DRAFT

Initial Study and Mitigated Negative Declaration

MARINA VILLAGE - HOUSING PROJECT

Suisun City, California

Lead Agency:

City of Suisun City
701 Civic Center Boulevard
Suisun City, California 94585

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

November 2021

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DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency:	City of Suisun City
Project Proponent:	Solano Affordable Housing Foundation
Project Location:	The Project is located at 201 Marina Boulevard, Suisun City, California. Assessor's Parcel Numbers (APN) associated with the property are 0032-411-020, 0032-411-030, 0032-411-050, 0032-411-060, 0032-411-070, 0032-411-080, 0032-411-090, 0032-411-100, and 0032-411-110. (Figure 1. Regional Location and Figure 2. Project Location). The site is in an unsectioned portion of the Rancho Tolenas Land Grant, Township 5 North, Range 2 West (Mount Diablo Base and Meridian). The approximate center of the site is located at latitude 38.245932º and longitude -122.030675º.

Project Description:

The Solano Affordable Housing Foundation proposes the development of 160 apartments in eight 3-story buildings on a 5.2-acre vacant property. The 160 apartments will include one to four bedroom units. The Project also includes an apartment complex office and common room in a separate building and a patio and children's play area. There will be landscape throughout the site, covered and uncovered parking, an on-site connection to the existing Central County Bikeway, and on-site stormwater detention basins.

Public Review Period: November 3, 2021 to December 2, 2021

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Air Quality

AQ-1: The Project applicant and/or its contractor shall prohibit the installation of wood-burning fireplaces within the Project. This prohibition shall be noted on the deed to require compliance in perpetuity.

Timing/Implementation: *Prior to the initiation of construction activities*

Enforcement/Monitoring: *Bay Area Air Quality Management District and Project construction lead.*

Biological Resources

BIO-1 **Permanent Loss or Conversion of Foraging Habitat – Burrowing Owl.** Mitigation for the permanent disturbance, destruction, or conversion of 5.2-acres of burrowing owl habitat for urban development or other permanent facilities shall be provided at a 1:1 ratio. This 1:1 compensation ratio shall be used in the lands identified in the Solano HCP used to satisfy

mitigation measures for other Natural Communities and/or Covered Species (i.e., Valley Floor Grassland and Vernal Pool Natural Community [excluding the wetland restoration/construction component], Coastal Marsh Natural Community, Swainson's hawk, California red-legged frog, and callippe silverspot butterfly) can be used to satisfy burrowing owl conservation if the reserve area meets the basic burrowing owl reserve management standards as identified in the Solano HCP (Sections 7.3 and 10.5.3) and criteria specified in Objective BO 1.2 (Section 5.10.1).

If the Solano HCP has not been adopted or the mitigation lands identified above are not available prior to Project development, then the 1:1 compensation ratio shall be implemented at a CDFW approved mitigation site.

BIO-2 **Permanent Loss or Conversion of Foraging Habitat – Swainson's Hawk.** Long-term impacts to Swainson's hawk foraging habitat at the project site shall be mitigated through the preservation and management of foraging habitat at a ratio of 1:1 and subject to species management requirements specified in the Solano HCP Sections 7.3 and 10.5.3. Mitigation shall be provided in the Irrigated Agriculture or Valley Floor Grassland Potential Reserve Areas (Solano HCP Figure 4-27). Preservation of valley floor grassland habitat may be satisfied through Mitigation Measure VPG 2 of the Solano HCP if the minimum 1:1 ratio for foraging habitat is achieved.

If the Solano HCP has not been adopted or the mitigation lands identified above are not available prior to Project development, then the 1:1 compensation ratio shall be implemented at a CDFW approved mitigation site.

Timing/Implementation: *Prior to the initiation of construction activities*

Enforcement/Monitoring: *City of Suisun City Development Services Department and Project construction lead.*

Cultural Resources

CUL-1: **Cultural or Archaeological Resource Discovery.** All construction plans and grading plans shall include the following:

If subsurface deposits believed to be cultural or human in origin are discovered during any roadway or future construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.

- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the City and landowner. If the find is determined to be eligible for inclusion in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR), the City shall consult on a finding of eligibility and implement appropriate treatment measures. Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to its satisfaction.
- 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 (Assembly Bill [AB] 2641). The archaeologist shall notify the Siskiyou County Coroner (in accordance with § 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, which 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 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 the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *The City of Suisun City Development Services Department and construction lead.*

Geology and Soils

GEO-1: **Paleontological or Sensitive Geologic Resource Discovery.** If paleontological or other geologically sensitive resources are identified during any phase of development including roadway development and future developments on the Project site, the applicant shall cease operation at the site of the discovery and immediately notify the City. The future Project proponent shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the qualified paleontologist, the City

shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the development site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *The City of Suisun City Development Services Department and construction lead.*

Tribal Cultural Resources

TRI-1: **Tribal Cultural Sensitivity Training.** Prior to any groundbreaking or construction, the Project shall facilitate and require Tribal cultural sensitivity training for all project personnel. The project proponent shall contact the Yocha Dehe Wintun Nation, as shown below, to request and schedule this training.

Laverne Bill, Interim Director of Cultural Resources
Yocha Dehe Wintun Nation
Office: (530) 723-3891
Email: lbill@yochadehe-nsn.gov

Timing/Implementation: *Training shall occur prior to the initiation of any groundbreaking or construction activities*

Enforcement/Monitoring: *City of Suisun City Development Services Department, Project proponent and construction lead.*

TRI-2: **Native American Human Remains Discovery.** All construction plans and grading plans shall include the following:

If subsurface deposits believed to be cultural or human in origin are discovered during any roadway or future construction, all work must halt within a 100-foot radius of the discovery. If it is determined that these subsurface deposits are Native American human remains and these remains are affiliated to the Yocha Dehe as determined by the by the Native American Heritage Commission, the "*Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation*" shall be initiated by the tribe, City of Suisun City and Project. If the NAHC determines that the remains are not of Yocha Dehe heritage but of another tribe, the treatment protocol of that tribe shall be initiated.

Timing/Implementation: *During groundbreaking or construction activities*

Monitoring/Enforcement: *The City of Suisun City Development Services Department, Project proponent and construction lead.*

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LIST OF ATTACHMENTS

Attachment 4.3: Air Quality & Greenhouse Gas Emissions Assessment, Marina Village - Housing Project, ECORP Consulting, Inc., September 2021

Attachment 4.4: Biological Report for Marina Village Project, Suisun City, CA LSA Associates, Inc., September 10, 2020

Attachment 4.6: Energy, Total Construction-Related and Operational Gasoline Usage, ECORP Consulting, Inc., September 2021

Attachment 4.7: Geotechnical Investigation: Marina Village, 201 Marina Boulevard, Suisun City, California, Geocon Consultants, Inc., April 2021

Attachment 4.13: Noise Impact Assessment, Marina Village Housing Project ECORP Consulting, Inc.

Attachment 4.17: Technical Memorandum, Marina Village Project Traffic Study & VMT Analysis GHD Transportation, September 2021

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ACRONYMS AND ABBREVIATIONS

Term	Description
AB	Assembly Bill
ACM	Asbestos-containing material
AERMET	American Meteorological Society/Environmental Protection Agency Regulatory Model Meteorological Processor
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AMSL	Above mean sea level
ANSI	America National Standards Institute
APCO	Air Pollution Control Officer
APE	Area of Potential Effects
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BMP	Best management practices
BP	Before Present
BRA	Biological Resources Assessment
CAC	Certified Asbestos Consultant
CAL FIRE	California Department of Forestry and Fire Protection
Cal-EEMod	California Emissions Estimator Model
CalHFA	California Housing Finance Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARI	California Aquatic Resource Inventory
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDLAC	California Debt Limit Allocation Committee
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFNR	California Northern Railroad
CGS	California Geologic Survey

Term	Description
CH_4	Methane
CHRIS	California Historical Resources Information System
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
CR	Commercial Retail
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
DMR	Division of Mine Reclamation
DOC	Department of Conservation
DOF	Department of Finance
DPM	Diesel particulate matter
DTSC	Department of Toxic Substance Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAST	Fairfield and Suisun Transit
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FSSD	Fairfield-Suisun Sewer District
FSURMP	Fairfield-Suisun Urban Runoff Management Program
FSUSD	Fairfield-Suisun Unified School District
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GLO	General Land Office
HCP	Habitat Conservation Plan
HMMH	Harris, Miller, Miller and Hanson, Inc.
IS	Initial Study
LID	Low impact development
LOS	Level of service
MBTA	Migratory Bird Treaty Act
MCL	Maximum contaminant level
MG	Million gallons
MLD	Most Likely Descendant
MND	Mitigated Negative Declaration
MRI	Mean recurrence interval
MRZ	Mineral Resource Zones
MSW	Municipal solid waste

Term	Description
MTBE	Methyl tert-butyl ether
N2O	Nitrous oxide
NAHC	Native American Heritage Commission
NIOSH	National Institute for Occupational Safety and Health
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRPA	National Recreation and Park Association
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
PG&E	Pacific Gas and Electric Company
PGA	Peak ground acceleration
PHL	Potrero Hills Landfill
PI	Plasticity index
PM	Particulate matter
PM_{10}	Particulate Matter Less than 10 Microns in Diameter
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns in Diameter
PPV	Peak particle velocity
PRC	Public Resources Code
ROG	Reactive organic gas
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCFD	Suisun City Fire Department
SCPD	Suisun City Police Department
SFBAAB	San Francisco Bay Area Air Basin
SFHA	Special Flood Hazard Area
SFHR	San Francisco Bay Hydrologic Region
SGMA	Sustainable Groundwater Management Act
SID	Solano Irrigation District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SOI	Sphere of Influence
SR	State Route
SSC	Species of special concern
SSWA	Suisun-Solano Water Authority
STC	Sound Transmission Class
SWMP	Stormwater Management Plans
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TAZ	Traffic analysis zone
TCAC	Tax Credit Allocation Committee

Term	Description
TDM	Travel demand model
TPH	Total petroleum hydrocarbons
UCERF	Uniform California Earthquake Rupture Forecast
UCMP	University of California Museum of Paleontology
USBR	U.S. Bureau of Reclamation
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VMT	Vehicle miles traveled
YSAQMD	Yolo-Solano Air Quality Management District

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1.0 BACKGROUND

1.1 Summary

Project Title:	Marina Village - Housing Project
Lead Agency Name and Address:	City of Suisun City 701 Civic Center Blvd. Suisun City, CA 94585
Contact Person and Phone Number:	John Kearns, Senior Planner 707-421-7335
Project Location:	The Project is located at 201 Marina Boulevard, Suisun City, California. APNs associated with the property are 0032-411-020, 0032-411-030, 0032-411-050, 0032-411-060, 0032-411-070, 0032-411-080, 0032-411-090, 0032-411-100, and 0032-411-110. (Figure 1. Regional Location and Figure 2. Project Location). The site is in an unsectioned portion of the Rancho Tolenas Land Grant, Township 5 North, Range 2 West (Mount Diablo Base and Meridian). The approximate center of the site is located at latitude 38.245932º and longitude -122.030675º.
General Plan Designation:	Higher Density Residential and Mixed Use
Zoning:	High-Density Residential 2 (RH2) and Commercial Retail (CR)

1.2 Introduction

1.3 Introduction

The City of Suisun City is the Lead Agency for this Initial Study/Mitigated Negative Declaration (IS/MND), which has been prepared to identify and assess the anticipated environmental impacts of the proposed Marina Village - Housing Project (Project or Proposed Project) and mitigate potentially significant environmental effects. This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resources Code [PRC], § 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 IS/MND is generally used to determine the potentially significant environmental affects and mitigate those to be less than significant.

1.4 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 Suisun City (City) is the lead agency for the Proposed Project.

1.5 Purpose and Document Organization

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed Marina Village Housing 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 proposed 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 Attachments – This section provides a list of document appendices.

1.6 Project Location and Surrounding Land Uses

The Project is located at 201 Marina Boulevard in Suisun City, California. See Figures 1 and 2. The Project is 5.2 acres in size and is currently comprised of nine parcels including the following:

Accessor's Parcel Numbers		
0032-411-020	0032-411-060	0032-411-090
0032-411-030	0032-411-070	0032-411-100
0032-411-050	0032-411-080	0032-411-110

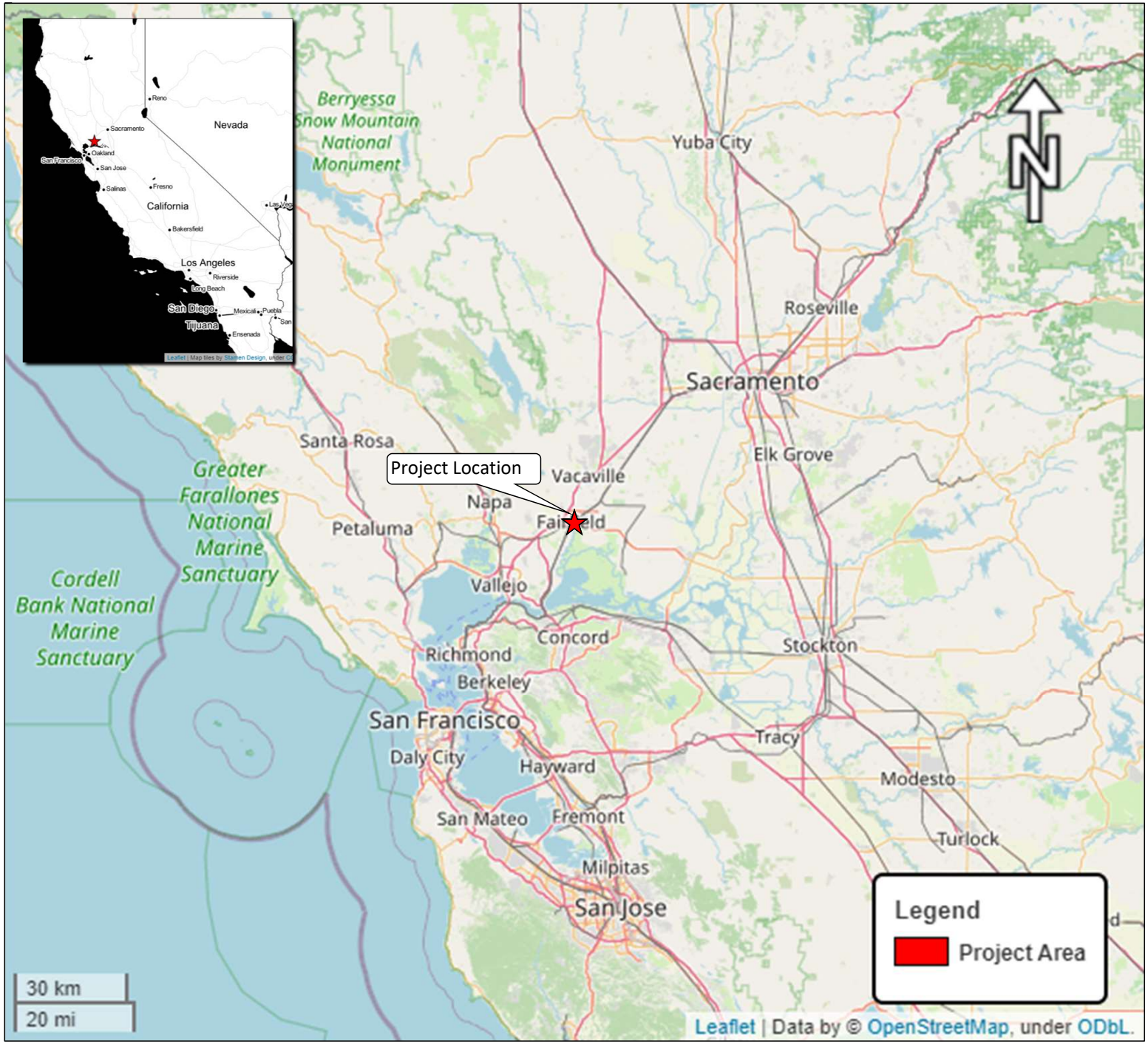
Surrounding uses include single family homes to the east of the Project Site. To the north is Buena Vista Avenue, the First Baptist Church and single-family homes. To the west of the Site is Marina Boulevard and vacant land and to the south is an ARCO AM/PM gas station, the Central County Bikeway, State Route (SR) 12, vacant land, Suisun Slough, and a shopping center. See Figure 3.

1.7 Environmental Setting

The Project Site is located at a vacant parcel along Marina Boulevard, within the urban growth boundary of Suisun City, Solano County. The Project Site's elevation ranges 5-10 feet above mean sea level (AMSL). The Project Site is located near the western boundary of the former Brennan – Fairfield Suisun Air Park. The airpark was established as an auxiliary airfield in 1944 and was an irregularly-shaped grass field, with a 3,500-foot unpaved runway, and a few small buildings on the southeast corner (near today's Sunset Avenue). The airfield was closed in 1961. Since then, the Project Site has been vacant land, and appears to have been mowed frequently.

The Project Site is a flat lot with a substrate of imported fill and compacted natural soil. The underlying native soils are Capay silty clay loams and Clear Lake clay, saline, drained. The native soils are poorly drained with slow to very slow permeability. The water table is reported to be at depths of 4 to 10 feet in the late summer (LSA 2020).

