditionally and culturally affiliated with the lands subject to the City's jurisdiction:

- Ione Band of Miwok Indians
- Wilton Rancheria
- Shingle Springs Band of Miwok Indians

- United Auburn Indian Community of Auburn Rancheria (UAIC)

On June 1, 2021, the City determined that they had a complete project description and was ready to begin review under CEQA. The City sent initial notification letters on June 1, 2021 to each of the four tribes with project information and an invitation to consult on the Project. The City requested responses to the offer to consult within 30 days of the receipt of the letter. Shingle Springs Band of Miwok Indians, Wilton Rancheria, and UAIC responded to the initial letter. There was no response from the Ione Band of Miwok Indians. The resulting correspondence and consultation are described below, and documented in confidential Appendix C.

4.18.3.1 United Auburn Indian Community of Auburn Rancheria

On June 2, 2021, UAIC responded stating the tribe was able to determine there were no known TCRs in the Project Area, however there may be a possibility of unknown TCRs buried subsurface. The tribe requested the City employ standard mitigation for unanticipated discoveries. The tribe asked the City how deep ground disturbance was expected for the Project, and when the environmental document would be circulated. The City informed the tribe on July 3, 20201 that the depth of excavation would be less than 15 feet, the environmental document is expected to be an IS/MND and that they tribe would be included on the circulation list. They also provided a link to the cultural report. The tribe did not request formal consultation.

4.18.3.2 Wilton Rancheria

On June 25, 2021, Wilton Rancheria responded to the City requesting additional information about the ground disturbing activity on the project. The tribe was concerned about unearthing any cultural-related and wanted to discuss measures for avoidance. On June 28, the City provided the requested information to the tribe and asked whether the tribe would like to engage in formal consultation. No response was received. On July 14, the City sent a follow-up email to the tribe asking if the tribe had any additional requests. No response was received. Because the tribe did not request consultation under AB 52, no additional consultation was required.

4.18.3.3 Shingle Springs Band of Miwok Indians

On June 2, 2021, the Shingle Springs Band of Miwok Indians requested formal consultation on the Project. The City initiated consultation on June 24, 2021. A consultation meeting was held on July 9, 2021, at which time the tribe the tribe informed the City about a known TCR in the area. The tribe and the City discussed the precise project location, the extent of ground disturbance, and the potential of the Project to impact a known TCR near the Project Area. Because the area containing the TCR, thought to be north of Highway 50, as well as the majority of the Project Area, had been developed, it is unknown if a subsurface component of the TCR extends into the Project Area. The tribe discussed potential mitigation measures, including having a Native American monitor inspect the exposed soils after initial ground disturbance to look for signs of any buried resources, and protocols for unanticipated discoveries. On July 19, 2021, the City sent the draft mitigation measures to the tribe with the intention of closing consultation with agreement. The tribe did not object to the mitigation measures. On July 29, 2021, the City sent the tribe a formal letter concluding consultation in agreement.

4.18.3.4 Tribal Cultural Resources

Information about potential impacts to TCRs was drawn from:

1) the results of a search of the Sacred Lands File of the NAHC;
2) existing ethnographic information about pre-contact lifeways and settlement patterns;
3) information on archaeological site records obtained from surveys of the Project area and the California Historical Recourse Information System; and
4) the tribal consultation record under AB-52 for the Project.

Sacred Lands File Search

A search of the NAHC Sacred Lands File was requested for the Project Area on January 24, 2021. The NAHC responded on January 29, 2021 that the sacred lands file search was negative, which means that there is no information on file identifying sacred lands in the Project Area. The NAHC included a list of suggested tribal representatives to contact who may have more information. The Ione Band of Miwok Indians, Wilton Rancheria, Shingle Springs Band of Miwok Indians, and the United Auburn Indian Community were on the list of contacts; all of these were offered an opportunity to consult, as summarized above.

Ethnographic Information

The ethnographic information reviewed for the Project included ethnographic maps. The *Handbook of North American Indians* (Wilson and Towne 1978) lists the nearest Native American village of the Northern Pomo as *Yoduk,* which is located on the northern side of the American River approximately three miles northwest of the Project Area. No villages were mapped in the Project Area vicinity.

Archaeological Site Records

The entire project area was subjected to an archaeological survey and records search review. Records showed that two Native American sites had been recorded within 0.5 mile of the Project Area, and no sites have been recorded within the Project Area.

Tribal Consultation Results

Three out of four tribes contacted expressed concerns about the potential of the Project to unearth buried TCRs. The Shingle Springs Band of Miwok Indians indicated a known TCR exists the vicinity of the Project Area, and there is potential that the TCR has a subsurface component that extends into the Project Area.

4.18.4 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

i) No impact. The entire project area was subjected to an archaeological survey and records search review. Records showed that two Native American sites had been recorded within 0.5 mile of the Project Area, and no sites have been recorded within the Project Area. Therefore, no listed sites or sites eligible for occur in the Project area. Therefore, there would be **no impact**.

ii) Less than significant with mitigation incorporated.

Tribal consultation resulted in the Shingle Springs Rancheria revealing knowledge of a TCR in the vicinity of the Project Area. Because the TCR is in an area that has been developed and paved, the full extent of the TCR is unknown, although it is believed to be north of US-50 and outside of the Project Area. The Project Area has also been heavily developed; therefore, there is a possibility that a subsurface component of the TCR extends into the Project Area. Following initial exposure of subsurface soils, an inspection of the soil by a tribal monitor would confirm whether there is a subsurface component of the TCR is present. There is potential for project construction to unearth elements of the known TCR and additional unanticipated TCRs during construction, due to the highly sensitive nature of the area. Therefore,

implementation of **TCR-01** and **TCR-02** would reduce project impacts to known and unanticipated TCRs in the Project Area **to less than significant levels with mitigation incorporated.**

There have been no human remains discovered on the property during any archaeological investigations. However, the potential exists for project construction to unearth human remains. Implementation of mitigation measure **CUL-2** would assure that any discovery of human remains within the Project Area would be subject to these procedural requirements. Implementation of this mitigation measure would also reduce impacts associated with the discovery/disturbance of human remains to **less than significant levels with mitigation incorporated**.

4.18.5 Mitigation Measures

TCR-1: **Tribal Inspections of Subsurface Soils.** To accommodate any necessary security clearance, no less than five working days before the start of construction, the contractor shall notify the Shingle Springs Band of Miwok Indians about the start date of ground disturbing activities. The tribe will be given the opportunity to send a tribal monitor to inspect the subsurface soils once during the first five days of ground disturbing activity on the project. Should the tribe choose not to send a monitor to perform the inspection within the first five days, work can continue as long as the notice was provided and documented.

Timing/Implementation:	*Prior to and during Project construction*
Enforcement/Monitoring:	*City of Rancho Cordova, Project Applicant construction contractor, tribal monitor*

TCR-2: **Implement Measures to Protect Unanticipated Tribal Cultural Resources Discoveries.** If subsurface deposits believed to be cultural in origin are discovered during construction, all work must halt within 100 feet of the discovery. The construction foreman will notify the City, which shall notify the Shingle Springs Band of Miwok Indians and a qualified professional archaeologist. A representative from the tribe will be afforded a reasonable opportunity to visit the discovery location to determine whether or not it is a tribal cultural resource. The following actions shall apply, depending on the nature of the find:

- If the Shingle Springs Band of Miwok Indians determines that the find does not represent a tribal cultural resource, and the qualified professional archaeologist determines that the find does not represent a potential historical resource, and the City concurs, then work may resume immediately, and no further action is required.
- If the Shingle Springs Band of Miwok Indians determines that the find represents a tribal cultural resource, as defined in PRC Section 21074(a) though (c) of the CEQA Guidelines, the City shall consult with the tribe on appropriate treatment measures. Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.
- If the find includes human remains, or remains that are potentially human, the construction supervisor shall ensure reasonable protection measures are taken to

protect the discovery from disturbance (AB 2641) and shall immediately notify the City and the Sacramento County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 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 within 24 hours. The NAHC will designate a Native American Most Likely Descendant (MLD) for the discovery (§ 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 (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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 Sacramento County (AB 2641). Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.