The Project Site consist of predominantly ruderal grassland, and some bare ground caused by walking trails and vehicle tracks. The Project Site is highly disturbed and shows evidence of routine mowing.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Regional Location
Marina Village - Housing Project

ECORP Consulting, Inc.
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Figure 2. Site Location
Marina Village - Housing Project

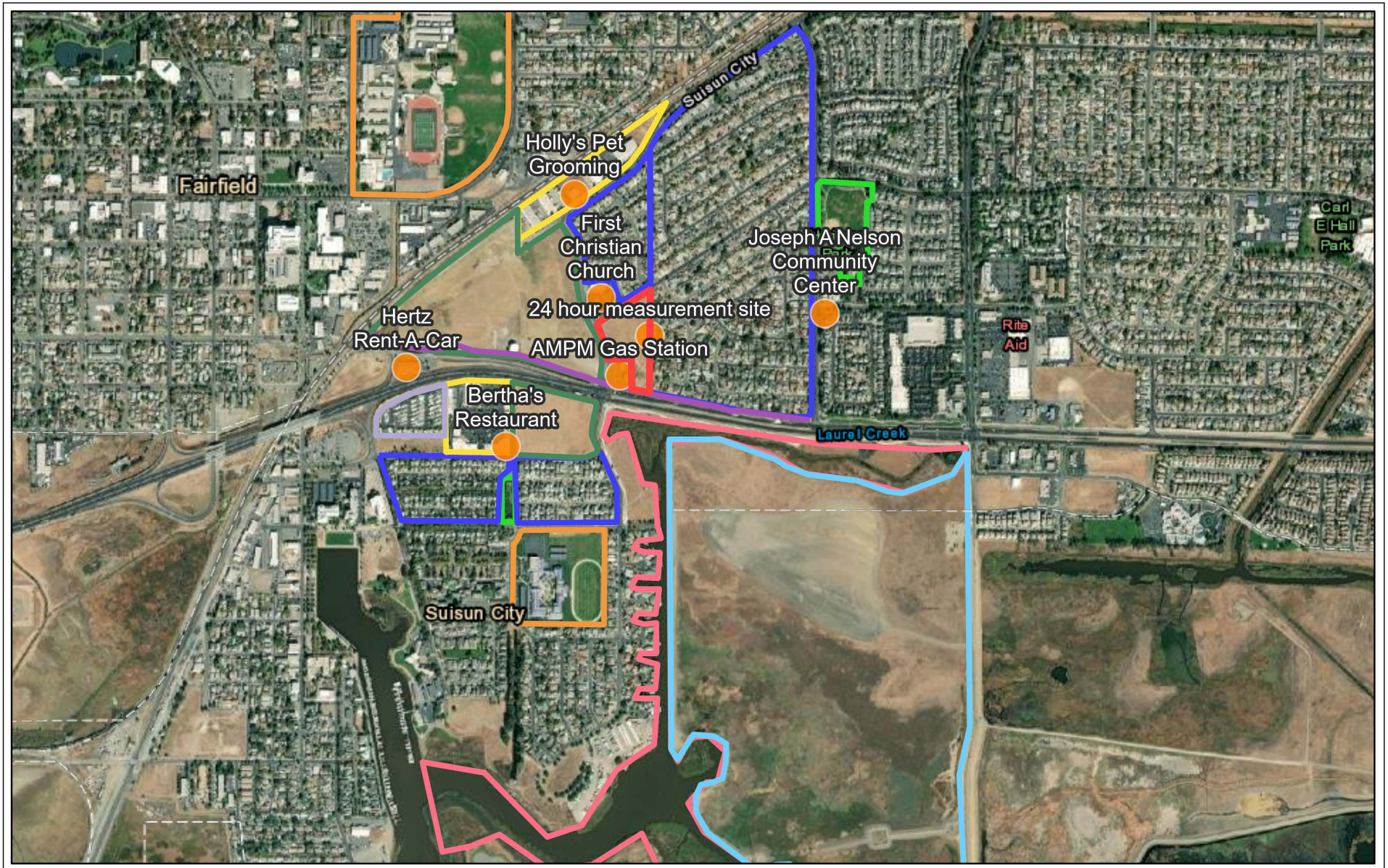

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Figure 3. Surrounding Uses
Marina Village - Housing Project

2.0 PROJECT DESCRIPTION

2.1 Project Description

The Proposed Project, the Marina Village Apartments, is a 100% affordable housing development located at 201 Marina Blvd, Suisun City, California. The development will offer 159 affordable rental units restricted to households earning 30%, 40%, 60%, and 70% of the Area Median Income, and one manager unit for a total of 160 residential units. The 5.20-acre site is within the Suisun City General Plan land use designations of Higher Density Residential and Mixed Use and is zoned High-Density Residential 2 (RH2) and Commercial Retail (CR). The development will consist of nine three-story garden-style residential buildings, a community building and a laundry building. See Figures 4 and 5. The unit mix will consist of 39 one-bedroom, 55 two-bedroom, 50 three-bedroom, and 16 four-bedroom units. The Project will provide 15 percent of the total low-income units with mobility features and 10 percent of the total low-income units with communication to comply with the minimum construction standards pursuant to Tax Credit Allocation Committee (TCAC) requirements.

The number and unit type for each apartment building are shown in Table 2.1-1.

Table 2.1-1. Unit Size and Number

Building	Unit Size (Bedrooms/Bathrooms)					Total
	1/1	2/2	3/1	3/2	4/2	
Building A1	6	9	6	0	3	24
Building A2	6	9	6	0	3	24
Building A3	6	9	6	0	3	24
Building A4	6	9	6	0	3	24
Building B1	3	6	0	8	1	18
Building B2	3	6	0	8	1	18
Building C1	3	2	0	3	1	9
Building C2	3	2	0	3	1	9
Building D	3	3	0	4	0	10
Total	**39**	**55**	**24**	**26**	**18**	**160**

The Project also includes an apartment complex office within the community building. Open space includes a plaza, a patio, a children's play area, village walks, and green space. There will be landscaping throughout the Site, security fencing, gated entry, covered and uncovered parking, an on-site connection to the existing Central County Bikeway, and two on-site stormwater detention basins. The Project's social services will include adult education, health, skill building classes and health & wellness service programs

will be provided to the residents, at no cost, by the LifeSTEPS Inc. Improvements to Marina Boulevard include curbs, gutters and sidewalks adjacent to the Project Site.

City required approvals include a lot merger, site plan and design review.

2.1.1 Financing Schedule

The Project secured site control in August of 2020. A development team was formed shortly thereafter, designing and structuring the development to achieve the necessary density and unit mix necessary to be competitive for financing applications in 2021. On March 15, 2021, an application to the California Housing Finance Agency (CalHFA) proved successful with an award secured on April 29, 2021. Immediately following, an application to the California Debt Limit Allocation Committee (CDLAC) was submitted on May 24, 2021. CDLAC published its Preliminary Recommendations list on July 16, 2021, which indicates the Project will secure an award of bonds and credits. Final CDLAC/TCAC approval of the bonds and credits is scheduled for August 11, 2021. The construction loan closing will occur prior to February 7, 2022. The permanent loan conversion would follow roughly one month later around December 2024. Receipt of IRS Form 8609[1] and the final equity installment would take place around March 2025.

2.1.2 Construction

Construction activities associated with the Proposed Project would require grading, utility connections, building construction, frontage improvements (e.g., new curb, gutter, sidewalk, and driveway construction), and landscaping on the Project Site.

Preliminary analysis of the Project Site and proposed uses indicate that maximum fills for building pads to be on the order of approximately 1.5′ and maximum parking lot cuts to be on the order of approximately 2.5′. It is anticipated that cut and fill volumes to balance out fairly closely with minimum import or export of soils required.

Construction is anticipated to begin in February 2022 and an 18-month construction schedule is anticipated. This would result in construction completion around August of 2023 and stabilization around November of 2024.

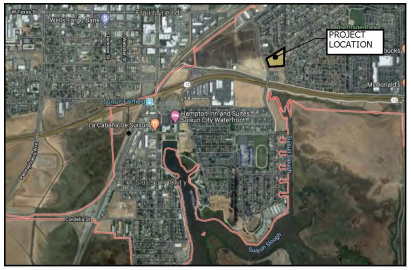
[1] Owners of residential low-income rental buildings are allowed a low-income housing credit for each qualified building over a 10-year credit period. A separate Form 8609 must be issued for each building in a multiple building project. This form can be used to obtain a housing credit allocation from the housing credit agency, and certify certain information.

VIEW FROM MARINA BLVD.

PROJECT	201 MARINA BLVD.	DEVELOPER:	SOLANO AFFORDABLE HOUSING FOUNDATION
LOCATION:	SUISUN, CA 94585		1411 OLIVER ROAD, SUITE 220
			FAIRFIELD, CA 94534
APN:	0032-411-090		
		ARCHITECT:	VRILAKAS GROEN ARCHITECTS, INC.
ZONING:	RH2 HIGH DENSITY		1221 18TH STREET
LOT SIZE:	3.2 ac = 139,392 sf (RH2)		SACRAMENTO, CA 95811
	2.0 ac = 87,120 sf (CR)		
BUILDING USE:	RESIDENTIAL / APT.	CIVIL ENGINEER:	CUNNINGHAM ENGINEERING CO.
OCCUPANCY:	R2		2120 20TH STREET, STE. 3
CONST. TYPE:	VA		SACRAMENTO, CA 95818
DESCRIPTION:	3 STORY WALK UP APARTMENTS	LANDSCAPE ARCH:	CUNNINGHAM ENGINEERING CO.
	W/ TENANT AMENITIES AND		2120 20TH STREET, STE. 3
	ON SITE PARKING.		SACRAMENTO, CA 95818

PROJECT DATA

VICINITY MAP



AREA MAP

Marina Village - Housing

Solano Affordable Housing Foundation
201 Marina Blvd., Suisun, CA
03.01.21

VRILAKAS | GROEN
www.vg-architects.com

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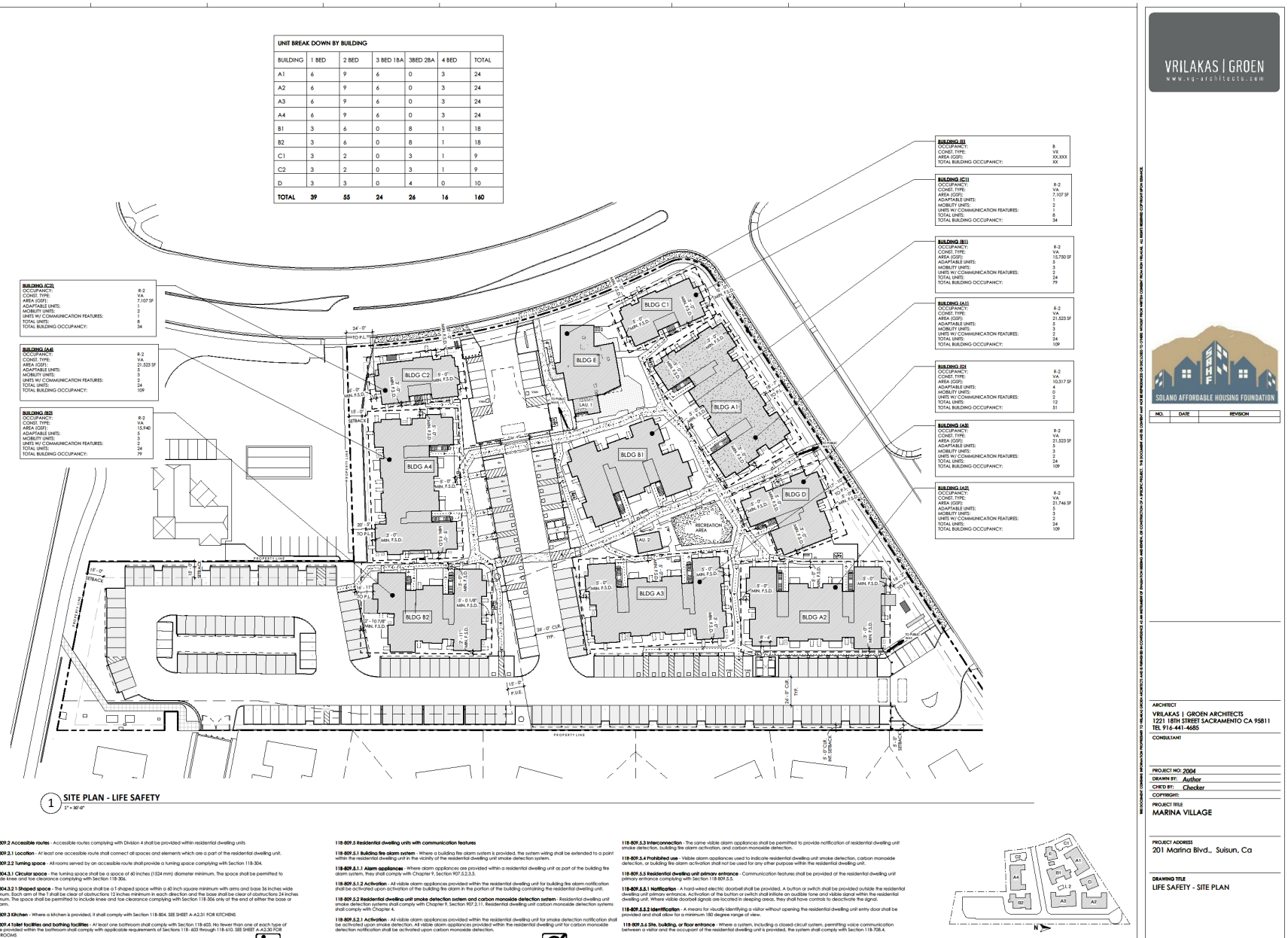
ENVIRONMENTAL CONSULTANTS

Figure 4. Representation of Future Project
Marina Village - Housing Project



1 SITE PLAN - LIFE SAFETY
1" = 30'-0"

118-809.2 Accessible routes - Accessible routes complying with Division 4 shall be provided within residential dwelling units

118-809.2.1 Location - At least one accessible route shall connect all spaces and elements which are a part of the residential dwelling unit.

118-809.2.2 Turning space - All rooms served by an accessible route shall provide a turning space complying with Section 118-304.

118-304.3.1 Circular space - the turning space shall be a space of 60 inches (1524 mm) diameter minimum. The space shall be permitted to include knee and toe clearance complying with Section 118-306.

118-304.3.2 T-Shaped space - The turning space shall be a T-shaped space within a 60 inch square minimum with arms and base 36 inches wide minimum. Each arm of the T shall be clear of obstructions 12 inches minimum in each direction and the base shall be clear of obstructions 24 inches minimum. The space shall be permitted to include knee and toe clearance complying with Section 118-306 only at the end of either the base or one arm.

118-809.3 Kitchen - Where a kitchen is provided, it shall comply with Section 118-804. SEE SHEET A-A2.31 FOR KITCHENS

118-809.4 Toilet facilities and bathing facilities - At least one bathroom shall comply with Section 118-603. No fewer than one of each type of fixture provided within the bathroom shall comply with applicable requirements of Sections 118- 603 through 118-610. SEE SHEET A-A2.30 FOR BATHROOMS

REQUIREMENTS FOR MOBILITY UNITS

118-809.5 Residential dwelling units with communication features

118-809.5.1 Building fire alarm system - Where a building fire alarm system is provided, the system wiring shall be extended to a point within the residential dwelling unit in the vicinity of the residential dwelling unit smoke detection system.

118-809.5.1.1 Alarm appliances - Where alarm appliances are provided within a residential dwelling unit as part of the building fire alarm system, they shall comply with Chapter 9, Section 907.5.2.3.3.

118-809.5.1.2 Activation - All visible alarm appliances provided within the residential dwelling unit for building fire alarm notification shall be activated upon activation of the building fire alarm in the portion of the building containing the residential dwelling unit.

118-809.5.2 Residential dwelling unit smoke detection system and carbon monoxide detection system - Residential dwelling unit smoke detection systems shall comply with Chapter 9, Section 907.2.11. Residential dwelling unit carbon monoxide detection systems shall comply with Chapter 4.

118-809.5.2.1 Activation - All visible alarm appliances provided within the residential dwelling unit for smoke detection notification shall be activated upon smoke detection. All visible alarm appliances provided within the residential dwelling unit for carbon monoxide detection notification shall be activated upon carbon monoxide detection.

118-809.5.3 Interconnection - The same visible alarm appliances shall be permitted to provide notification of residential dwelling unit smoke detection, building fire alarm activation, and carbon monoxide detection.

118-809.5.4 Prohibited use - Visible alarm appliances used to indicate residential dwelling unit smoke detection, carbon monoxide detection, or building fire alarm activation shall not be used for any other purpose within the residential dwelling unit.

118-809.5.5 Residential dwelling unit primary entrance - Communication features shall be provided at the residential dwelling unit primary entrance complying with Section 118-809.5.5.

118-809.5.5.1 Notification - A hard-wired electric doorbell shall be provided. A button or switch shall be provided outside the residential dwelling unit primary entrance. Activation of the button or switch shall initiate an audible tone and visible signal within the residential dwelling unit. Where visible doorbell signals are located in sleeping areas, they shall have controls to deactivate the signal.

118-809.5.5.2 Identification - A means for visually identifying a visitor without opening the residential dwelling unit entry door shall be provided and shall allow for a minimum 180 degree range of view.

118-809.5.6 Site, building, or floor entrance - Where a system, including a closed-circuit system, permitting voice communication between a visitor and the occupant of the residential dwelling unit is provided, the system shall comply with Section 118-708.4.

REQUIREMENTS FOR COMMIUNICATIONS UNITS

VRILAKAS | GROEN
www.vg-architects.com

SOLANO AFFORDABLE HOUSING FOUNDATION

NO.	DATE	REVISION

ARCHITECT
VRILAKAS | GROEN ARCHITECTS
1221 18TH STREET SACRAMENTO CA 95811
TEL 916-441-4685

CONSULTANT

PROJECT NO: 2004
DRAWN BY: Author
CHK'D BY: Checker
COPYRIGHT:

PROJECT TITLE
MARINA VILLAGE

PROJECT ADDRESS
201 Marina Blvd., Suisun, Ca

DRAWING TITLE
LIFE SAFETY - SITE PLAN

1" AT FULL SIZE
SHEET NO: A0.11

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 5. Site Plan
Marina Village - Housing Project

2.2 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project.

2.2.1 Lead Agency Approval

The City of Suisun City (City) is the lead agency for the Proposed Project. In order to approve the Proposed Project, the City must first adopt the IS/MND, approve the Proposed Project, and file a Notice of Determination within five working days. The City will consider the information contained in the IS/MND in making its decision to approve or deny the Proposed Project. The IS/MND is intended to disclose to the public the Proposed Project's details, analyses of the Proposed Project's potential environment impacts, and identification of feasible mitigation that will reduce potentially significant impacts to less than significant levels.

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:

2.2.1.1 San Francisco Bay Area Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) typically requires that a Construction General Permit be obtained for projects that disturb more than one acre of soil. The Project may disturb more than one acre of soil. As such, a stormwater pollution prevention plan (SWPPP) may be required for the Project. Typical conditions issued with such a permit include the submittal of and adherence to a SWPPP, as well as prohibitions on the release of oils, grease, or other hazardous materials.