Timing/Implementation:	*During Project construction*
Enforcement/Monitoring:	*City of Rancho Cordova, Project Applicant construction contractor, Shingle Springs Band of Miwok Indians, County Coroner*

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

Potable water for current and former development and operations on the Project site is provided by the City of Folsom Environmental and Water Resources Division. The City of Folsom obtains its surface water supply directly from a diversion point in Folsom Reservoir. Water service for the Project would be provided based on a 2007 Agreement between the City and Aerojet for the City to provide water on Aerojet properties, and additional agreements between Folsom and Golden State Water Company that discuss a future change of the CPUC service territory in the future from Folsom to GSWC. A Will Serve Letter from the City of Folsom confirming that the Project area is within the Folsom Water Service Area is contained in Appendix F of this document. As of 2020, the City of Folsom serves about 20,000 acre feet per year to a water service area population of approximately 69,500 through nearly 22,000 metered connections. The City of Folsom adopted its 2020 Urban Water Management Plan (UWMP) on June 8, 2021 (Water Systems Consulting [WSC] 2021). The 2020 UWMP also includes a Water Shortage Contingency Plan, in compliance with California Water Code Section 10632. For areas south of the American River, the City of Folsom takes deliveries from the Natoma Pipeline, a 42- inch steel pressure

pipe that originates at Folsom Dam. The Natoma Pipeline splits into two separate lines: one line to the Folsom Prison water treatment plant, and one line to the Folsom water treatment plant.

The City of Rancho Cordova is not a water provider and is being served by two private water companies (Golden State Water and California American Water) and two public agencies (Sacramento County Water Agency and City of Folsom Water District). According to the City of Rancho Cordova's online Water District Map (Rancho Cordova 2021b), the Project site is within the City of Folsom Water District service area.

4.19.1.2 Wastewater

The City does not own or operate any wastewater treatment facilities. The City collects wastewater within its service area and discharges all wastewater flows to Sacramento Area Sewer District/Sacramento Regional County Sanitation District (SASD/SRCSD) conveyance facilities. City flows are conveyed 30 miles away and are treated at SRCSD's wastewater treatment plant (WWTP) which is located in the City of Elk Grove. Currently, the SRCSD's WWTP provides secondary treatment consisting of mechanical screening, aerated grit removal, primary settling, activated sludge aeration with pure oxygen, and secondary clarification followed by disinfection. Currently the SRCSD's WWTP is being upgraded to a tertiary system, which would include nutrient removal, filtration, and additional disinfections, to meet the 2010 mandates imposed by the state. Treated wastewater is discharged into the Sacramento River. A portion of wastewater is treated to recycled water standards but is not used within City's water service area. Improvements currently being constructed to the Sacramento Regional WWTP would bring the wastewater treatment capacity to 181 million gallons per day. There are existing SASD and SRCSD wastewater collection facilities located in Folsom Boulevard, as shown on preliminary sanitary sewer connection plans for the Project, (see Section 2.1.1 Project Description).

4.19.1.3 Storm Drainage

The City Planning Area contains both natural waterways and constructed features (e.g., channel, siphons, overchutes, detention basins) that convey drainage. Flows in the City primarily drain in a southwest direction into existing natural waterways. Major drainage/flood control features in the City Planning Area include detention basins, channels, levees along the American River and Folsom Dam. Overall drainage in the City is adequate, with only localized flooding during storm events. There is an existing stormwater conveyance channel located immediately south of the Project site. This unlined channel was engineered to collect all of the stormwater runoff from the Aerojet Administration Campus located on lands east of the Project site and route them into nearby Buffalo Creek.

4.19.1.4 Solid Waste

Solid waste generated from the Project Area is ultimately disposed of at three facilities: the Kiefer Road Landfill, the Forward Landfill, and the Lockwood Regional Landfill in Nevada. The Kiefer Road Landfill is located at 12701 Kiefer Boulevard, near the intersection of Kiefer Boulevard and Grant Line Road. The Kiefer Road Landfill comprises approximately 660 acres and is the only landfill within Sacramento County that is permitted to accept non-hazardous solid waste and treated medical waste for disposal. The Kiefer Road Landfill is classified as a major landfill, which is defined as a facility that receives more than 50,000

tons of solid waste per year and is the only facility in Sacramento County that accepts solid waste from the public. Kiefer landfill currently has 117 million cubic yards (58 million tons) total capacity and is divided into 11 modules. To date, Kiefer has placed approximately 40 million cubic yards of waste into Modules 1-3, leaving 77 million cubic yards (38 million tons) of available capacity. The maximum tons per day (tpd) allowed at the Kiefer Road Landfill is 10,815 tpd, with an average intake of 6,362 tpd. Currently, the Kiefer Road landfill is operating below permitted capacity and would have capacity for the next 30 to 40 years based on current disposal rates (City of Rancho Cordova 2006b).

The Forward Landfill is a Class I, II, and III landfill, which accepts hazardous wastes, variance wastes, designated wastes, in addition to non-hazardous solid waste and treated medical waste. The Forward Landfill encompasses 567 acres in San Joaquin County and is located at 9999 South Austin Road in City of Manteca, which is approximately 60 miles south of the Planning Area. The maximum permitted capacity of this landfill is 8,668 tons per day, with an average intake of 791 tpd, with an ultimate permitted capacity of 50 million cubic yards. This landfill is permitted through 2020 and has approximately 40 million cubic yards of remaining capacity (Rancho Cordova 2006b).

The Lockwood Regional Landfill is a Class I landfill on approximately 1,535 acres, located approximately 10 miles east of Reno-Sparks in Storey County Nevada, and is made up entirely of imported wastes. Lockwood, which is owned and operated by Refuse Inc., provides disposal capacity for much of western Nevada, including Washoe, Storey, Lyon, Douglas and part of Churchill County. In addition, Lockwood receives waste from several areas in California, including the Lake Tahoe Basin, the Sierra foothills and portions of Sacramento County. The landfill receives approximately 4,000 tons per day (TPD) of solid waste with nearly 1,200 TPD (30%) coming from California. This facility has an existing maximum permitted capacity of 200 million tons; however, there are proposals that would triple the existing size of the landfill. This facility has a current permitted capacity for the next 40 years or through 2045 (City of Rancho Cordova 2006b).

4.19.1.5 Electricity/Natural Gas Services

Electricity for the Project would be supplied by SMUD, and natural Gas would be provided by PG&E. Refer to Section 4.6. Energy.

4.19.1.6 Telecommunications

Telecommunication would be through existing company and personal cell phones. No new telecommunication facilities would be required to serve the Project.

4.19.2 Regulatory Framework

4.19.2.1 State

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the State to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory State waste diversion goals of 25 percent by 1995

and 50 percent by 2000. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal. The City provides for the source reduction through the collection of greenwaste and recycling as part of the waste disposal program, which is provided by BFI Waste Disposal of Sacramento.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a "model ordinance" (which Sacramento County has adopted) relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance is used by the County as the basis for imposing recycling conditions on new development projects and on existing projects that add 30 percent or more to their existing floor area. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single-family detached homes, recycling areas are required to serve only the needs of the home within that subdivision.

4.19.2.2 Local

Sacramento Regional County Sanitation District

the Sacramento Regional County Sanitation District (SRCSD) provides public wastewater treatment, and disposal in the unincorporated and urbanized portions of Sacramento County under the direction of the County of Sacramento's Water Quality Division. SRCSD has prepared the following documents to guide the development of wastewater facilities in Sacramento County:

- Regional 2020 Master Plan - The Sacramento Wastewater Treatment Plant Master Plan (2020 Master Plan) for the SRWTP 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 2020 Master Plan addresses both public health and environmental protection issues while ensuring reliable service at affordable rates for SRCSD customers. The key goals of the 2020 Master Plan are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, to comply with applicable water quality standards, and to provide for the most cost-effective facilities and programs from a watershed perspective.

New regulations and policies will have a significant influence of the operation of the wastewater treatment plant. The discharge permit adopted by SRWTP in 2000 contains new, more stringent requirements at both the state and federal levels that are designed to restrict discharges of toxic pollutants into surface waters. Water recycling will become an important compliance strategy. Innovative biosolids recycling

technologies may be implemented. The allowable total maximum daily loads of pollutants discharged into the Sacramento River as well as prohibitions on elevated temperature of discharges into the Sacramento River will be future concerns.