2.2.1.2 Bay Area Air Quality Management District

The Proposed Project is located in an area under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Construction equipment used for the Project that meets certain horsepower or emitting specifications will be required to have Portable Equipment Registrations from the Bay Area Air Quality Management District (BAAQMD, 2017).

2.2.2 Relationship of Project to Other Plans and Projects

2.2.2.1 City of Suisun City 2035 General Plan

The Proposed Project would be located in Suisun City. The City of Suisun City 2035 General Plan was adopted by the City Council on May 5, 2015. The 2035 General Plan provides the basis for Suisun City's regulation of the overall amount, character, and location of urban development, as well as preservation and natural resource conservation, economic development, transportation, safety, public facilities and services, and housing. As the City's "constitution," the 2035 General Plan fulfills state legal requirements for long-range comprehensive planning and provides a framework for the City to exercise its land use entitlement authority, as provided under state law. The 2035 General Plan is both comprehensive and internally consistent – it addresses a broad range of topics with policies that are mutually supportive. The 2035 General Plan is intended to be implemented over the long-term. It identifies key locations within the City where there is capacity for future growth and identifies how the City will protect, enhance, and

maintain a high quality of life along with growth and development. Because the 2035 General Plan includes projections of future development capacity, it serves as a tool for the City and other service providers to plan for services, facilities, infrastructure, and environmental mitigation.

City of Suisun City 2015-2023 Housing Element

The northern half of the Project site (APNs 0032-411-070, -080, -090, -100, and -110) is designated in the General Plan's 2015-2023 Housing Element as a high-density housing site. These particular Assessor's parcels are designated as "Site 2" in the Housing Element. The Housing Element describes Site 2 as follows:

> "Site 2 is vacant and ready for development. All of the parcels share a single owner and the site has been studied as a potential high-density housing site. The site will be redesignated to High Density Residential (R-H) with a minimum of 20 units per acres and a maximum of 45 units per acre. The City will amend the Zoning Ordinance to allow a minimum of 20 units per acres and a maximum of 45 units per acres in the R-H zone consistent with the proposed 2035 General Plan update. Refer to Table 33 for details on each of the sites."

2.2.2.2 City of Suisun City Municipal Code Title 18 Zoning

The Proposed Project is required to comply with the City's Municipal Code, including Title 18 Zoning (Suisun City 2021a). The zoning plan was adopted to provide a precise plan for residential, commercial, industrial, agricultural, public, and other land uses in the city in order to:

a. Protect the established character and social and economic values of residential, commercial, industrial, agricultural, recreational, public and other areas within the city that have developed in a healthy and orderly manner;
b. Encourage beneficial development of those areas that have grown with conflicting or uneconomic patterns of use; and
c. Assist in providing a definite and publicly approved plan of development to guide, control, and stimulate the future growth of the city in accordance with the needs of the city and in proper relation to other land use areas in the region.

2.2.2.3 Solano Habitat Conservation Plan

The Solano Habitat Conservation Plan (HCP) establishes a framework for complying with State and Federal endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the Plan Participants within Solano County over the next 30 years. However, at the time of this writing, the HCP has not been adopted. Adoption is anticipated to occur in the fall of 2022.

2.2.3 California Department of Transportation

The Project is adjacent to SR 12 and Project related traffic may influence operations of SR 12. The California Department of Transportation (Caltrans) is responsible for traffic operations on state highways, including SR 12. As such, the Project will be reviewed by Caltrans.

2.2.4 Bay Area Air Quality Management District

The Proposed Project is located in an area falling under the jurisdiction of the Bay Area Air Quality Management District. The Project applicant will be required to obtain approval of a dust control plan from the District prior to any soil disturbing activities on the Site.

2.2.5 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 City sent consultation requests on September 14, 2021 to the following Native American Tribes:

Ione Band of Miwok Indians
P.O. Box 699
9252 Bush Street, Suite 2
Plymouth, CA 95669

Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95063

Guidiville Indian Rancheria
P.O. Box 339
Talmage, CA, 95481

Cortina Rancheria –
Kletsel Dehe Band of Wintun Indians
P.O. Box 1630
Williams, CA, 95987

Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA, 95606

Cachil Dehe Band of Wintun Indians of the Colusa Indian Community
3730 Highway 45
Colusa, CA, 95932

As of October 21, 2021. the City received responses from two tribes: 1) the United Auburn Indian Community of the Auburn Rancheria stating that the project location and determined that it falls outside of the UAIC's geographic area of traditional and cultural affiliations, and 2) the Yocha Dehe Wintun Nation stating that the project location is within the aboriginal territories of the Yocha Dehe Wintun Nation and the Tribe recommends cultural sensitivity training for all project personnel prior to all ground disturbance activities and that the Yocha Dehe Wintun Nation's Treatment Protocol be incorporated into the mitigation measures for this project. Tribal cultural resources are discussed in Sections 4.5 and 4.18 of this IS.

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3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

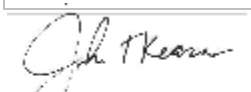
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ 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	☒ Paleontological Resources	☒ 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.	☐



10/27/2021

John Kearns
Senior Planner

Date

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

The Project Site is currently vacant and located in the western portion of the City within a suburban residential area. The Project Site is bordered by Buena Vista Avenue to the north, with single-family residences and the First Christian Church beyond; single-family residences to the east; Marina Boulevard to the west, with vacant land beyond; and an ARCO AM/PM gas station, Central County Bikeway, and SR 12 to the south, with vacant land, Suisun Slough, single-family residences, and a shopping center beyond. Additionally, the California Northern Railroad (CFNR) is about 0.25-mile northwest of the Project Site and runs parallel to Railroad Avenue. Residential development within the immediate vicinity of the Project Site ranges from one to two stories tall.

The 2035 General Plan identifies views of the Suisun Marsh, the Coastal Range, Cement Hill, Potrero Hills, and the Vaca Mountains as important local scenic resources (Suisun City 2015a). The City does not necessarily consider changes to the existing visual character through urban development to be an adverse change. However, the 2035 General Plan requires new development projects to be designed to retain or enhance views along existing public rights-of-ways of locally important scenic resources. These local scenic resources are located in the northern, southern, and western portions of the City and within 10 miles of the Project Site. However, due to the suburban residential setting, views of these local scenic resources are not visible from the Project Site or are mostly blocked by the surrounding development. The greatest potential for views of these scenic resources from the Site would be that of the Suisun Marshes and Potrero Hills from three-story levels. According to Caltrans (Caltrans 2021) and the City (Suisun City 2015a), there are no officially designated state scenic highways within the City or County.

The Project Site is currently vacant, bounded by roads to the north, west, and south; with residences to the east and a gas station abutting the southwestern portion of the Project parcel. There are no existing substantial light or glare sources. Light and glare sources found onsite consist of mainly urban sources including nighttime interior and exterior lighting related to the adjacent single-family residences to the east and north, beyond Buena Vista Avenue; lighting associated with vehicles traversing roadways within the Project vicinity (i.e. headlights, brake lights); illumination from various streetlamps on roadways and sidewalks within residential areas and along the Central County Bikeway; and ambient area lighting associated with the ARCO AM/PM and First Christian Church parking lots.

4.1.2 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 Suisun is distinguished with its views of the surrounding marshes, mountains, and hills and considers these views to be significant and should be protected. As such, the City includes policies and actions in its 2035 General Plan designed to protect and enhance scenic views throughout the City. These include:

Objective CCD-6 *Increase visual access to the Suisun Marsh, the Coastal Range, Cement Hill, the Potrero Hills, and the Vaca Mountains.*

Policy CCD-6.1 Locally important scenic resources include the Suisun Marsh, the Coastal Range, Cement Hill, the Potrero Hills, and the Vaca Mountains. Locally important scenic vistas are those available from public properties and rights-of-way of locally important scenic resources.

Policy CCD-6.2 New developments shall be designed to retain or enhance views along existing public rights-of-way of locally important scenic resources, to the extent feasible.

Policy CCD-6.3 New developments should be designed, where feasible, to frame views of locally important scenic resources, by providing direct lines of sight along public rights-of-way and open space in areas where these features are prominently visible.

Policy CCD-6.4 The City will not consider urban development that is consistent with General Plan community design policies to represent a degradation of visual character for the purpose of environmental impact analysis.

As previously discussed, the City emphasizes the importance of protecting and promoting the resources associated with scenic views of the Suisun Marsh, the Coastal Range, Potrero Hills, Vaca Mountains, and Cement Hill. These resources are scattered throughout the City's surroundings, and most are either partially or completely blocked by the City's suburban and commercial development. The Project proposes the construction of nine three-story garden-style residential buildings and one single-story community building, totaling 159 100% affordable housing units and one manager unit. Section 18.31 of the Suisun City Municipal Code establishes that maximum height of 55 feet in the RH2 zoning district. The maximum height for the proposed three-story residences buildings would be 55 feet above ground level, with a Project total density of 30.58 dwelling units per acre (DU/AC). In order to provide housing opportunities for all segments of the community, and to meet current and future needs, Policy 1.A of the 2035 General Plan Housing Element states that the City offers a lot consolidation program for housing development projects with a 30 DU/AC or greater. For developers interested in lot consolidation for the development of affordable housing, the City offers incentives – on a project-by-project basis – including the exceedance of maximum building height limits, decreasing setbacks, and/or reducing parking requirements. Additionally, in accordance with Section 18.31.005 of the City Municipal Code, the maximum allowable height for RH2 development projects is 55 feet. Therefore, the proposed building's maximum height of 55 feet would be consistent with the City Municipal Code.

With the construction of these three-story buildings, views of the Coastal Mountain Range to the west – currently experienced by the single-family residences east of the Project Site – have the potential to be degraded. However, with the addition of the proposed residential units and to be consistent with the 2035 General Plan Housing Element Objective CCD-6, views of the Coastal Mountain Range, the Suisun Marshes, Potrero Hills, and the Vaca Mountains would be created. Additionally, the Project would be subject to the City's site plan and architectural review process in accordance with Chapter 18.76 of the City Municipal Code (Suisun City 2021a). This review process ensures Project compatibility with the surrounding land uses and conformity with the City's goals of providing and enhancing views of local scenic resources. Therefore, the Proposed Project would not have a substantial adverse effect on local scenic vista resources, and impacts would be less than significant.

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 Proposed 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 an urbanized area. As previously stated, the Project proposes the development of 160 housing units, with a 30+ DU/AC density level. Due to the City's limited supply of vacant land, the City designated key locations with vacant and underutilized properties that represent priority Opportunity Areas for future growth (Suisun City 2015a). The Project Site is located in the Northeast Downtown Opportunity Area. The City intends to promote compact, mixed-use development in these Opportunity Areas to improve overall design character, provide additional revenue to the City, add jobs, and offer new housing opportunities. Development in these Opportunity Areas would use design approaches that create

vibrant and attractive places to live and do business. Listed below are 2035 General Plan policies and actions designed to promote the aesthetic character of the City.

Objective CCD-5 *Improve the overall design character of each of the Opportunity Areas during General Plan buildout.*

Policy CCD-5.1 The City will encourage – through entitlement streamlining, flexibility in development standards, fee structures, and other incentives – infill development of vacant or underutilized properties within Opportunity Areas.

Policy CCD-5.4 The Northwest Downtown and Northeast Downtown Opportunity Areas shall be designed to accommodate transit use by residents of future projects within these areas, as well as patrons and employees of future residential projects. Site planning and building design should reduce exposure to air pollutants and noise associated with the railroad and SR 12 for future residents.

Development of the Proposed Project would be subject to those objectives and policies listed above, which would assist in promoting the visual character of the City. In addition, the Project is subject to Chapter 18.76 of the City Municipal Code, which provides a design review process for development in the City, intended to promote a visual environment of high aesthetic quality. The City's Development Services Department and City Council promote responsible architectural design that is consistent with the City's character by enforcing the design guidelines as promulgated in Chapter 18.76 of the Suisun City Municipal Code (Suisun City 2021a). The Planning Department reviews architectural drawings or renderings, which are required to be submitted with an application for a building permit.

The City's 2035 General Plan goals and policies and Chapter 18.76 would be effective in reducing the visual prominence and aesthetic impact of new development. In addition, the City's approach to protecting and maintaining the scenic qualities of the surrounding natural resources, and the scenic views of such resources, is comprehensive. Therefore, this impact is considered less than significant.

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.

The current Project Site is on vacant land with no existing sources of light or glare. Surrounding land uses and infrastructure provide sources of light experienced within the Project Site; sourced from interior and exterior residential lighting, street lighting, and ambient area lighting associated with the ARCO AM/PM and First Christian Church parking lots. However, implementation of the Project would 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 the Project vicinity are from sunlight reflecting from structures with reflective surfaces such as windows. Development under the Proposed Project would include residential structures and other potential sources of glare; including glare associated with solar panels mounted to rooftops, as would be the case with the proposed option for roof-mounted solar panels above the proposed carports. 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.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential development, lighting from nonresidential uses, lights associated with vehicular travel (e.g., car headlights), street lighting, parking lot lights, and security-related lighting. Increased nighttime lighting and illumination could result in adverse effects to adjacent land uses through the light trespass into these areas and contribute to skyglow conditions. The following City objectives, policies and programs pertain to lighting associated with the Proposed Project.

Objective CCD-8 *Incorporate design approaches, as necessary, to provide attractive lighting and ensure that new developments do not create significant effects related to light or glare.*

Policy CCD-8.1 Low, pedestrian-scaled, ornamental lighting should be emphasized in new developments in order to avoid adverse effects on adjacent uses.

Policy CCD-8.2 New developments shall use attractive lighting that is complementary to the design of proposed structures.

Policy CCD-8.4 Light fixtures shall aim light sources downward and provide shielding to prevent glare and reflection.

Policy CCD-8.5 Permanent lighting cannot blink, flash, or be of unusually high intensity or brightness. Lighting standards shall avoid the use of harsh mercury vapor, low-pressure sodium, or fluorescent bulbs for lighting of public areas or for the lighting within residential neighborhoods.

Policy CCD-8.6 New developments shall not include reflective surfaces that could cast glare toward pedestrians, bicyclists, or motorists. Bare metallic surfaces, such as pipes, vents, and light fixtures shall be painted to minimize reflectance.

Program 8-1 (Site Design for Lighting and Glare) The City will review and condition new developments, as necessary, to avoid introduction of light and glare that would adversely affect motorists, bicyclists, and pedestrians using public travel ways. New developments have several design options that can be used, as appropriate to avoiding substantial adverse light and glare effects, including carefully planning the location and orientation of on-site lighting, use of non-reflective paint and building materials, use of vegetation screening or shielding of light at the source, use of directional or lower-intensity lighting, use of timing devices or sound/motion-controlled lighting, or other techniques.

Activities associated with Project construction have the potential to increase lighting and glare within and around the Project Site. Sources of additional light and glare would emanate from area lighting during any nighttime work, headlights from construction equipment, and the glare from construction equipment reflective surfaces. Although there is a potential to increase lighting and glare within and around the Project Site during construction, these sources would be temporary and would cease upon completion of the Project. During operations, interior and exterior lighting associated with the residential units, cars driving in and out of the parking lots, ambient area lighting in outdoor common spaces and walkways, and frontage signs and security lighting would all be the primary sources within and around the Project Site.

Project development would be subject to existing City development and design standards outlined in the City's 2035 General Plan and Municipal Code. For instance, Section 18.42.040G states that lights provided to illuminate any parking facility or paved area shall be designed to reflect away from residential uses and motorists, to maintain light standards in a low-profile design, and be compatible with the architectural design. Additionally, Section 18.42.040 requires that light standards shall not exceed 15 feet in overall height from the finished grade of the parking facility and that no lighting shall create illumination trespass on adjacent properties which exceeds five footcandles (Suisun City 2021a).

Adherence to existing City standards and Municipal Code would reduce the impacts of daytime glare and nighttime lighting by requiring design to limit lighting leakage and glare. Therefore, this impact would be less than significant.

4.1.3 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 currently vacant and located in the western portion of the City limits, with surrounding residential and commercial land uses. While the Site may have been used for agricultural purposes in the past, according to Google Earth images, the Site has been vacant, undeveloped land since at least 1985.

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 Site as being within an area of "Urban and Built-Up Land", and adjacent to "Other Lands" to the west beyond Marina Boulevard (DOC, 2021 [see Figure 3]).

According to Solano County Williamson Act Parcels mapping, none of the land within the Project Site or vicinity is under a Williamson Act contract (Solano County 2008).

The Project Site is located in a flat, mostly suburban and commercial area that does not contain possible forest or timber resources.

4.2.2 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.

The DOC identifies the Project Site as Urban and Built-Up Land. As presented in the City General Plan Environmental Impact Report (EIR), there is currently no designated Important Farmland within the Project Site, nor within the Project vicinity. As previously discussed, the DOC Important Farmland Finder Map classifies the Project Site and vicinity as either "Urban and Built-Up Land" or "Other Lands" with no agricultural resources (DOC 2021). Therefore, the Proposed Project would not result in the conversion of any Important Farmland (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) to any uses other than agriculture, and no impact would occur.

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 Suisun City General Plan EIR Williamson Act mapping, the are no properties within the Project Site or within the Project vicinity that are subject to a Williamson Act contracts (Suisun City 2015c). The closest County Agricultural Zoning Williamson Act Contract Land is located approximately 1.2 miles south of the Project Site. 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 protected 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.

As previously addressed, according to the City General Plan EIR the Project Site is not located within lands designated as forest land, timberland, or agricultural land (Suisun City 2015c). Additionally, the Project Site is surrounded by a mix of residential and commercial land uses. The closest Prime Farmland and Unique Farmland areas are located approximately 2.2 miles southwest of the Project Site. As such, the proposed project would not involve other changes in the existing environment that would result in the conversion of farmland to a non-agricultural use or the conversion of forestland to a non-forest use. No impact would occur.

4.2.3 Mitigation Measures

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

4.3 Air Quality

4.3.1 Environmental Setting

The Project Site is located within Solano County, in the City of Suisun City. 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 southwestern portion of Solano County which is located in the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB is approximately 5,600 square miles in area and consists of nine counties that surround the San Francisco Bay, including all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties; the southwestern portion of Solano County; and the southern portion of Sonoma County. Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The greatest distortions occur when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summertime (Bay Area Air Quality Management District [BAAQMD] 2017).