County Sanitation District 1

In 1999, CSD-1 agreed to prepare its own studies, separate from that of SRCSD, which is known as CSD-1 Sewerage Facilities Expansion Master Plan and CSD-1 Rehabilitation Master Plan.

- County Sanitation District 1 Sewerage Facilities Expansion Master Plan - The overall goal of the CSD-1 Sewerage Facilities Master Plan (Master Plan) is to estimate the future capital improvement needs of the CSD-1 trunk sewer system, both in capacity relief projects for the existing system and expansion projects to serve newly developed areas. This plan provides for sewerage facilities and relief sewers to address future development within CSD-1's service area and to minimize the risk from potential sewer overflows that could occur during storm events. This plan also addresses the financial aspects of the CSD-1 Trunk Expansion Program.

Rancho Cordova 2006 General Plan

The following General Plan Policies and associated Action Items applicable to the Project are included in the Infrastructure, Services, and Finance Element, Land Use Element, and Natural Resources Element of the General Plan.

Action ISF.2.1.2: Adopt a phasing plan for the development of public facilities in a logical manner that encourages the orderly development of roadways, water and sewer, and other public facilities.

Action ISF.2.1.4: Work with utility providers to coordinate the installation or upgrading of utilities and eliminate multiple trenching of city streets.

Action ISF.2.3.2: Require new development to fund its fair share portion of its impacts to all public infrastructure and facilities.

Action ISF.2.4.1: Require all development projects, excluding subdivisions, to adhere to the following provisions:

- An assured water supply and delivery system shall be available at the time of project approval. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.

- All required water infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City's satisfaction. Water infrastructure may be phased to coincide with the phased development of large-scale projects.

Action ISF.2.4.2: Require all subdivision developments to adhere to the following provisions, to the extent permitted by state law:

- Proposed water supply and delivery systems shall be identified at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may provide several alternative methods of supply and/or delivery, provided that each is capable individually of providing water to the project.
- The agency providing water service to the subdivision shall demonstrate prior to the approval of the Final Map that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects in the same service area, and other projects which have received commitments for water service.
- Offsite and onsite water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the approval of the Final Map or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
- Offsite and onsite water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.

Policy ISF.2.5: Ensure that water flow and pressure are provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.

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.

Action ISF.2.7.1: Coordinate with utility agencies to underground, strategically place, and screen equipment to the maximum extent feasible.

Action ISF.2.6.1: Require all subdivision developments to adhere to the following provisions, to the extent permitted by state law:

- Sewage/wastewater treatment capacity shall be available at the time of tentative map approval.
- The agency providing sewer service to the subdivision shall demonstrate prior to the approval of the Final Map by the City that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other proposed or approved projects which have received sewage treatment capacity commitment.

- Onsite and offsite sewage conveyance systems required to serve the subdivision shall be in place prior to the approval of the Final Map, or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.

- Sewage conveyance systems within the subdivision shall be in place and connected to the sewage disposal system prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City

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.8.4: Encourage the use of recycled materials and source reduction (also known as waste prevention) by governmental agencies and local businesses.

Action NR.8.5.1: Implement the State's source reduction and recycling element (required by the California Integrated Waste Management Act) and the household hazardous waste element (required by PRC 41500-41510).

4.19.3 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

4.19.3.1 Water

Development of the Project would include constructing utility infrastructure both on and off site, including potable water connections to Aerojet's existing water conveyance pipelines along Aerojet Road, two sanitary sewer connections to existing Sacramento Area Sewer District/Sacramento Regional County Sanitation District (SASD/SRCSD) pipelines within Folsom Boulevard, and constructing a new stormwater drainage channel leading approximately 1,800 feet southwest from the southwest corner of the Project site and draining into the existing Aerojet Administration Drainage Channel. These known offsite areas of utility expansion are included in the Project Description and study areas analyzed for this project based on preliminary utility maps and the conceptual site layout (See Section 2.1 and Figures 2-1 through 2-4). The

Project would also involve relocation of several buried PG&E natural gas pipelines on the Project site, as indicated on the Tentative Subdivision Map (Figure 2-1).

A new underground potable water pipeline would be required heading east approximately 2,500 feet from between Lots 2 and 8 of the Project along the future Atlanta Street alignment thorough the proposed Easton Place/Glenborough development, and connecting to the existing potable water line at Aerojet Road, as shown in Figure 2-4 of the project description. The pipeline would be located in impact areas already evaluated as part of the Easton Place/Glenborough development. Thus, the new water facilities for the Project would not have any new or additional impacts that have not been addressed in previous environmental evaluations and City of Folsom water planning documents.

This CEQA analysis has identified potentially significant impacts to natural resources related to the Project's utility improvements, such as filling Waters of the US from the new storm drainage channel outfall into the Aerojet Administration Channel, that may require mitigation measures **BIO-2** through **BIO-11** as described in Section 4.4, to reduce impacts to less than significant levels. Therefore, this impact is **less than significant with mitigation incorporated.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

As stated in Item a) above, water for the Project would be provided by the City of Folsom. Water service would be provided based on a 2007 Agreement between the City and Aerojet for the City to provide water on Aerojet properties and additional agreements with Golden State Water Company, which holds certain water rights jointly with the City of Folsom. The City of Folsom's Will Serve Letter confirming that the Project is within the City's Water Service Area is contained in Appendix F.

The City of Folsom adopted its 2020 UWMP on June 8, 2021 (WSC 2021). The 2020 UWMP also includes a Water Shortage Contingency Plan, in compliance with California Water Code Section 10632. The 2020 UWMP provides future demand factors for new customers[3]. The demand factor for future commercial and industrial customers is 2.5 acre-feet per year per acre. The Project would cover 105.5 acres. Thus, the future Project water demand would be approximately 265 acre-feet per year[4].

[3] See Table 4-7 of the 2020 UWMP.

[4] An acre-foot is the volume of water that would cover an area of one acre with a foot of water. It is equivalent to approximately 326,000 gallons.

The 2020 UWMP provides an assessment of Water Service Reliability for normal year, single dry year, and multiple dry year scenarios, for up to five consecutive dry years[5]. For normal year conditions, the available water supply for the City of Folsom exceeds demand by over 17,800 acre-feet in 2025 and by up to 12,800 acre-feet in 2045. Under single dry year and five consecutive dry year scenarios, the water supply is projected to exceed demand by 16,000 acre-feet and 12,000 acre-feet, respectively, in 2025, and by 11,000 acre-feet and 7,000 acre-feet per year, respectively, in 2045. Therefore, although the 2020 UWMP does not specifically include the water demand from the new Project within its analysis of anticipated future development, the 2020 UWMP demonstrates that the City of Folsom would have more than sufficient water supplies available to serve the approximate 265 acre-feet per year demand from the Project during normal, dry, and multiple dry years.

The Will Serve letter indicates that future coordination with the City of Folsom is required during final design of the Project to determine any final required infrastructure improvements to deliver the water to the Project from the City of Folsom. Therefore, mitigation measure UTIL-1 is required to ensure proper coordination with the City of Folsom to determine those final infrastructure requirements and to coordinate their implementation. Implementing mitigation measure **UTIL-1** would ensure that Project impacts on water supply would be **less than significant impact with mitigation incorporated.**

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the 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.

Typical estimates of employee water use for sanitary purposes include 3 gallons per flush and as much as 1.3 gallons per hand washing. If it is assumed that each employee uses the restroom five times per shift (i.e., at the beginning of the shift, during the first break period, during the lunch period, during the second break period, and at the end of the shift), then the total daily sanitary water use per employee would be 21.5 gallons per day[6].

Based on the traffic analysis conducted by Fehr & Peers, the approximate 1.486 million square feet of warehouse space could have 1,100 to 2,400 employees. Thus, daily sanitary water use and wastewater generation would be 23,650 gallons to 51,600 gallons.

[5] See Tables 7-4, 7-5, and 7-6 in Section 7.1.3 of the 2020 UWMP.

[6] This analysis only considers the quantity of water that could be discharged to the sanitary sewer. Therefore, potable water use by employees and landscape water use are not considered.