Both the U.S. Environmental Protection Agency (USEPA) and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other

effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3), carbon monoxide (CO), particulate matter (PM), oxides of nitrogen (NO_x), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Solano County portion of the SFBAAB 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, PM_{10}, and $PM_{2.5}$ (CARB 2019).

4.3.2 Regulatory Framework

4.3.2.1 Bay Area Air Quality Management District

The BAAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The BAAQMD responsibilities include preparing plans for the attainment of ambient air quality standards, adopting and enforcing air pollution rules, issuing permits for and inspecting stationary air pollution sources, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing state and federal programs and regulations. The BAAQMD has also adopted various rules and regulations that are designed to reduce and control pollutant emissions from a project's construction and operational activities. The following provisions are applicable to the Proposed Project and are summarized as follows:

- **Regulation 2, Rule 1, General Permit Requirements:** Includes criteria for issuance or denial of permits, exemptions, appeals against decisions of the Air Pollution Control Officer (APCO) and BAAQMD actions on applications.
- **Regulation 2, Rule 2, New Source Review:** Applies to new or modified sources and contains requirements for Best Available Control Technology and emission offsets. Rule 2 implements federal New Source Review and Prevention of Significant Deterioration requirements.
- **Regulation 6, Rule 1, General Requirements:** Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity.
- **Regulation 6, Rule 6, Prohibition of Trackout:** Controls trackout of solid material onto public paved roads from three types of sites: large bulk material sites, large construction sites, and large disturbed area sites. Under this regulation, the owners and operators of a construction site are required to clean up trackout on public roadways within four hours of identification and at the conclusion of each workday. The rule also includes requirements regarding the emission of fugitive dust during cleanup of trackout, and requirements for monitoring and reporting trackout at regulated sites
- **Regulation 7, Odorous Substances:** Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. A person (or facility) must meet all limitations of this regulation but meeting such limitations shall not exempt such person from any other requirements of BAAQMD, state, or national law. The limitations of this regulation shall not be applicable until BAAQMD receives odor complaints from ten or more complainants within a 90-day period, alleging that a person has caused odors perceived at or

beyond the property line of such person and deemed to be objectionable by the complainants in the normal course of their work, travel, or residence. When the limits of this regulation become effective, as a result of citizen complaints described above, the limits shall remain effective until such time as no citizen complaints have been received by BAAQMD for one year. The limits of this Regulation shall become applicable again if BAAQMD receives odor complaints from five or more complainants within a 90-day period. BAAQMD staff investigate and track all odor complaints it receives and make attempts to visit the site and identify the source of the objectionable odor and assist the owner or facility in finding a way to reduce the odor.

BAAQMD Construction Mitigation Measures

The BAAQMD recommends quantifying a proposed project's construction-generated emissions by implementing the Basic Construction Mitigation Measures as mitigation for dust and exhaust construction impacts in the California Environmental Quality Act (CEQA) compliance documentation. If additional construction measures are required to reduce construction-generated emissions, the Additional Construction Mitigation Measures should then be applied. Table 4.3-1 identifies the Basic and Additional Construction Mitigation Measures. In addition, all projects must implement any applicable air toxic control measures. For example, projects that have the potential to disturb asbestos (from soil or building materials) must comply with all the requirements of CARB's air toxic control measures for construction, grading, quarrying, and surface mining operations.

Table 4.3-1. BAAQMD Basic and Additional Construction Mitigation Measures

BAAQMD Basic Construction Mitigation Measures
All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
All vehicle speeds on unpaved roads shall be limited to 15 mph.
All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's phone number shall also be visible to ensure compliance with applicable regulations.

Table 4.3-1. BAAQMD Basic and Additional Construction Mitigation Measures
BAAQMD Additional Construction Mitigation Measures
All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the number of disturbed surfaces at any one time.
All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
Minimizing the idling time of diesel-powered construction equipment to 2 minutes.
The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products,
Use low volatile organic compound (i.e., reactive organic gas ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOx and PM.
Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.

4.3.3 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 State Implementation Plan (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 California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously described, the BAAQMD is the agency responsible for enforcing many federal and state air quality requirements and for establishing air quality rules and regulations. The BAAQMD attains and maintains air quality conditions in the SFBAAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The most recently adopted air quality plan is the BAAQMD's 2017 Clean Air Plan, the primary goals of which are to protect public health and the climate. The 2017 Clean Air Plan includes a wide range of control measures and actions to reduce combustion-related activities, decrease combustion of fossil fuels, improve energy efficiency, and reduce emissions of potent greenhouse gases. Several measures address the reduction of multiple pollutants such as O_3 precursors, PM, air toxics, and greenhouse gases.

Determination of whether a project supports the goals in the 2017 Clean Air Plan is achieved by a comparison of project-estimated emissions with BAAQMD thresholds of significance. If project emissions would not exceed the thresholds of significance after the application of all feasible mitigation measures, the project is consistent with the goals of the 2017 Clean Air Plan. As shown in Table 4.3-2 and Table 4.3-4, emissions generated during Project construction and operations would not exceed the BAAQMD's significance thresholds. Therefore, the Project would not conflict with or obstruct reduction measures presented in the 2017 Clean Air Plan.

Additionally, the Project Site can be identified for its "location efficiency". Location efficiency describes the location of the Project Site relative to the type of urban landscape its proposed to fit within, such as an 'urban area', 'compact infill', or 'suburban center'. In general, compared to the statewide average, a project could realize vehicle miles traveled (VMT) reductions up to 65 percent in an urban area, up to 30 percent in a compact infill area, or up to 10 percent in a suburban center (California Air Pollution Control Officers Association [CAPCOA] 2017), and thus reductions in air pollutant emissions, a primary goal of the 2017 Clean Air Plan. The Project Site represents an urban/compact infill location within the central portion of the Suisun City-Fairfield area. The Project Site is served by existing public transportation, there is a bus pick-up located at the northern boundary of the Project. Additionally, this site is about 1/2 mile from the Suisun Fairfield Train Station. The access to rail transit for future Project residents would assist on reducing vehicle trips and thereby eliminate air quality emissions from these vehicles. Also, the Project is in proximity to a mini-market (directly adjacent), a church on Marina Boulevard, a park and community center 0.3 mile to the northeast. The increases in land use diversity and mix of uses in the Project vicinity would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, which would result in corresponding reductions in transportation-related emissions, a primary goal of the 2017 Clean Air Plan.

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 with mitigation incorporated.

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 cumulatively considerable. The Solano County 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, PM_{10}, and $PM_{2.5}$ (CARB 2019).

4.3.3.1 Project Construction-Generated Criteria Air Quality Emissions

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., tractors, forklifts, pavers), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities.

Construction-generated emissions associated with the Proposed Project were calculated using the CARB-approved California Emissions Estimator Model (CalEEMod) computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment 4.3 for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 4.3-2. Construction-generated emissions are short-term and of temporary duration, lasting only if construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance.

Table 4.3-2. Construction-Related Project Emissions

Construction Year	ROG		NO_X		CO		PM_{10}		$PM_{2.5}$	
	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)
Construction Year 1	3.946	0.013	40.541	1.193	21.966	0.946	21.850	0.262	12.023	0.149

Table 4.3-2. Construction-Related Project Emissions

Construction Year	ROG		NO_X		CO		PM_{10}		$PM_{2.5}$	
	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)
Construction Year 2	12.187	0.714	30.405	2.488	38.244	3.005	3.354	0.298	1.891	0.160
Construction Year 3	9.860	0.870	11.583	1.125	17.449	1.687	0.961	0.090	0.642	0.061
BAAQMD Threshold	54	--	54	--	--	--	82	--	54	--
Exceeded Threshold?	**No**	**NA**	**No**	**NA**	**NA**	**NA**	**No**	**NA**	**No**	**NA**

Source: BAAQMD 2017, CalEEMod version 2020.4.0

As shown in Table 4.3-2, emissions generated during Project construction would not exceed the BAAQMD's thresholds of significance. Therefore, 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. Emissions for SO_2 were also calculated by CalEEMod but are minimal (> 0.01 tpy and > 0.1 lb/day) and can be found in Attachment 4.3 of this document.

4.3.3.2 Project Operations Criteria Air Quality Emissions

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10} and O_3 precursors such as ROG and NO_X. Operational-generated emissions associated with the Proposed Project were calculated using CalEEMod. Predicted maximum daily operational-generated emissions of criteria air pollutants for the Proposed Project are summarized in Table 4.3-3.

Table 4.3-3. Operation-Related Unmitigated Project Emissions (lbs)

Operational Emissions	ROG Daily		NO_X Daily		CO Daily		PM_{10} Daily		$PM_{2.5}$ Daily	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Area	70.287	70.287	1.607	1.607	100.16	100.16	12.415	12.415	12.415	12.415
Energy	0.04	0.04	0.339	0.339	0.144	0.144	0.027	0.027	0.027	0.027
Mobile	2.325	2.097	2.175	2.509	19.29	20.62	4.2603	4.260	1.154	1.154
Total	72.651	72.424	4.121	4.455	119.60	120.93	16.703	16.703	13.597	13.597
BAAQMD Threshold	*54*	*54*	*54*	*54*	*NA*	*NA*	*82*	*82*	*54*	*54*
Exceeded Threshold?	**Yes**	**Yes**	**No**	**No**	**NA**	**NA**	**No**	**No**	**No**	**No**

Source: BAAQMD 2017, CalEEMod version 2020.4.0

As shown in Table 4.3-3, daily emissions associated with Project operations would exceed the BAAQMD significance thresholds for ROG. The majority of Project ROG emissions is attributed to the use of wood-burning hearths. Therefore, mitigation measure **AQ-1** is required in order to reduce ROG emissions to levels below the significance threshold. Mitigation measure **AQ-1** would prohibit the installation of wood-burning hearths.

Table 4.3-4 shows Project operations emissions with the imposition of mitigation measure **AQ-1**.

Table 4.3-4. Operation-Related Mitigated Project Emissions

Operational Emissions	ROG Daily (lbs)		NO_X Daily (lbs)		CO Daily (lbs)		PM_{10} Daily (lbs)		$PM_{2.5}$ Daily (lbs)	
	Summer	**Winter**	**Summer**	**Winter**	**Summer**	**Winter**	**Summer**	**Winter**	**Summer**	**Winter**
Area	4.067	4.067	1.143	1.143	13.649	13.649	0.1533	0.1533	0.153	0.153
Energy	0.04	0.04	0.339	0.339	0.144	0.144	0.0274	0.0274	0.027	0.027
Mobile	2.325	2.097	2.175	2.509	19.29	20.62	4.2603	4.2603	1.154	1.154
Total	6.432	6.204	3.657	3.991	33.082	34.413	4.441	4.441	1.335	1.335
BAAQMD Threshold	*54*	*54*	*54*	*54*	*NA*	*NA*	*82*	*82*	*54*	*54*
Exceeded Threshold?	**No**	**No**	**No**	**No**	**NA**	**NA**	**No**	**No**	**No**	**No**

Source: BAAQMD 2017, CalEEMod version 2020.4.0

Table 4.3-4 shows that once mitigations are applied, the operational emissions from the Project are under the BAAQMD thresholds for all pollutants. The average daily emissions correspond to annual emission levels under the BAAQMD thresholds of 10 tons per year (15 for PM_{10}).

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.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive land uses to the Project Site

are the single-family residences located directly adjacent and east of the Site. Additionally, once construction is completed, the Project itself would be considered a sensitive land use.

4.3.3.3 Short-Term Construction Impacts

Construction-related activities would result in temporary, short-term Proposed 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); soil hauling truck traffic; paving; and other miscellaneous activities. The Project is located in a portion of the SFBAAB that 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, $PM_{2.5}$ and PM_{10}. Thus, existing O_3, $PM_{2.5}$ and PM_{10} levels in the SFBAAB are at unhealthy levels during certain periods. However, as shown in Table 4.3-2 the Project would not exceed the BAAQMD 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 BAAQMD 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 BAAQMD 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. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{10}, considered a surrogate for DPM and includes emissions of exhaust $PM_{2.5}$, would be 2.04 pounds/day during construction in the first year of construction, 0.8 pounds/day in the second year of construction and 0.51 pounds/day in the third year of construction (see Attachment 4.3). PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O_3 and NO_X, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the significance thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

4.3.3.4 Operational Air Contaminants

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract mobile sources that spend long periods queuing and idling at the Site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors with the imposition of mitigation measure **AQ-1**. The maximum operations-related emissions of exhaust PM_{10}, considered a surrogate for DPM, would be 0.21 pounds in a single day. Therefore, the Project would not be a substantial source of TACs. The Project will not result in a high carcinogenic or non-carcinogenic risk during operation.

This report also evaluates the potential health risks associated with the placement of residences at the Project Site. Specifically, the potential exposure of future residents at the Project Site to the DPM and total organic gases generated by the vehicular traffic traversing SR 12, as well as the gasoline vapors generated by the existing gasoline dispensing station adjacent to the Project Site. The BAAQMD provides a recommended methodology for assessing local risks and hazards. Specifically, the following TAC source types must be included:

1. Permitted Sources
2. Highways
3. Major Roadways

Permitted sources include any stationary source of TAC emissions which requires a permit to operate from the BAAQMD. Highways are identified by definition, and major roadways include any roadway with at least 10,000 average annual daily traffic. Consistent with BAAQMD recommendations, all such sources within 1,000 feet of the Proposed Project boundary are included in this analysis. The BAAQMD thresholds for identifying significant cumulative risk from local sources on a potential project are listed in Table 4.3-5.

Table 4.3-5. BAAQMD Cumulative Health Risk Thresholds

Description	Guidance
Receptor Thresholds Risks and Hazards (Individual Project)	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM2.5 increase: >0.3 µg/m3 annual average Zone of Influence: 1,000-foot radius from property line of receptor
Risks and Hazards (Cumulative Threshold)	Compliance with Qualified Community Risk Reduction Plan OR Increased Cancer Risk: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM2.5: > 0.8 µg/m3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of receptor

Table 4.3-5. BAAQMD Cumulative Health Risk Thresholds

Description	Guidance
Accidental Release of Acutely Hazardous Air Pollutants	New receptors locating near stored or used acutely hazardous materials considered significant
Odors	5 confirmed complaints per year averaged over three years

Source: BAAQMD 2017

The BAAQMD was contacted to provide information on any stationary source within 1,000 feet of the Project. The BAAQMD identified two sources within 1,000 feet of the Project Site: the Diamond Petroleum Inc. Marina ARCO gas dispensing facility, and SR 12, located directly south of the Project boundary. Details on these sources are presented in Table 4.3-6. The BAAQMD also provides guidelines for an initial screening of risk for single sources and cumulative risk for all surrounding sources. The provided conservative cancer risk data from the gas station is 78.3 which is higher than the 10 in a million-screening threshold, thus a detailed modeling analysis was conducted for cumulative risk. Screening values are currently not available for highway sources.

Table 4.3-6. Sources within 1,000 Feet of the Project

Source Name	Source Type	Emissions Data Source	Activity Data Source
Diamond Petroleum Arco	Permitted Stationary	BAAQMD	BAAQMD
Highway 12	On Road Mobile	EMFAC2021	GHD 2021 Report

Source: BAAQMD 2021

Cumulative health risk was calculated for the Project Site using regulatory modeling tools. Emissions from sources within 1,000 feet of the Project were modeled using EMFAC2021 for the highways and BAAQMD-provided values for permitted stationary sources. Emissions from the highway source were calculated using the average daily trips calculated in the GHD 2021 traffic analysis conducted for the Project.

American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) version 19191 was used for dispersion modeling utilizing preprocessed Travis Air Force Base meteorological data available on the CARB American Meteorological Society/Environmental Protection Agency Regulatory Model Meteorological Processor (AERMET) website. This site is roughly five miles away and can be considered representative of the meteorological conditions at the Project Site. The gas dispensing site was modeled as a point source at the center of the facility. SR 12 was modeled as adjacent volume sources per the Office of Environmental Health Hazard Assessment and CAPCOA guidance. Modeling receptors were placed on the facility fence line and in the center of the facility. Modeling summary files can be found in Attachment 4.3 of this document which includes a figure containing source and receptor locations.

The cumulative cancer risk and hazard values are below BAAQMD thresholds as shown in Table 4.3-7

Table 4.3-7. Calculated Health Risk at the Project Site			
Description	**Cancer Risk**	**Chronic Hazard**	**Acute Hazard**
Calculated Health on the Project Site	29.1	0.0	0.3
BAAQMD Cumulative Health Risk Threshold	100	10	10
Exceeds Significance Threshold?	**No**	**No**	**No**

Source: See Attachment 4.3

As shown, the calculated health risks at the Project Site are all below the BAAQMD health risk thresholds.

4.3.3.5 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 SFBAAB 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 BAAQMD 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.

According to GHD (2021), the Project would result in 870 additional trips per day during normal operations. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 44,000 vehicles per day and there is no likelihood of the Project traffic exceeding CO values.

The impact is less than significant. No mitigation is required.

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.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

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 of these uses identified as being associated with odors. Therefore, operational odors would result in a less than significant impact related to odor emissions.

4.3.4 Mitigation Measures

AQ-1: The Project applicant and/or its contractor shall prohibit the installation of wood-burning fireplaces within the Project. This prohibition shall be noted on the deed to require compliance in perpetuity.

Timing/Implementation: *Prior to the initiation of construction activities*

Enforcement/Monitoring: *Bay Area Air Quality Management District and Project construction lead.*

4.4 Biological Resources

LSA Associates, Inc. conducted a Biological Resources Assessment (BRA) for the Proposed Project (LSA 2020). The purpose of the BRA was to document the endangered, threatened, sensitive, and rare species that occur or may occur in the biological survey area of the Project. The following information was excerpted from the BRA. The BRA is included as Attachment 4.4 of this IS/MND and provides information for the following sections.

4.4.1 Methods

On August 31, 2020, senior wildlife biologist Steve Kohlmann, PhD., CWB surveyed the property to identify potential wetlands, or special status species habitats that may be present on the Project Site. In addition, a review of the updated Solano HCP database, which incorporates California Natural Diversity Data Base (CNDDB) records and the California Native Plant Society (CNPS) rare plant database, to locate records of special-status species and habitats known to occur within a 1-mile radius of the property. The 1-mile search area was used since the Project Site is small in area, primarily surrounded by urban development, and is within the City's urban growth boundary. The BRA also reviewed the U.S. Fish and Wildlife Service (USFWS) Species List (LSA 2020 Attachment 4.4) for the extension of Railroad Avenue from Marina Boulevard to Main Street for species and habitats that may be present on this adjacent site.