Improvements currently being constructed to the Sacramento Regional WWTP would bring the wastewater treatment capacity to 181 million gallons per day. The current wastewater influent is estimated to be 124 million gallons per day (SRCSD 2021). The 23,560 gallons per day to 51,600 gallons per day of wastewater generated by the Project is a small fraction of the 57 million gallon per day excess capacity of the Sacramento Regional WWTP (i.e., 0.04 percent to 0.09 percent, respectively). Thus, this impact is **less than significant**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) 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?	☐	☐	☒	☐

Less than significant impact.

According to CalRecycle (2021), the estimated solid waste generation rates for employees is 11.0 pounds per employee per day. Based on this information and an anticipated range of 1,100 to 2,400 employees at full operation of the Project, the Project would produce approximately 12,100 to 26,400 pounds per day (lbs/day) or 80.3 tons annually.

As shown above, Kiefer landfill has a capacity of 38 million tons, and accepts up to 10,815 tons/day. The Project would generate approximately 6-13 tons/day, representing 0.001 percent of the daily maximum tons accepted at the landfill. This conservative calculation assumes that all of the Project's waste would be disposed at Kiefer Landfill, when it is likely that a portion of it would be disposed at other disposal sites, such as those listed above. The minor amount of solid waste that would be generated by the Proposed Project would not result in a determination of insufficient capacity. As such, this is a **less than significant impact**.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Less than significant impact.

Buildout of the Project would involve the demolition of existing structures, concrete foundations, and pavement. However, a large percentage of construction and demolition (C&D) debris can be recycled.

The City of Rancho Cordova's Ordinance No. 20-2008 (Rancho Cordova 2008) requires that at least 50 percent of all material generated during a large construction and/or demolition project be diverted from landfilling (i.e., recycled or reused). The proposed project would comply with this ordinance, and all other

local, State, and federal statutes and regulations related to solid waste. Therefore, with implementation of this program, buildout of the project would result in a **less than significant impact** regarding solid waste impacts due to construction and demolition activities.

4.19.4 Mitigation Measures

UTIL-1: **Water Service Availability.** The City of Rancho Cordova will coordinate with the City of Folsom and the Project Applicant to include any of The City of Folsom's standard and required conditions of approval regarding the review of construction documents for the water system and connections when submitted.

Timing/Implementation: *Prior to submittal of improvement plans*

Enforcement/Monitoring: *City of Folsom, City of Rancho Cordova, Project Applicant*

4.20 Wildfire

4.20.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (e.g., winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area-to-mass ratio and require more heat to reach the ignition point.

The Project Area is relatively flat and dominated by vacant semi-rural, partially developed land within grassland habitat with scattered oak trees and forbs.

The Project site is not located within a heavily wooded area, nor is it surrounded by wildlands or forests. According to the Fire Hazard Severity Zones in State Responsibility Area map published by CAL FIRE (2021) the nearest Very High Fire Hazard Severity Zones are approximately 11 miles to the east, in Cameron Park and Sprekelsville of El Dorado County. the Project site is located in a Moderate Fire Hazard Severity Zone in Sacramento County (CAL FIRE 2007).

4.20.2 Regulatory Framework

There are no relevant local, State, or federal regulations applicable to wildfire resources given that the Project site is not in an area designated by CAL FIRE as a state responsibility area or a FHSZ.

4.20.3 Wildfire (XX) Environmental Checklist and Discussion

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

No impact.

The Project site is not in an area designated by CAL FIRE as a FHSZ. Furthermore, no Very High FHSZs are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2007). The Project would have **no impact** in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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?	☐	☐	☐	☒

No impact.

The Project site is not in an area designated by CAL FIRE as a FHSZ. Furthermore, no Very High FHSZs are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2009). The Project would have **no impact** in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) 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?	☐	☐	☐	☒

No impact.

The Project site is not in an area designated by CAL FIRE as a FHSZ. Furthermore, no Very High FHSZs are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2009). The Project would have **no impact** in this area.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) 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?	☐	☐	☐	☒

No impact.

The Project site is not in an area designated by CAL FIRE as a FHSZ. Furthermore, no Very High FHSZs are located nearby. Also, the Project site is not located in a state responsibility area (CAL FIRE 2007. The Project would have **no impact** in this area.

4.20.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Section 4.5 Cultural Resources and Section 4.18 Tribal Cultural Resources describe how the Project would have potential impact cultural resources and tribal cultural resources. However, with implementation of Mitigation Measures **CUL-1 and CUL-2**, this potential impact would be reduced to a level that is considered less than significant.

Section 4.4 Biological Resources describes how the Proposed Project has the potential to impact special-status animals including Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp, Valley Elderberry

Longhorn Beetle, western spadefoot toad, pallid bat, and protected birds. Section 4.4 also describes how the Project has the potential to impact seasonal wetlands and other Waters of the US (ditches). With implementation of mitigation measures BIO-10 **and** BIO-11 these potential impacts to biological resources will be reduced to a less than significant level.

Section 4.7 Geology and Soils describes how future development of the site may result in the potential to impact paleontological or other geologically sensitive resources. Mitigation measure **GEO-1** would also reduce this impact to **less than significant with mitigation incorporated**.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Implementation of the Proposed Project, in conjunction with other approved or pending projects in the region, has the potential to result in cumulatively considerable impacts to the physical environment. However, implementation of Project-specific mitigation measures for the other issue areas addressed in this document, would ensure that the Project's contribution to cumulative impacts in the area remain less than considerable. Therefore, cumulative impacts are considered **less than significant with mitigation incorporated.**

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

Section 4.8 Greenhouse Gas Emissions describe how the Project operations could generate greenhouse gas emissions exceeding significance thresholds for adverse effects. However, with implementation of Mitigation Measure **GHG-1** this potential impact would be reduced to a level that is considered less than significant. Section 4.9 Hazards and Hazardous Materials describes the potential for adverse impacts to future workers at the Project site from subsurface contamination. Mitigation measure **HAZ-1** would reduce this impact to a less than significant level. Section 4.12 Noise describes potential significant impacts from nighttime construction that would be reduced to less than significant level with

implementation of mitigation measure **NOI-1**. Mitigation measure **UTIL-1** would ensure that any required water service infrastructure improvements for the Project would be coordinated between the City of Rancho Cordova, the City of Folsom, and the applicant. With implementation of all of these measures, impacts would be reduced to **less than significant levels with mitigation incorporated.**

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5.0 LIST OF PREPARERS

5.1 City of Rancho Cordova

Lead Agency

Darcy Goulart, Planning Director

5.2 ECORP Consulting, Inc.

CEQA Documentation/Air Quality/Biological Resources/Cultural Resources/Greenhouse Gas/Noise

Chris Stabenfeldt, AICP, CEQA Project Manager

Michelle Wilson, Senior Environmental Planner

Jed McLaughlin, Staff Environmental Planner

Mark Morse, Senior Environmental Planner

Seth Myers, Air Quality/GHG & Noise Director

Andrew Kopania, RG, Hydrologist/Hydrogeologist

Rosemary Worden, Assistant Environmental Planner

Thea Fuerstenberg, Senior Archeologist

Laura Hesse, Technical Editor

Angela Haas, Senior Biologist

5.3 Easton Development Company LLC

David Hatch

5.4 Fehr & Peers

David Robinson, PE, Principal

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LIST OF APPENDICES

Appendix A - Air Quality and Greenhouse Gas Assessment, Easton Research Park West Project – ECORP Consulting, Inc. July 2021

Appendix B – Biological Resources Assessment, Easton Research Park West Project – ECORP Consulting, Inc. DRAFT

Appendix C - **Confidential** Addendum Cultural Resources Inventory, Integrity Assessment, and Finding of Effect for the Easton Research Park West Project Offsite Improvements, Sacramento County California – ECORP Consulting, Inc. July 28, 2021 and Tribal Cultural Resources Notification and Consultation Conclusion Letter

Appendix D - Noise Impact Assessment Easton Research Park West Project – ECORP Consulting, Inc. July 2021

Appendix E – Storm Drain Evaluation

Appendix F - City of Folsom Will Serve Letter for Water Service

Access Appendices by clicking the paper clip icon on the left side of your screen.