4.4.2 Environmental Setting

The Project Site is located at a vacant parcel along Marina Boulevard, within the urban growth boundary of Suisun City, Solano County. The Project Site's elevation ranges 5-10 feet AMSL. The Project Site is located near the western boundary of the former Brennan – Fairfield Suisun Air Park. The airpark was established as an auxiliary airfield in 1944 and was an irregularly-shaped grass field, with a 3,500-foot unpaved runway, and a few small buildings on the southeast corner (near today's Sunset Avenue). The airfield was closed in 1961. Since then, the Project Site has been vacant land, and appears to have been mowed frequently. The Site is shown on the U.S. Geological Survey (USGS) US Topo 7.5-minute map for Fairfield South, CA.

4.4.2.1 Topography and Soils

The Project Site is a flat lot with a substrate of imported fill and compacted natural soil. The underlying native soils are Capay silty clay loams and Clear Lake clay, saline, drained. The native soils are poorly

drained with slow to very slow permeability. The water table is reported to be at depths of 4 to 10 feet in the late summer.

4.4.2.2 Land Cover

The Project Site is surrounded by urban habitat on all sides. Urban habitat is characterized by the presence of highly disturbed and developed land. These areas contain the developed residential areas to the east and north of the Project Site, the existing gas station and SR 12 to the south and southwest, and Marina Blvd on the western boundary. Beyond Marina Blvd on the western boundary, the habitat is ruderal grassland. Vegetation present in the urban areas includes ornamental trees, shrubs and herbaceous species, many of them potentially invasive. The Project Site consist of predominantly ruderal grassland, and some bare ground caused by walking trails and vehicle tracks. Ruderal grasslands are typically dominated by invasive species. The Project Site is highly disturbed and shows evidence of routine mowing. Dominant species within the ruderal grassland include foxtail barley (*Hordeum murinum*), Italian ryegrass (*Festuca perennis*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), yellow starthistle (*Centaurea solstitialis*), redstem stork's bill (*Erodium cicutarium*), and perennial pepperweed (*Lepidium latifolium*) near the gas station. Aside from a white mulberry tree (*Morus alba*) along the lot boundary with the gas station, there are no shrubs or trees on the Project Site. The presence of perennial pepperweed and of green grass behind the gas station during the August 31 field survey indicates higher soil moisture. No evidence of wetland hydrology (prolonged standing water, algal mats, soil crust, etc.) were observed in this area. Examination of soil test pits found no evidence of hydric soil characteristics in the upper 18 inches of the soils. As such this area was not identified as a wetland. The source of this late season moisture has not been positively determined but appears to originate from anthropogenic irrigation from the gas station/convenience market landscaping.

The Site is mowed at least annually for weed abatement and has multiple trails and vehicle tracks going through it. The Site is littered with heavy trash accumulation.

4.4.2.3 Wildlife

No special-status species were observed on the property during the August 31, 2020 field survey completed for the BRA. Wildlife species observed on or near the Project Site included northern mockingbird (*Mimus polyglottos*), Eurasian collared doves (*Streptopelia decaocto*) and American crow (*Corvus brachyrhynchos*). These species are typical of disturbed open habitats and/or vegetated urban areas in Solano County. No raptor nests were observed near the property. There was no evidence of burrowing mammals, such as California ground squirrel (*Otospermophilus beecheyi*) or Botta's pocket gopher (*Thomomys bottae*), on the property. Burrows of these mammals provide habitat such as underground shelter for other animals, including special-status species such as the burrowing owl (*Athene cunicularia*). In addition, no evidence of California voles (*Microtus californicus*) such as runways or burrows was found on the property; this species is an important prey item for many raptors in Solano County.

4.4.2.4 Potential Waters of the U.S./State

An aquatic resources delineation to identify potential Waters of the U.S./State was not conducted for the Project Site. However, according to the California Aquatic Resource Inventory, there are no previously mapped aquatic resources within the Project Site.

4.4.3 Evaluation of Potentially Occurring Special-Status Species

The purpose of the BRA was to assess the potential for occurrence of special-status plant and animal species or their habitats and sensitive habitats such as wetlands, riparian communities, and sensitive natural communities within the Study Area.

This assessment included a preliminary analysis of impacts on biological resources anticipated to result from the Project, as presently defined. For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as birds of conservation concern by the USFWS;
- are plants considered by the CNPS to be "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1 and 2), "plants about which more information is needed" (i.e., species with a CRPR of 3), or "plants of limited distribution – a watch list" (i.e., species with a CRPR of 4);
- are plants listed as rare under the California Native Plant Protection Act; California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above-listed groups were considered for the biological assessment. While other species (e.g., special-status lichens, mosses and bryophytes, CNDDB-tracked species with no special status) are sometimes found in database searches or within the literature, these species were not included within the BRA analysis as these species are not identified as special-status species.

A summary of special-status species and their potential to occur within one mile of the Study Area are described in Table 2 of the BRA. Potential for occurrence was determined by reviewing database queries from federal and state agencies and evaluating habitat characteristics. Species with some potential to occur on the Project Site, as determined by the BRA, are listed in Table 4.4-1. There are no plant species

which have potential to occur on the Project Site. According to the BRA, two animal species have some potential to occur within the Project Site: Swainson's hawk and burrowing owl. These species are discussed further below. Species that were considered to be absent from the Project Site due to lack of suitable habitat, or because the known distribution of the species does not include the Project Site vicinity, are not discussed further in this document.

A complete list of special-status species known to exist in the region and the results of the database queries are included in the BRA included as Attachment 4.4.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (*Scientific Name*)	Federal Status	State Status	Global Rank	State rank	Rare Plant Status	CDFW Status	Habitat	Potential to Occur
Burrowing owl *(Athene cunicularia)*	None	None	G4	S3		SSC	Grasslands	No suitable nesting habitat (burrows), marginal foraging habitat present.
Swainson's hawk *(Buteo swainsoni)*	None	Threatened	G5	S3			Open and semi-open country – deserts, grasslands and prairies – hayfields, and pastures, tied very closely to the distribution of various small mammals.	Marginal foraging habitat present site

Source: LSA 2020

4.4.3.1 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is state listed as threatened and is protected under the Migratory Bird Treaty Act (MBTA). In California, Swainson's hawk nesting distribution includes Great Basin sage-steppe communities and associated agricultural valleys in extreme northeastern California, isolated valleys in the Sierra Nevada in Mono and Inyo counties, the Sacramento and San Joaquin valleys, and at least one known isolated breeding site in the Mojave Desert. The historic breeding distribution also included much of Southern California, particularly the inland valleys, where the species was once considered common.

In California, Swainson's hawk habitat generally consists of large, flat, open, undeveloped landscapes that include suitable grassland or agricultural foraging habitat and sparsely distributed trees for nesting.

Swainson's hawks usually nest in large, native trees such as valley oaks (*Quercus lobata*), cottonwoods (*Populus fremontii*), and willows (*Salix* spp.), although nonnative trees such as eucalyptus (*Eucalyptus* spp.) are also used. Nests occur in riparian woodlands, roadside trees, trees along field borders, isolated trees, small groves, trees in windbreaks, and the edges of remnant oak woodlands. Swainson's hawks typically forage in large fields that support low vegetative cover (to provide access to the ground) and provide the highest densities of prey. Marginal habitat is present within the site.

4.4.3.2 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a California SSC and protected by the MBTA. In California, the range of the western burrowing owl extends through the lowlands south and west from north central California to Mexico, with small, scattered populations occurring in the Great Basin and the desert regions of the southwestern part of the state. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats, often associated with burrowing animals. They can also inhabit grass, forbs, and shrub stages of piñon and ponderosa pine habitats. They can be found at elevations ranging from 200 feet below sea level to 9,000 feet above. Burrowing owls commonly perch on fence posts or on mounds outside the burrow. They can be found at the margins of airports and golf courses and in vacant urban lots.

Burrowing owls tend to be resident where food sources are stable and available year-round. They disperse or migrate south in areas where food becomes seasonally scarce. Burrowing owls in migratory populations also often re-nest in the same burrow, particularly if the previous year's breeding was successful. Other birds in the same population may move to burrows near their previous year's burrow. Marginal foraging habitat is present on the Project Site.

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 impact with mitigation incorporated.

While the Project proposes development of land with potential for occurrences of Swainson's hawk and burrowing owl, compliance with 2035 General Plan Policy OSC 1.1 ensures that applicants for development projects that have the potential to negatively affect special-status species will conduct a BRA and identify design solutions that avoid such impacts (Program OSC-1.1). If adverse impacts cannot be avoided, Program OSC-1.3 requires that impacts be mitigated as prescribed by the appropriate state or federal agency, with the preferred method being participation in the Solano HCP.

According to the BRA, the CNPS lists 15 rare plant species, and the CNDDB lists 10 plant species and 15 animal species occurrences, within 1 mile of the Project Site. Of the rare animal species, vernal pool crustaceans have been found on the adjacent property to the west, south of Railroad Avenue. However, the Marina Village Project Site has no vernal pools present and hence there is no suitable habitat for these vernal pool species. Any project activities on the Project Site will occur at a distance of over 1,500 feet from existing vernal pools and thus are unlikely to affect their habitat or hydrology.

Only two special-status plant species, Contra Costa goldfields (*Lasthenia conjugens*) and soft bird's beak (*Chloropyron molle* ssp. *molle*) are federally endangered species with CNDDB occurrences within 1 mile of the Project Site. The remainder of special-status species have a CRPR of 1B, meaning that they are rare, threatened, or endangered throughout their range and many are endemic to California. Impacts to any of these species would be considered significant under CEQA. However, these species would not be expected to occur on the Project Site because it has been disturbed by mowing, tilling, grading and imported fill and there is no suitable vernal pool, wetland or coastal marsh habitat present within the Project Site. In addition, since the property is located within an urban developed landscape and frequently disturbed by mowing and vehicle access, the natural dispersal of propagules from rare plant populations in other parts of Solano County is unlikely to occur on this property.

Most of the CNDDB records for Mason's lilaeopsis, Suisun marsh aster, salt marsh common yellowthroat, Suisun song sparrow and salt marsh harvest mouse are from CDFW properties at Hills Slough Wildlife Area, south of SR 12 near the Project Site. The Hill Slough Wildlife Area has diverse and intact marsh habitats, which do not exist on the Project Site. The Project Site is separated from the Hill Slough Wildlife Area by a divided four-lane highway (SR 12).

The Swainson's hawk occurs widely in the lowlands of Solano County, and Swainson's hawks are known to nest in trees within industrial landscapes as long as suitable foraging habitat is located in nearby areas. The closest known Swainson's hawk nest site is approximately 3 miles from the Project Site. A burrowing owl record is located approximately 1 mile southwest of the Project Site at the western edge of Suisun City near the Train Station. While the property, itself, is not a high value foraging site for Swainson's hawks, burrowing owls, or other raptors, it could be used by these species on an occasional basis such as burrowing owls wintering onsite. As such, development of the property contributes to the regional reduction of foraging habitat for Swainson's hawk and burrowing owl and may therefore require mitigation under CEQA. Mitigation for lost foraging habitat is also required under the Solano HCP once adopted.

Mitigation for unavoidable impacts to Swainson's hawk and burrowing owl pursuant to the current draft of the Solano HCP is described in Mitigation Measure SH MIT 2: Valley Floor Grassland Foraging Habitat Conservation, stating that "Direct impacts to Swainson's hawk foraging habitat in the Valley Floor Grassland and Vernal Pool Conservation Area [...] shall be mitigated through the preservation and management of foraging habitat at a ratio of 1:1 mitigation-to-impact. This mitigation will also meet the CDFW's mitigation measures for the loss of foraging habitat, which requires that "Projects within 5 miles of an active nest tree, but greater than 1 mile from the nest tree, shall provide 0.75 acres of Habitat Management (HM) land for each acre of urban development authorized (0-75:1 ratio)". Likewise, mitigation for the direct disturbance, destruction, or conversion of nesting and non-breeding/wintering

burrowing owl habitat from urban development or other permanent facilities shall be provided at a minimum 1:1 ratio (Mitigation Measure BO MIT 1: Mitigation for Direct and Indirect Impacts to Foraging Habitat). The same mitigation acreage can satisfy mitigation for Swainson's' hawk and burrowing owl habitat. Although the Solano HCP exempts construction of infill developments on small infill lots, the Project Site does not qualify under this exemption.

Birds protected under the California Fish and Game Code and the MBTA could potentially nest on or near the property; however, as long as the Project complies with provisions of the MBTA and California Fish and Game Section 3513, the Project will not result in significant impacts to any protected nesting birds.

Once adopted, the HCP requirements for mitigation of direct impacts to foraging habitat for Swainson's hawk and burrowing owl will reduce the Project's impact to "Less Than Significant with Mitigation Incorporation". However, until such time that the HCP is adopted, reliance on the HCP mitigation measures to reduce Project impacts to Swainson's hawk and burrowing owls is not permitted as there is no guarantee that mitigation can be completed without adoption. As such, mitigation measure **BIO-1** and **BIO-2** have been included to reduce impacts to these species to a less than significant level.

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?	☐	☐	☐	☒

No impact.

No riparian or other sensitive natural communities are present on the Project Site. Coastal salt marsh alliances, which are considered sensitive natural communities, are known to occur south of the Project Site within Suisun Marsh. However, since salt marsh alliances are not present on or adjacent to the Project Site, the Proposed Project will not impact these natural communities. Low value vernal pool habitat is present west of Marina Boulevard along the railroad tracks. The Project will not affect this sensitive community.

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?	☐	☐	☐	☒

No impact.

The Proposed Project is restricted to the designated work area and will not directly or indirectly affect any jurisdictional wetlands. Construction of the Project will direct runoff from the proposed driveways and buildings to established storm drains and potential bio-retention swales on-site. The Project applicant shall follow applicable laws and regulations for erosion control and storm water management. Thus, there will be no significant impacts to federally protected wetlands.

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?	☐	☐	☐	☒

No impact.

The CDFW Biogeographic Information & Observation System was reviewed to determine if the Project is located within an Essential Connectivity Area. The Marina Village Project does not occur within an Essential Connectivity Area; therefore, the Project is not likely to adversely affect migratory corridors. Connectivity to open marshland areas is severed by four lanes and the median of SR 12. There are no wildlife nursery sites on the property. The Project will not affect wildlife movement or nursery sites of any native wildlife species. There is no impact.

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?	☐	☐	☐	☒

No impact.

The City of Suisun City 2035 General Plan Open Space, Conservation, and Recreation Element includes goals, policies, and programs encouraging the protection of biological resources. The primary open space,

conservation, and recreation policies are related to Objective OSC-1: "Increase the number of new developments that preserve and integrate drainages and other wildlife movement into site plans." The proposed development does not conflict with these objectives and their respective policies OSC-1.1 through OSC-1.10 of the Suisun City 2035 General Plan, because there are no drainages or wildlife movement corridors on the Project Site.

The City of Suisun City 2035 General Plan also provides Objective OSC-2: "New development in the Planning Area supports the conservation objectives of the Solano HCP", including the following policies:

Policy OSC-2.1. The City will coordinate environmental review and mitigation requirements with the Solano HCP.

Policy OSC-2.2. The City will support the use of mitigation fees from the Solano HCP to fund preservation and restoration elements of the City's conservation and open space strategy.

Policy OSC-2.3. The City will require that new developments comply with relevant conservation measures detailed within the Conservation Strategy chapter of the Solano HCP, as applicable.

Development on the Project Site would not conflict with any of the above policies as long as the Project adheres to the Solano HCP Conservation, Avoidance and Mitigation measures. Mitigation measures **BIO-1** and **BIO-2** are designed to be in concert with mitigation measures provided in the Administrative Draft Solano HCP, which is currently the only Solano HCP document available to the public at this time. The Solano HCP has not yet been adopted. Adoption is anticipated to occur sometime in the fall of 2022.

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?	☐	☐	☒	☐

Less than significant impact.

There are no conflicts with any adopted HCP, natural community conservation plan, or other approved local, regional, or State conservation plans. The Project Site is within an area identified for development within the City's urban growth boundary in the Solano HCP's Covered Activity Zone 1. The primary focus of the Solano HCP Swainson's Hawk Conservation Strategy involves establishing and maximizing foraging potential and nesting habitat in agricultural areas and natural habitat. The HCP has established site design avoidance measures that require protection of traditional nest sites in urban areas. Currently, the Site has no active or known nest site within 3 miles. Similarly, the focus of the Burrowing Owl Conservation Strategy involves establishing and maximizing foraging potential and protecting nesting habitat in agricultural and natural habitat areas outside of city growth areas, rather than trying to protect small,

isolated habitat areas in urban environments. Therefore, no special site design considerations are required for the burrowing owl. However, under the Solano HCP, loss of foraging habitat for Swainson's hawk and burrowing owl must be mitigated, by establishing protected foraging habitat at a ratio of 1:1 (Impact to Mitigation). Although the Solano HCP, of which the City of Suisun is a Plan Participant, has not yet been adopted and therefore not a current requirement for the Proposed Project, mitigation measures **BIO-1** and **BIO-2** is imposed in order to reduce impacts to potential foraging habitats of MTBA-listed species on the Project Site.

4.4.5 Mitigation Measures

BIO-1 **Permanent Loss or Conversion of Foraging Habitat – Burrowing Owl.** Mitigation for the permanent disturbance, destruction, or conversion of 5.2-acres of burrowing owl habitat for urban development or other permanent facilities shall be provided at a 1:1 ratio. This 1:1 compensation ratio shall be used in the lands identified in the Solano HCP used to satisfy mitigation measures for other Natural Communities and/or Covered Species (i.e., Valley Floor Grassland and Vernal Pool Natural Community [excluding the wetland restoration/construction component], Coastal Marsh Natural Community, Swainson's hawk, California red-legged frog, and callippe silverspot butterfly) can be used to satisfy burrowing owl conservation if the reserve area meets the basic burrowing owl reserve management standards as identified in the Solano HCP (Sections 7.3 and 10.5.3) and criteria specified in Objective BO 1.2 (Section 5.10.1).

If the Solano HCP has not been adopted or the mitigation lands identified above are not available prior to Project development, then the 1:1 compensation ratio shall be implemented at a CDFW approved mitigation site.

BIO-2 **Permanent Loss or Conversion of Foraging Habitat – Swainson's Hawk.** Long-term impacts to Swainson's hawk foraging habitat at the project site shall be mitigated through the preservation and management of foraging habitat at a ratio of 1:1 and subject to species management requirements specified in the Solano HCP Sections 7.3 and 10.5.3. Mitigation shall be provided in the Irrigated Agriculture or Valley Floor Grassland Potential Reserve Areas (Solano HCP Figure 4-27). Preservation of valley floor grassland habitat may be satisfied through Mitigation Measure VPG 2 of the Solano HCP if the minimum 1:1 ratio for foraging habitat is achieved.

If the Solano HCP has not been adopted or the mitigation lands identified above are not available prior to Project development, then the 1:1 compensation ratio shall be implemented at a CDFW approved mitigation site.

Timing/Implementation: *Prior to the initiation of construction activities*

Enforcement/Monitoring: *City of Suisun City Development Services Department and Project construction lead.*

4.5 Cultural Resources

ECORP Consulting, Inc. was retained by Solano Affordable Housing Foundation to conduct a cultural resources inventory of the Suisun City Marine Village Project Site located southeast of the intersection of Marina Boulevard and Buena Vista Avenue in Suisun City, Solano County, California. A survey of the property was required to identify potentially eligible cultural resources (archaeological sites and historic buildings, structures, and objects) that could be affected by the Project. On June 7, 2021, ECORP subjected the 5.2-acre direct Area of Potential Effects (APE) to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* using north-south transects spaced 15 meters apart (see Figure 4.5-1 of the Cultural Report). At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. The Suisun City Marina Village Cultural Inventory Report provides information to support the following sections (ECORP 2021).

4.5.1 Cultural Resources Inventory Survey

ECORP requested a records search for the property at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at California State University–Sonoma on May 19, 2021. The purpose of the records search was to determine the extent of previous surveys in and within a 0.5-mile radius of the direct and indirect APE, and whether previously documented pre-contact (prehistoric) or historic-period archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within this area. The records search was completed by NWIC staff and returned to ECORP on June 2, 2021.

In addition to the official records and maps for archaeological sites and surveys in Solano County, the following historic references were also reviewed: Historic Property Data File for Solano County; The National Register Information System (National Park Service 2020); Office of Historic Preservation, California Historical Landmarks (Office of Historic Preservation [OHP] 2020); California Points of Historical Interest (OHP 1992); Directory of Properties in the Historical Resources Inventory (OHP 1999); Caltrans Local Bridge Survey; Caltrans State Bridge Survey; and Historic Spots in California.

Other references examined include a RealQuest Property Search and historic General Land Office (GLO) plat maps and land patent records. Historic aerial photographs from 1948, 1968, and more recent aerial photographs from 1982, 1993, 2005, 2009, 2010, 2012, 2014, and 2016 to present were also reviewed for indications of past property uses and built environment in both the direct and indirect APE.

The CHRIS search, literature review, and map review covered the 5.2-acre direct APE and 3.26-acre indirect APE. An ECORP Architectural Historian, who meets the Secretary of the Interior's Professional Qualification Standards in Architectural History, reviewed the Project description and the indirect APE to assess the Project's potential to have indirect effects on buildings or structures outside of the direct APE.

In addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) on May 20, 2021 to request a search of the Sacred Lands File for the APE. This search determines whether or not Sacred Lands have been recorded by California Native American tribes within the APE,

because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. In requesting a search of the Sacred Lands File, ECORP solicited information from the Native American community regarding tribal cultural resources, but the responsibility to formally consult with the Native American community lies exclusively with the federal and local agencies under applicable state and federal law. ECORP was not delegated authority by the lead agencies to conduct tribal consultation. However, the City of Suisun City, pursuant to AB 35 sent formal consultation request letter to those tribes which have requested consultation for projects in the City. These tribes are listed in Section 2.2.5.

4.5.2 Environmental Setting

The Project Site is located in an urban setting in western Suisun City, with vacant land to the west and residential neighborhoods to the north, east, and south. The Site is bound by Buena Vista Avenue to the north, Marina Boulevard to the west, SR 12 to the south, and a residential neighborhood to the east.

4.5.2.1 Prehistory

The earliest evidence of the pre-contact inhabitants of the region comes from a single, deeply buried site in the bank of Arcade Creek, north of Sacramento, containing grinding tools and large, stemmed projectile points. The points and grinding implements suggest an occupation date of sometime between 8,000 and 5,000 Before Present (BP). However, it was not until after about 5,500 BP, in the Late Archaic Period, when people began to move into the San Joaquin and Sacramento valleys in any significant numbers. This earliest permanent settlement of the Delta region of the Sacramento River is called the Windmiller Tradition and is known primarily from burial sites containing relatively elaborate grave goods. Based on linguistic evidence, it has been suggested that the Windmiller culture was ancestral to several historic tribes in the Central Valley, including the Penutian-speaking Nisenan. The Windmiller Tradition lasted until about 3,000 BP.

Around 3,000 BP, subsistence strategies in the Delta region became noticeably more "focal," with a clear increase in the reliance on acorns and salmon. Culturally, this has been dubbed the Cosumnes Tradition (3,700 to 1,000 BP), and appears to be an outgrowth of the Windmiller Tradition. Populations increased and villages became more numerous than before, with more milling tools and specialized equipment for hunting and fishing. Projectile points found embedded in the bones of excavated skeletons suggest that warfare was on the rise, possibly as a result of increased competition over available resources and trade.

The next, and final, discrete prehistoric culture is the Hotchkiss Tradition (1,000 to 181 BP [AD 1769]), which persisted until the arrival of European settlers in central California. Large sedentary villages along the lower Sacramento and San Joaquin rivers, and their tributaries and delta were common. The size and density of these settlements suggest a further increase in population from Cosumnes times. Trade goods were plentiful, and burials exhibit a marked stratification of society with wide differences in the amount and variety of funerary objects. Cremation of the dead appears, along with the flexed interments of the previous period. In addition, fired and unfired clay objects begin to appear.

4.5.2.2 Known Historic and Cultural Resources in the Project Site

Solano County was one of the original 27 counties, the boundaries of which were set on February 18, 1850. The county is named for a prominent Native American chief, Sem Yeto, who was baptized with the name Solano by Father José Altamira upon converting to the Catholic faith. Sonoma commandant General Mariano Guadalupe Vallejo and Chief Solano became friends despite facing one another in battle, and General Vallejo recommended naming the new county Solano to honor his friend. Twelve townships were created in early Solano County, seven of which have incorporated into cities: Fairfield, Dixon, Vacaville, Rio Vista, Benicia, Vallejo, and Suisun City. Benicia was established as the county seat in 1849, but in 1858 the county seat was moved to Fairfield.

The Project Site is part of the approximately 13,000-acre Rancho Tolenas Mexican Land Grant, given to Jose Francisco Armijo in 1840 by Mexican governor Juan Alvarado. Armijo worked with General Vallejo, an influential Californio military commander who owned Rancho Suisun to the south of Rancho Tolenas. Suisun City is named for the Suisun tribe, and residences were established there in 1850 by Curtis Wilson and Dr. John Baker. The two built a produce warehouse there, which provided slight elevation from the surrounding marsh. Captain Josiah Wing transported produce to and from the warehouse by ship. John Owen and the captain together laid out Suisun City in 1851, and in 1858 the captain built himself a home there. Suisun City was incorporated in 1868 when the railroad was built in the area.

The agricultural setting and central location of Suisun City between San Francisco and Sacramento made it an economic hub and the area enjoyed rapid growth through the 1890s, despite a fire and an earthquake that destroyed many of the prospering businesses. However, successive fire events of the next few decades proved to be steep setbacks for the Suisun City economy, and further decline resulted from the 1914 completion of the first state highway through Solano County, which bypassed Suisun City. Additional road construction connecting Suisun City to surrounding cities, including the county seat, helped an economic rebound beginning in the mid-1920s. The construction of the Fairfield-Suisun Army Air Base, today's Travis Air Force Base, in 1942 following the onset of World War II brought many additional jobs and residents to the area, which would become a bedroom community. Suisun City's status as a bedroom or commuter city expanded with the growth of the technological industry in the Bay Area over the next several decades and remains so today.

4.5.3 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 impact.

As discussed above, there are no known historic resources within the Project Site. The results of the records search indicate that all of the property was previously surveyed for cultural resources in the late

1970s as part of two separate studies; however, these studies were conducted in larger segments, at different times, and by different consultants under obsolete standards. Therefore, a pedestrian survey of the APE was conducted for the current Project under current protocols. No cultural resources were recorded within the Project Site from the past two studies.

The records search determined that one previously recorded historic-period cultural resource is located within 0.5 mile of the Project Site: P-48-549/CA-SOL-449H, Southern Pacific Railroad. No cultural resources were previously recorded within the property. However, ground disturbance associated with development of the Site has the potential to impact previously unknown, subsurface historic resources should any be present. Mitigation measure **CUL-1** is provided below to reduce potential impacts to a level that is considered less than significant.

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 impact.

As discussed above, there are no known archaeological resources within the Project Site. Treatment options under California PRC Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource). In addition, CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission and/or tribe that would be the most probable descendent must be contacted within 24 hours. At that time, Suisun City, as the lead agency, must consult with the appropriate Native Americans, if any, as timely identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

While the Project site was surveyed for archaeological resources, there remains the possibility that unknown sub-surface archaeological resources may be discovered during Project construction. Therefore, mitigation measure **CUL-1** is provided below to address the potential for the discovery of any unrecorded or previously unknown archaeological resources. With implementation of this mitigation, impacts would be less than significant.

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 impact.

As discussed above, there are no known formal or informal cemeteries within the Project Site. Regardless, there is a possibility of the unanticipated and accidental discovery of human remains during ground-disturbing Project-related activities. Therefore, mitigation measure **CUL-1** is provided below to reduce potential impacts to a level that is considered less than significant.

4.5.4 Mitigation Measures

CUL-1: **Cultural or Archaeological Resource Discovery.** All construction plans and grading plans shall include the following:

If subsurface deposits believed to be cultural or human in origin are discovered during any roadway or future construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the a 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 City and landowner. If the find is determined to be eligible for inclusion in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR), the City shall consult on a finding of eligibility and implement appropriate treatment measures. Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not eligible for the NRHP or CRHR; or 2) that the treatment measures have been completed to its satisfaction.
- 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 (Assembly Bill [AB] 2641). The archaeologist shall notify the Siskiyou County Coroner (in accordance with § 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, which 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 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 the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *The City of Suisun City Development Services Department and construction lead.*

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 Project. Such impacts include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants during the construction and operational phases. The impact analysis focuses on the three sources of energy that are relevant to the proposed Project: electricity, the equipment-fuel necessary for Project construction, and the automotive fuel and natural gas necessary for Project operations.

4.6.1.1 Electricity/Natural Gas Services

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to the Project Area. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern two-thirds of California, from Bakersfield to almost the Oregon and Nevada state lines. It provides 5.2 million households with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from greenhouse gas emission-free sources, including renewables, nuclear, and hydropower.

4.6.1.2 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, diesel fuel, or aviation fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all residential uses in Solano County from 2015 to 2019 is shown in Table 4.6-1. As indicated, the demand has increased since 2015.

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

Year	Electricity Consumption (kilowatt hours)
2019	1,078,745,041
2018	1,029,371,072
2017	1,069,989,087
2016	1,015,877,696
2015	1,012,251,946

Source: California Energy Commission (CEC) 2019

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

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

Year	Natural Gas Consumption (therms)
2019	59,099,223
2018	56,353,688
2017	57,943,450
2016	53,458,024
2015	51,418,125

Source: CEC 2019

Automotive fuel consumption in Solano County from 2016 to 2020 is shown in Table 4.6-3. As shown, automotive fuel consumption has decreased since 2016.

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

Year	Total Fuel Consumption (gallons)
2020	200,969,970
2019	226,014,848
2018	216,109,572
2017	216,521,337
2016	213,620,531

Source: CARB 2021

4.6.2 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 four 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 residential land uses in Solano County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Solano County.

The analysis of electricity and natural gas usage is based on CalEEMod modeling conducted by ECORP Consulting (see Attachment 4.6), 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 Solano 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. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Electricity Consumption[1]	651,389 kWh	0.063 percent
Natural Gas Consumption[1]	134,107 therms	0.209 percent
Automotive Fuel Consumption		
Project Construction 2021[2]	16,453 gallons	0.008 percent
Project Construction 2022[2]	54,581 gallons	0.027 percent
Project Construction 2023[2]	24,335 gallons	0.012 percent
Project Operations[3]	116,753 gallons	0.058 percent

Source: [1]ECORP Consulting (see Attachment 4.6); [2]Climate Registry 2016; [3]EMFAC2021 (CARB 2017).
Notes: The Project increases in electricity and natural gas consumption are compared with all residential uses in Solano County 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.

As shown in Table 4.6-4, the increase in electricity usage as a result of the Project would constitute 651,389 kWh, or a 0.063 percent increase in the typical annual electricity consumption attributable to all residential uses in Solano County. However, this is potentially a conservative estimate. It is noted that solar panels are intended to be integrated with the proposed carports however design particulars are unknown at this time and were unable to be accounted for the in the modeling. As such, it is assumed that the Projects contribution to electricity consumption would be lower than that presented in Table 4.6-4. Additionally, Project increases in natural gas usage across the County would be negligible, 134,107 therms, which equates to a 0.209 percent increase in use. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

As further indicated in Table 4.6-4, the Project's fuel consumption during the construction period is estimated to be 16,453 gallons of fuel during 2021 construction, 54,581 gallons of fuel during 2022 construction and 24,335 gallons of fuel during 2023 construction. This would increase the annual gasoline fuel use in the County by 0.008 percent, 0.027 percent and 0.012 percent respectively. 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 conserve the use of their supplies to minimize costs and maximize profit. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations regarding 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.

As indicated in Table 4.6-4, the Project is estimated to consume 116,753 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.058 percent. The amount of operational automotive fuel use was estimated using CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Solano County. This analysis conservatively assumes that all 870 anticipated automobile trips projected to be generated by the Project would be new trips generated in Solano County. The Project would not result in any unusual characteristics that would result in excessive long-term operational automotive fuel consumption. Additionally, the Project's proximity to both the bus stop at the corner of Marina and Buena Vista and the Suisun Fairfield train station would assist in reducing vehicle trips resulting reduced fuel consumption. 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 buildings for the Project would be required to be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (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. Additionally, in January 2010, the State of California adopted the California Green Building Standards Code (CalGreen) that establishes mandatory green building standards for all buildings in California. The code was subsequently updated in 2013. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality.

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

4.6.3 Mitigation Measures

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

4.7 Geology and Soils

4.7.1 Environmental Setting

Suisun City and the surrounding area are predominantly flat with slopes generally not exceeding two percent. The Project Site is generally flat with little to no slope. Elevation is approximately 5-10 feet AMSL.

Suisun City and the Project Site are located on two primary geologic formations: Tehama and Neroly of the Plio-Pleistocene and Miocene eras, respectively. The Tehama formation is typically made up of 2,000 +/- feet of massive pale greenish-gray to pale buff sandy clays, usually tuffaceous in character. A massive coarse-grained tuff member occurs near the base. The Tehama formation consists of flood-plain deposits, and with the exception of the Nomlaki tuff member, contains only a very subordinate amount of volcanic debris. Occurring on the western side of the Sacramento Valley, the Tehama formation lies, with unconformity and overlap, on the Cretaceous Chico-Shasta series and overlain by the Red Bluff formation (USGS 2020a). Named after the Neroly Station on the Southern Pacific Railroad, the Neroly sandstone

formation is of the San Pablo group, and located within the Coast Range and San Francisco Bay region. Consisting of sandstones, conglomerates, and shale with a thickness of 100 to 1,250 feet, Neroly formation is the uppermost formation in the San Pablo group. The formation overlies Cierbo sandstone and unconformably underlies Lawlor tuff, Pleistocene terrace deposits, and Sonoma volcanics (USGS 2020b).

The majority of the City and Project vicinity consist of low flat marshes and sloughs made up of Holocene Alluvium. These Holocene-age (11,000 years old to present day) alluvial fan and Bay Mud deposits overlie older Plio-Pleistocene alluvium in the City, and consist of sand, silt, and gravel deposited in fan, valley fill, or basin environments. Holocene alluvium is typically found in smooth, flat valley bottoms, in medium-sized drainages, and other areas where the terrain allows a thin veneer of this alluvium to deposit, generally in shallowly sloping or flat environments (Suisun City 2015a).

On March 4, 2021 Geocon Consulting, Inc. conducted a geotechnical site investigation for the Proposed Project. The scope of the investigation included field exploration, soil borings to depths ranging from approximately 5.0 to 30.5 feet, laboratory testing, and engineering analysis. Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent geotechnical parameters. In addition, two soil samples were submitted for screening-level corrosion testing (see Attachment 4.7 for further details and design recommendations [Geocon 2021]).

4.7.1.1 Geomorphic Setting

The Project Site is located 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 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 Geologic Survey (CGS)] 2002).

4.7.1.2 Site Soils

According to the U.S. Department of Agriculture's (USDA) NRCS via the Web Soil Survey database, the Project Site is composed of two soil units: Capay silty clay loam, 0 percent slopes, Clear Lake clay, saline, drained, 0 to 1 percent slopes, and Made land, as shown in Figure 6 and Table 4.7-1. 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 poorly drained, have a high runoff potential, and have no or rare potential for flooding or frost action. The Project Site soils also have a slight erosion potential and moderate to very high linear extensibility (shrink-swell) (USDA 2021).

Table 4.7-1. Project Site Soil Characteristics

Soil (Map Unit Symbol, Map Unit Name)	Percentage of Site	Drainage	Flooding Frequency Class	Frost Action[1]
Ca, Capay silty clay loam , 0 percent slopes, MLRA 17	61.3%	Moderately well drained	None, Rare	None
ClA, Clear Lake clay, saline, drained, 0 to 2 percent slopes, MLRA 14	33.6%	Poorly drained	Rare	None
Ma, Made land	5.1%	N/A	N/A	N/A
	Runoff Potential[2]	**Linear Extensibility[3]**	**Erosion Hazard[4]**	**Plasticity Rating[5]**
121, Boga-Loemstone , 0 to 1 percent slopes	D (high)	4.5%, moderate	Slight	26.8
127, Gridley taxadjunct loam, 0 to 2 percent slope	D (high)	11.6%, very high	Slight	42.3
Ma, Made land	N/A	N/A	N/A	N/A

Source: NRCS 2021

Notes:

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.
5. Plasticity index (PI) is one of the standard Atterberg limits used to indicate the plasticity characteristics of a soil. It is defined as the numerical difference between the liquid limit and plastic limit of the soil. It is the range of water content in which a soil exhibits the characteristics of a plastic solid. The plastic limit is the water content that corresponds to an arbitrary limit between the plastic and semisolid states of a soil. The liquid limit is the water content, on a percent by weight basis, of the soil (passing #40 sieve) at which the soil changes from a plastic to a liquid state. Soils that have a high plasticity index have a wide range of moisture content in which the soil performs as a plastic material. Highly and moderately plastic clays have large PI values. Plasticity index is used in classifying soils in the Unified and American Association of State Highway and Transporting Officials classification systems. For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

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).

According to the Suisun City General Plan Draft EIR, three faults are located close enough to potentially have an effect on the City. The identified faults area as follows:

Source: USDA Natural Resources Conservation Service: Web Soil Survey

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 6. Project Area Soils
Marina Village - Housing Project

Green Valley Fault

This strike-slip fault is the eastern-most fault of the larger San Andreas system in the San Francisco Bay Area. The fault borders the eastern side of Sulphur Springs Mountains (Lienkaemper 2012). Its northern section being conjectural, with reports indicating potential transferring of some dextral slip west across contractional structures in the Howell Mountains and northward onto the Maacama fault (Bryant 2002). The Green Valley Fault is characterized by aseismic creep and has been monitored for fault activity since 1984. The most recent faulting activity was identified from the Lopes Ranch paleoseismic site, indicating multiple surface-rupturing events over the past two thousand years. The Uniform California Earthquake Rupture Forecast (UCERF) estimates event rates and mean recurrence intervals (MRIs) at paleoseismic sites. The MRI rating for the Green Valley Fault is 239 years (Field 2013). The fault is located approximately 7 miles west of the Project Site .

Cordelia Fault

This active fault is located approximately 6.5 miles west of the Project Site, transecting the town of Cordelia, California, and is an extension of the Vine Hill fault which crosses Grizzly Bay near the Carquinez Strait southwest of the Project Site. Running north to south, the Cordelia fault is believed to be a possible branch of, or a 'step over' of the larger Green Valley Fault. The fault is not recognized as having surface rupture evidence in the past 11,000 years; however, evidence suggests displacement of late Pleistocene deposits (<700,000 years old) which leads to the fault being considered "potentially active" (LSA Associates 2008). Although the fault is zoned under the Alquist-Priolo Earthquake Fault Zone Act, the proximity to the Project Site does not trigger further detailed fault investigation (Suisun City 2015a).

Vaca-Kirby Hills Fault

Mapped by Bailey in 1931 (Vaca fault), the Vaca-Kirby fault lies on the eastern-most edge of the Suisun City Sphere of Influence (SOI), transecting Travis Airforce Base. A prominent zone of seismicity is associated with the southern trend near Montezuma Hills, defining a zone including the Livermore earthquake sequence of 1980 (Bennett 1987). Research indicates that over the past few decades, numerous 3.7 or less magnitude earthquake events have occurred along the Vaca-Kirby fault (Suisun City 2015a). Due to the distance to the Project being approximately 2 miles northwest of the Kirby fault (quaternary), and approximately 5 miles from the Vaca Fault (late quaternary), there is little potential for impacts to the Project Site and no further detailed fault investigation is necessary (Suisun City 2015a).

4.7.1.4 Paleontological Resources

A paleontological records search was completed using the University of California Museum of Paleontology (UCMP) Locality Search website on August 6, 2021. The search included a review of the institution's paleontology specimen collection records for Solano County, including the Project Site and vicinity. In addition, a query of the UCMP catalog records; a review of regional geologic maps from the CGS; a review of local soils data; and a review of existing literature on paleontological resources of Solano County by ECORP. The purpose of the assessment was to determine the sensitivity of the Project Site, whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project Site, and whether or not implementation of the Project could result in significant

impacts to paleontological resources. Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

The results of the search of the UCMP indicated that 1,698 paleontological specimens were recorded from 123 identified localities and 174 unidentified localities in Solano County indicating that there is a potential for paleontological discoveries in the City. The vast majority of the fossilized remains are invertebrates, however, some plant fossilized remains are recorded for Solano County (UCMP 2021). The General Plan Draft EIR did not identify any paleontological resources with the City Planning Area; however, the EIR did indicate that there was a possibility that paleontological resources may be discovered during construction and buildout of land uses allowed under the 2035 General Plan. Many specimens have been recovered in the Tehama Formation throughout northern California including horse, deer, coyote, ground sloth, peccary, turtle, mammoth, gopher, bony fish, rodents, and elephants. According to the General Plan EIR, the closest locality to the Project Site was located in the Suisun Slough just south of the Site, yielding leg and tooth samples of an invertebrate specimen known as the Rancholabrean-age horse.

4.7.2 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?	☐	☐	☒	☐

a) Less than significant impact.

i) Less than significant impact.

The Proposed Project Site is not located within an Alquist-Priolo Earthquake Zone (CGS 2011, 2020). The Site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active or potentially active faults are known to pass directly beneath the Site. By CGS definition, an active fault is one with surface displacement within the last 11,000 years. A potentially active

fault has demonstrated evidence of surface displacement with the past 1.6 million years. Faults that have not moved in the last 1.6 million years are typically considered inactive. There would be no impact related to fault rupture.

ii) No impact.

According to CGS' Earthquake Shaking Potential for California mapping, the Proposed Project Site is located in an area with a relatively high likelihood of experiencing ground shaking (CGS 2016). Depending upon the magnitude, proximity to epicenter, and subsurface conditions (bedrock stability and the type and thickness of underlying soils), ground shaking damage could vary from slight to intensive. For example, the wet unconsolidated soils of the Suisun Marsh would have a high ground response, while surrounding areas of hard rock generally would experience lower intensities of shaking but would be subject to other earthquake-induced hazards such as landslides (Suisun City 2015c). The Suisun City 2035 General Plan identifies the following policies and programs to assist in the reduction of impacts from earthquakes:

Policy PHS-14.1 The City will implement state and local building code requirements, including those related to structural requirements and seismic safety criteria, in order to reduce risks associated with seismic events and unstable and expansive soils.

Policy PHS-14.2 The City will require the preparation of a geotechnical site investigation for new development projects, which will be required to implement recommendations to reduce the potential for ground failure due to geologic or soil conditions.

Policy PHS-14.3 The City will require new developments that could be adversely affected by geological and/or soil conditions to include project features that minimize these risks.

Program PHS-14.1 (Geotechnical Investigations) The City will require geotechnical evaluation and recommendations before development or redevelopment activities. Such evaluations will be required to focus on potential hazards related to liquefaction, erosion, subsidence, seismic activity, and other relevant geologic hazards and soil conditions for development. New development would be required to incorporate project features that avoid or minimize the identified hazards to the satisfaction of the City.

According to the Mercalli Scale, which measures the intensity of earthquakes, the City and Project Site are in a seismically-active area prone to intense earth shaking as a result of earthquakes; with historic events reaching Mercalli Scales ratings up to X (East San Francisco Bay Hayward Fault event October 21, 1868). Studies of more recent earthquakes show that the following types of structural damage from earthquake shaking can be expected to occur to some modern wood-frame homes of the type found in the City's SOI:

- Possible shifting of homes on foundations. This problem has been minimized in recent years by requirements that adequate structural connection between house frames and foundations be provided.

- Damage to masonry chimneys or facades. Damage or toppling of unreinforced brick walls or chimneys commonly occurs in strong ground shaking. Code-required reinforcement and chimney ties can help minimize damage but will not prevent it completely.
- Falling of unbraced water heaters, with possible fire hazard.
- Cosmetic damage, especially cracking of plaster, and some glass breakage. Not surprisingly, the damage ratio, expressed as a percentage of loss of value to the "average" residential area due to an earthquake, becomes higher with increasing intensity of ground shaking. Studies with estimates applicable to typical Bay Area conditions suggest that the damage ratio associated with various intensities of shaking would be approximately as shown in Table GEO-3 of the City General Plan EIR (shown here as Table 4.7-2).

Table 4.7-2. Mercalli Scale Shaking Intensity

Intensity	Damage Ratio
V	0.1%
VI	0.5%
VII	2.5%
VIII	8.3%
IX	12.1%

Source: California Division of Mines and Geology, 1965

Thus, a rough estimate of the levels of housing damage that could be expected in the City's SOI in a great earthquake, with intensity values of VIII-IX, would be on the order of 10 percent of the value of all housing (Suisun City 2015c).

According to the Site-specific geotechnical report conducted by Geocon Consultants, Inc., the USGS web-based Unified Hazard Tool was used to estimate the peak ground acceleration (PGA) and mean and modal (most probable) magnitude associated with a 2,475-year return period that corresponds to an event with 2 percent chance of exceedance in 50 years. The USGS estimated PGA is 0.73 g and the mean magnitude is 6.7 for Seismic Site Class D (Vs30 = 259 m/sec) based on a recent 2014 model within the application. While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

Construction on the Project would be required to comply with the engineering standards associated with the California Building Code (CBC). The City shall review all design elements of the Project for conformance with CBC parameters, as part of the permit review process. These standards are in place to reduce damage associated with ground-shaking as a result of potential earthquakes. Additionally, as shown above, the Proposed Project would be subject to 2035 General Plan Policies PHS 14.2 and 14.3, which requires new developments to prepare a geotechnical site investigation and incorporate any recommendations into the Project development design plans (see Attachment 4.7 for geotechnical report

recommendations). Finally, the Project development would be subject to Chapter 15.60, Seismic Hazards Identification Program, which identifies buildings that pose potentially hazardous threats to public safety in the event of earthquakes of moderate to high magnitude. Because of the required compliance with the CBC seismic mitigation standards, City code Chapter 15.60, and the 2035 General Plan policies and programs, the Proposed Project would have a less than significant impact related to strong ground shaking.

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. According to Exhibit 9-7 in the 2035 General Plan, the Project Site is located in an area identified for high risk of liquefaction (Suisun City 2015a). Additionally, as noted above, the Project Site is located on flat vacant land and not within a sloped area prone to landslides. As previously discussed, construction as Proposed by the Project would be required to comply with the CBC and General Plan Policies PHS 14.2 and 14.3, which requires new developments to prepare a geotechnical site investigation and incorporate any recommendations into the Project development design plans.

According to the geotechnical report conducted for the Proposed Project, potentially liquifiable layers were identified at each Cone Penetrometer Test location. In general, these layers are located approximately between 10 and 35 feet below existing grade. Consequences of liquefaction can include ground surface settlement, ground loss (sand boils) and lateral slope displacements (lateral spreading). For liquefaction-induced sand boils or fissures to occur, pore water pressure induced within liquefied strata must exert enough force to break through overlying, non-liquefiable layers. A capping layer of non-liquefiable soil can prevent the occurrence of sand boils and fissures.

Based on the presence of the non-liquefiable layer that mantles the Site and the depth and locations/intervals to significant liquefiable layers, the potential for ground loss due to sand boils or fissures in a seismic event is considered low. Additionally, based on the depth to potentially liquefiable layers and the generally flat topography in the Site vicinity, the potential for lateral spreading is considered low. The likely consequence of potential liquefaction at the Site is settlement. The geotechnical

analysis indicates that total ground surface settlements approximately 2 inch or less may result from liquefaction and/or cyclic softening after a design-level seismic event. Output from the liquefaction analysis and associated building design recommendations are presented in Attachment 4.7.

Finally, the Project development would be subject to Chapter 15.60, Seismic Hazards Identification Program, which identifies buildings that pose potentially hazardous threats to public safety in the event of earthquakes of moderate to high magnitude. Because of the required compliance with the CBC seismic mitigation standards, City Code Chapter 15.60, recommendations in the geotechnical report, and the General Plan policies and programs, the Proposed Project would have a less than significant impact related to liquification.

iv) **Less than significant impact.**

The Project Site 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 less than significant.

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 4.7-1, the Project Site's soils have a slight erosion potential. The Proposed Project includes the construction of new residential structures, with construction involving grading, excavation, and soil hauling, which would disturb soils and potentially expose them to wind and water erosion. General Plan policies and programs designed to reduce erosion are as follows:

Policy PHS-5.1 New development shall incorporate site design, source control, and treatment measures to keep pollutants out of stormwater during construction and operational phases, consistent with City and Fairfield-Suisun Urban Runoff Management Program standards.

Policy PHS-5.2 New developments shall incorporate low impact development (LID) strategies, such as rain gardens, filter strips, swales, and other natural drainage strategies, to the greatest extent feasible, in order to reduce stormwater runoff levels, improve infiltration to replenish groundwater sources, reduce localized flooding, and reduce pollutants close to their source.

Program PHS-5.1 (Stormwater Development Requirements) The City will review new developments for applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit. New developments must use best management practices (BMPs) during construction to mitigate impacts from construction work and during post

construction to mitigate post-construction impacts to water quality. Long-term water quality impacts must be reduced using site design and source control measures to help keep pollutants out of stormwater. The City will encourage proactive measures that are a part of site planning and design that would reduce stormwater pollution as a priority over mitigation measures applied to projects after they are designed. Some of the many ways to reduce water quality impacts through site design include reducing impervious surfaces; drain rooftop downspouts to lawns or other landscaping; and use landscaping as a storm drainage and treatment feature for paved surfaces.

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 NPDES State General Permit (Order No. 2009-0009-DWQ) provisions. Any development of this size in the Suisun City Planning Area, including the Project Site, would be required to prepare and comply with an approved 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 BMPs including any additional site-specific and seasonal conditions. Erosion control BMPs 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 Proposed Project would be required to use BMPs to control runoff from all new development and thus limit erosion.

Since erosion impacts are often dependent on the type of development, intensity of development, and amount of lot coverage of a particular project site, impacts can vary. However, compliance with NPDES and SWPPP requirements, as well as implementation of the General Plan Policies PHS 5.1, 5.2 and Program 5.1, would ensure that soil erosion and related impacts would be less than significant.

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 Site 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 (USDA 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 Site is identified as being susceptible to liquefaction. However, as previously discussed, construction as proposed by the Project would be required to comply with the CBC and General Plan Policies PHS 14.2 and 14.3, which requires new developments to prepare a geotechnical site investigation and incorporate any recommendations into the Project development design plans (see Attachment 4.7 for the site-specific geotechnical report). Finally, the Project development would be subject to Chapter 15.60, Seismic Hazards Identification Program, which identifies buildings that pose potentially hazardous threats to public safety in the event of earthquakes of moderate to high magnitude. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.[2] This can occur as a result of high-volume water, oil or gas extraction operations. No oil, gas, or high-volume water extraction wells are known to be present in the Project vicinity. According to the USGS Areas of Land Subsidence in California webpage, the City of Suisun, including the Project Site, is not located in an area of land subsidence (USGS 2021a). The closest area of land subsidence is located approximately 15 miles east of the Project Site and is an area prone to peat loss. 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 will 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 Site soil must be determined for consideration in the foundation design.

During the geotechnical investigation conducted on March 4th of 2021 by Geocon Consultants, Inc., groundwater was encountered at depths ranging from 17-19 feet below surface, within the three soil borings that were explored to a maximum depth of 30.5 feet bgs. Although groundwater was not located in depths anticipated to be reached during construction activities, the Proposed Project is subject to General Plan Policies PHS 14.2 and 14.3, which requires new developments to prepare a geotechnical site investigation and incorporate any recommendations into the Project development design plans.

[2] The processes by which loose sediment is hardened to rock are collectively called lithification.

If dewatering is used, the applicant would be required to comply with the waste discharge requirements of the San Francisco Bay RWQCB. Discharge of non-stormwater from an excavation that contains sediments or other pollutants to sanitary sewer, stormwater systems, creek beds (even if dry), or receiving waters without treatment is prohibited. Discharge of uncontaminated groundwater from dewatering is a conditionally exempted discharge by the San Francisco RWQCB. As such, the Project contractor would be required to prepare a dewatering plan in accordance with the waste discharge requirements of the San Francisco Bay RWQCB. The dewatering plan would detail the location of dewatering activities, equipment, and discharge points in accordance with the requirements of the RWQCB. The dewatering plan would be submitted to the City for review and approval prior to the start of construction. Therefore, compliance with the City of Suisun General Plan Policies and Programs, discharge requirements of the San Francisco Bay RWQCB, Chapter 15.60 of the City Municipal Code, and CBC seismology standards, development of the Proposed Project would result in a less than significant impact to on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse.

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 a linear extensibility value of 4.6 and 11.6 percent. Soils with linear extensibility at this range correlate to having a moderate and very high expansion potential, respectively. Despite the shrink-swell potential identified for Project Site soils, standard procedures used in the construction of concrete footings as required by the CBC, and adherence to the recommendations promulgated in the Site-specific geotechnical report (Attachment 4.7), will reduce this potential impact.

Additionally, General Plan Policy PHS-14.2 mandate that a soils report, prepared by a licensed soils engineer, be required for all new 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. Such geotechnical special provisions would address any site-specific

expansive soil hazards for development under the Proposed Project (see Attachment 4.7 for detailed recommendations to reduce impacts associated with any shrink/swelling conditions on the Site). As such, the potential for the Proposed Project to be affected by expansive soils is less than significant with the implementation of recommendations outlined in the Project's Geotechnical Report (Geocon, 2021).

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.

The Proposed Project would connect to the City wastewater sewer system and would not require the construction of septic tanks or alternative wastewater disposal systems. Additionally, per General Plan Policy CFS-7.2, the Project is required to contribute on a fair-share basis toward implementation of system improvements, as determined by the City Engineer. Thus, there is no impact associated with Site soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

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 impact.

A search of the UCMP failed to indicate the presence of paleontological resources in the Project Site (UCMP 2021). The following 2035 General Plan policies and programs pertain to impacts on prehistoric resources:

Policy OSC-5.1 The City will use geologic mapping and cultural and paleontological resource databases to determine the likely presence of resources and the appropriate level of cultural and paleontological resources analysis and mitigation required for new developments.

Policy OSC-5.2 New developments shall be designed to avoid adverse impacts to any known archaeological and paleontological resources, wherever feasible.

Policy OSC-5.3 New developments in areas underlain by Pleistocene Alluvium and the Tehama Formation shall include training, notification, and recovery procedures for fossils

Program OSC-5.1 (Paleontological Resource Training and Recovery) Prior to the start of earthmoving activities that would disturb more than 1 acre of land within the Late Pleistocene alluvium or the Tehama Formation, the project applicant shall retain a paleontologist to provide a brief training session for all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the find and notify the Suisun City Department of Community Development. The project applicant(s) shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan. The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.

General Plan Program OSC-5.1 requires developments with earthmoving activities disturbing more than one acre to retain a paleontologist to train construction personal on the possibility of encountering fossils, appearance and types of fossils, and what to do when fossils are encountered. Although paleontological resources sites were not identified on the Project Site, there is a possibility that unanticipated paleontological resources will be encountered during Project construction and related ground-disturbing activities. As such mitigation is required. Therefore, incorporation of Mitigation Measure **GEO-1** would reduce impacts to unknown paleontological resources to a less than significant level.

4.7.3 Mitigation Measures

GEO-1: **Paleontological or Sensitive Geologic Resource Discovery.** If paleontological or other geologically sensitive resources are identified during any phase of development including roadway development and future developments on the Project site, the applicant shall cease operation at the site of the discovery and immediately notify the City. The future Project proponent shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the qualified paleontologist, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the development site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *The City of Suisun City Development Services Department and construction lead.*

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

Greenhouse Gas (GHG) emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents 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.

The BAAQMD project-level operational threshold of significance for GHG emissions is the project-generation of 1,100 metric tons of CO_2e per year during operations (bright-line numeric threshold); or the Project-generation of 4.6 metric tons of CO_2e per service population (employees + residents) per year during operations (efficiency-based threshold); or compliance with a Qualified GHG Reduction Strategy.

4.8.1.1 Regulatory Framework

Bay Area Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, BAAQMD CEQA Guidelines include guidance on assessing GHGs and climate change impacts as required under CEQA Section 15183.5(b) and establish thresholds of significance for impacts related to GHG emissions. These guidelines are based on substantial evidence to "attribute an appropriate share of greenhouse gas emission reductions necessary to reach AB 32 goals to new land use development projects in the BAAQMD's jurisdiction that are evaluated pursuant to CEQA" (BAAQMD 2017a).

The BAAQMD project-level operational threshold of significance for GHG emissions is the project generation of 1,100 metric tons of CO_2e per year during operations (bright-line numeric threshold); or the project generation of 4.6 metric tons of CO_2e per service population (employees + residents) per year during operations (efficiency-based threshold); or compliance with a Qualified GHG Reduction Strategy.

BAAQMD 2017 Climate Action Plan

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction

targets. The 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions of methane and other "super GHGs" that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA-Level 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 or
2. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

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 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to Senate Bill (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 BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions; however, the air district recommends the quantification and disclosure of construction-generated GHG emissions. The BAAQMD project-level operational threshold of significance for GHG emissions is the project generation of 1,100 metric tons of CO_2e per year during operations (bright-line numeric threshold); or the project generation of 4.6 metric tons of CO_2e per service population (employees + residents) per year during operations (efficiency-based threshold); or compliance with a Qualified GHG Reduction Strategy. However, it is noted that this threshold is based, in part, on the GHG-reducing target established for the year 2020 under AB 32, but the Project would be implemented after the year 2020. Statewide goals for GHG reductions in the years beyond 2020 were codified into state law with the passage of SB 32, which as described previously mandates that California achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. This equates to 40 percent below the statewide GHG reduction target for the year 2020.

Therefore, Project GHG emissions are quantified and compared to the thresholds issued by the CAPCOA, which is an association of the air pollution control officers from all 35 local air quality agencies throughout California, including the BAAQMD. CAPCOA recommends a significance threshold of 900 metric tons annually. This threshold is based on a capture rate of 90 percent of land use development projects, which in turn translates into a 90 percent capture rate of all GHG emissions. The 900 metric ton threshold, the lowest promulgated in any region in the state, is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future (year 2050) statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions.

In Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified

the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "subjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

As previously described, the 900 metric tons of CO_2e per year threshold represents a 90 percent capture rate (i.e., this threshold captures projects that represent approximately 90 percent of GHG emissions from new sources). The 900 metric tons of CO_2e per year value is typically used in defining small projects that are considered less than significant because it represents less than one percent of future 2050 statewide GHG emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. Land use projects above the 900 metric tons of CO_2e per year level would fall within the percentage of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources (Crockett 2011). As noted in the academic study, the fact that small projects below a numeric bright line threshold are not subject to CEQA-based mitigation, does not mean such small projects do not help the state achieve its climate change goals because even small projects participate in or comply with non-CEQA-based GHG reduction programs, such constructing development in accordance with statewide GHG-reducing energy efficiency building standards, called Cal Green or Title 24 energy-efficiency building standards (Crockett 2011), which among many goals seek to reduce GHG emissions from construction projects.

4.8.2 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 impact.

4.8.2.1 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., backhoes, pavers, forklifts). Table 4.8-1 illustrates the specific construction generated GHG emissions that would result from construction of the Project.

Table 4.8-1. Construction Related Greenhouse Gas Emissions

Description	CO_2e Emissions (Metric Tons/Year)
Construction Year 1	167
Construction Year 2	555
Construction Year 3	247
Project Construction Maximum	**555**
CAPCOA Threshold	900
Exceed Threshold?	**No**

Sources: CalEEMod 2020.0.4.0

As shown in Table 4.8-1, Project construction would result in the generation of a maximum of approximately 555 metric tons of CO_2e over the course of construction. Annual emissions would be generated at levels below the CAPCOA significance threshold. Once construction is complete, the generation of these GHG emissions would cease.

Furthermore, GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and

increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, the California Energy Commission recently released the 2019 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code). The 2019 updates to the Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions, and alterations to existing buildings. For instance, effective January 1, 2017, owners/builders of construction projects have been required to divert (recycle) 65 percent of construction waste materials generated during the project construction phase. This requirement greatly reduces the generation of GHG emissions by reducing decomposition at landfills, which is a source of CH_4, and reducing demand for natural resources.

4.8.2.2 Operation-Generated Greenhouse Gas Emissions

Long-term operational GHG emissions attributable to the Project are identified in Table 4.8-2.

Table 4.8-2. Operational-Related Greenhouse Gas Emissions

Description	CO_2e Emissions (Metric Tons/Year)
Area Source Emissions	8.4
Energy Emissions	132.9
Mobile Source Emissions	641.8
Waste Emissions	37.0
Water Emissions	21.6
Project Operations Total	**841.7**
CAPCOA Threshold	900
Exceed Threshold?	**No**

Sources: CalEEMod 2020.0.4.0
Notes: Emission projections are predominantly based on CalEEMod model Defaults for Solano County.
On road source emissions data used in CalEEMod is based on trip generation data from GHD (2021)

As shown in Table 4.8-2 Project operations would result in the generation of 842 metric tons of CO_2e per year and would not exceed CAPCOA's significance threshold of 900 metric tons annually.

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.

Suisun City does not currently have an adopted plan for the purpose of reducing GHG emissions. However, as previously described the State of California promulgates several mandates and goals to reduce statewide GHG emissions, including the goal to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 and 80 percent below 1990 levels by the year 2050 (SB 32). The Proposed Project is subject to compliance with SB 32. As discussed previously, the Proposed Project generated GHG emissions would not surpass GHG significance thresholds, which were prepared with the purpose of complying with these requirements. The 900 metric tons of CO_2e per year CAPCOA significance threshold is used in defining small projects that are considered less than significant because it represents less than one percent of future 2050 statewide GHG emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. Additionally, the Project's proximity to both the bus stop at the corner of Marina and Buena Vista and the Suisun Fairfield train station would assist in reducing vehicle trips resulting reduced GHG emissions from vehicles. As such, the impact is less than significant.

4.8.3 Mitigation Measures

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

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 Solano County is managed by the Environmental Health division of the Solano County Department of Resource Management. Environmental Health 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 Health 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 websites. A search of the DTSC (2021) and the SWRCB (2021) identified no open cases of hazardous waste violations on the Project Site. A search of the DTSC list and the SWRCB list identified one open case of hazardous waste violations within 0.5 mile of the Project Site: Woody's Auto Repair Shop, located at 1101 SR 12 in Suisun City, approximately 822 feet from the center of the Project Site. This site is classified as Open – Inactive as of April 23, 2009. Potential contaminants of concern include lead and total petroleum hydrocarbons (TPH). However, as of February 18, 1994, 104.38 tons of lead- and TPH-contaminated soil was excavated, sampled for characterization, and transported to a recycling facility for disposal. Soil samples showed groundwater analysis for TPH to be below detectable levels, lead samples were consistent with background levels, and all were less than the primary maximum contaminant level (MCL [CEC 1994]).

In July of 2021, RMD Environmental Solutions conducted a Phase 2 Environmental Site Assessment (ESA) Report of the Proposed Project Site (RMD 2021). The assessment further investigated the two recognized environmental conditions (RECs) revealed in the Phase 1 ESA within the Project Site:

- The Presence of an Upgradient Source – An active retail gasoline station and convenience store are located adjacent to the Subject Property to the south. The service station has occupied the adjacent site to the northwest since at least the early-1990s. In 2003, a case was opened by the Solano County Department of Resource Management during the upgrade of a product piping and dispensers. During site investigation activities in 2008, soil and groundwater samples were collected at the Subject Property. Gasoline range organics was detected in groundwater and methyl tert-butyl ether (MTBE) was detected in soil and groundwater at the Subject Property.

- The Presence of an Historical Air Park – From at least 1940 to the late 1960s, a runway associated with the Fairfield Suisun Air Park was located on the central portion of the Subject Property.

Through further investigation and observations, the Phase 2 Environmental Site Assessment Report revealed that contamination at the Site is not present at concentrations that would warrant additional investigation or remediation, and that the Site is acceptable for the Proposed Project (RMD 2021).

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.

The Suisun City 2035 General Plan includes the following objectives and policies designed to reduce the potential for hazardous materials release:

Objective PHS-10 Avoid and minimize health risk associated with hazardous materials.

Policy PHS-10.1 The City will assess risks associated with public investments and other City-initiated actions, and new private developments shall assess and mitigate hazardous materials risks and ensure safe handling, storage, and movement in compliance with local, state, and federal safety standards.

Policy PHS-10.2 The City will protect property and life from disaster by implementing the Local Hazard Mitigation Plan.

Policy PHS-10.4 The City will prohibit the transportation of hazardous materials through residential areas in quantities greater than those used in routine household maintenance.

Policy PHS-10.5 The City will require that large quantities of hazardous materials be securely contained in a manner that minimizes risk until they can be transported off-site and neutralized to a nonhazardous state and appropriately disposed.

Policy PHS-10.8 The City will require that dedicated pipeline rights-of-way be permanently protected from construction encroachment, particularly in areas where high-pressure pipelines adjoin developable properties.

Program PHS-10.3 (Hazardous Building Materials Analysis) For projects involving demolition that could disturb asbestos or lead-based paint, the City will require a hazardous building analysis. Prior to the issuance of building or demolition permits, the City will require project

applicant(s) to hire a Certified Asbestos Consultant (CAC) to investigate whether any of the existing structures or infrastructure contain lead or asbestos-containing materials (ACMs) that could become friable or mobile during demolition, renovation, or other construction-related activities. If ACMs or lead-containing materials are found, the project applicant(s) shall ensure that such materials are properly removed by an accredited contractor in accordance with EPA and the California Occupational Safety and Health Administration (Cal- OSHA) standards and BAAQMD asbestos rules. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal-OSHA standards related to exposure of workers to asbestos and lead. The lead-containing materials and ACMs shall be handled properly and transported to an appropriate disposal facility.

In addition to the above City policies and programs, the County of Solano Department of Resource Management is the Certified Unified Program Agency (CUPA) for all cities and unincorporated areas within the County. The CUPA oversees the following policies and programs that pertain to the Proposed Project:

HS.P-26: Minimize the risks associated with transporting, storing, and using hazardous materials through methods that include careful land use planning and coordination with appropriate federal, state, or County agencies.

HS.P-27: Work to reduce the health risks associated with naturally occurring hazardous materials such as radon, asbestos, or mercury.

HS.P-28: Encourage the use of programs and products by businesses that will result in a reduction of hazardous waste and materials.

HS.P-29: Promote hazardous waste management strategies in this order of priority: source reduction, recycling and reuse, on-site treatment, off-site treatment, and residuals disposal.

HS.P-30: Locate facilities for transfer, treatment, storage and disposal of hazardous wastes using the siting criteria described in the Hazardous Waste Management Plan. The facilities shall be developed and operated to ensure the protection of the environment and compatibility with surrounding land uses.

The Project proposes the construction of a 160-unit affordable multi-family residential apartment complex and associated features; with the potential for construction-related hazards that could be created during the course of construction in the Project Site. The Site does not contain any existing structures for demolition, and therefore would not pose a hazard regarding asbestos- and/or lead-containing materials that would trigger a Hazardous Building Materials Analysis. However, in the case that underground infrastructure containing hazardous materials is found during excavation activities, a Hazardous Building Materials Analysis would be required, and further actions listed in Program PHS-10.3 above would be implemented accordingly. Construction may include the use of hazardous materials, given that

construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

Although there is a slight potential for a hazardous waste incident associated with the ARCO AM/PM gas station directly abutting the Project Site's southwestern boundary, the gas station itself is required to comply with all local, state, and federal regulations concerning the transport, use, storage, and disposal of any hazardous waste materials.

Generally, residential uses are not typically associated with routine transport, use, or disposal of hazardous materials and do not present a reasonably foreseeable release of hazardous materials. While some hazardous materials may be used for residential purposes such as household cleaners and lawn care equipment and chemicals, the amount of these materials are small and the potential for hazardous releases is minute. The Household Hazardous Waste Element of the County's Integrated Waste Management Plan, of which the City of Solano is a participating member, addresses the safe collection, recycling, treatment and disposal of hazardous wastes generated by households in the County, including Suisun City. In addition, compliance with 2035 General Plan Policies HSP-29 and HSP-30 would assist in reducing the potential for hazardous materials releases from residential uses and provides guidance on the BMPs in storing, treating, and disposing of hazardous materials. Regulatory requirements for the transport of hazardous wastes in California are specified in Title 22 of the CCR, Division 4.5, Chapters 13 and 29. In accordance with these regulations, transport of hazardous materials must comply with the California Vehicle Code, California Highway Patrol regulations (contained in Title 13 of the CCR); the California State Fire Marshal regulations (contained in Title 19 of the CCR); U.S. Department of Transportation regulations (Title 49 of the Code of Federal Regulations); and USEPA regulations (contained in Title 40 of the Code of Federal Regulations). The use of hazardous materials is regulated by the Department of Toxic Substances Control (Title 22, Division 4.5 of the CCR). Therefore, potential residential impacts for creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials from residential uses would be 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.

As discussed in Issue a), the Project proposes the construction of a 160-unit affordable housing development, with 1 additional unit proposed for management, and accompanying facilities. Residential uses are not typically associated with routine transport, use, or disposal of hazardous materials and do not present a reasonably foreseeable release of hazardous materials. However, in the case of reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment, the County's Integrated Waste Management Plan addresses the appropriate measures to be taken to avoid impacts to the environment. 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 2035 General Plan policies discussed previously. 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.

The Project Site is located 0.47 mile north of Crystal Middle School in the City of Suisun. The Proposed Project does not involve the development of a use that would emit hazardous materials, substances, or waste during operations. The use of heavy equipment and activities involving hazardous materials would be limited to the construction phase, would be confined to construction areas and within existing roadways, and would cease upon completion of the Project. The use, transport, storage, and disposal of hazardous materials during the Project's construction phase would be regulated by health and safety requirements under federal, state, and local laws; including handling, storage, and disposal of the materials, as well as emergency spill response. As previously discussed in Issue a) above, the County's Integrated Waste Management Plan addresses the appropriate measures to be taken to avoid impacts to the environment. The construction and operation of the Proposed Project would not pose a significant threat to human health, and impacts related to the emission or handling of hazardous materials within 0.25 mile of an existing or proposed school 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 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?	☐	☐	☐	☒

No impact.

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 not located on, or directly adjacent to, a hazardous materials site. However, a search of the DTSC list and the SWRCB list identified one open case of hazardous waste violations within 0.5 mile of the Project Site: Woody's Auto Repair Shop, located at 1101 SR 12 in Suisun City, approximately 822 feet from the center of the Project Site. This site is classified as Open – Inactive as of April 23, 2009. Potential contaminants of concern include lead and TPH. Nevertheless, as of February 18, 1994, 104.38 tons of lead- and TPH-contaminated soil was excavated, sampled for characterization, and transported to a recycling facility for disposal. Soil samples showed groundwater analysis for TPH to be below detectable levels, lead samples were consistent with background levels, and all were less than the primary MCL (CEC 1994). Given there are no existing hazardous waste sites within or directly adjacent to the Project Site, and that the closest hazardous waste site being classified as open has been mitigated to compliance, the Project will have no impact in this area.

	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 Site is not located within two miles of a public airport nor is it located in the vicinity of a private airstrip. The closest public airport is the Nut Tree Airport, a General Aviation airport located approximately 19 miles northeast of the Project Site; and the nearest private airport is the Travis Airforce Base, located approximately 7 miles to the east. Therefore, the Project Site is more than two 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.

All communities face the possibility of disasters and emergency situations, whether they are of natural or human-related causes. Citizens and first responders must be prepared to react to such an emergency. The Solano County Office of Emergency Services is charged with emergency management for the County, including Suisun City, and is responsible for maintaining situational awareness of threats that may necessitate an evacuation of citizens, and works with the City and County departments on fire suppression activities, evacuations, hazardous materials incidents, disaster exercises, planning, and utilization of resources through the Standardized Emergency Management System/Incident Command System (Suisun City 2015c). The Suisun City Fire Department and Police Department are equipped to provide a first line of emergency response in the unlikely event of a major disaster. Suisun City has prepared for the possibility of a major disaster affecting the City by preparing the Local Hazard Mitigation Plan. The Suisun City 2035 General Plan includes the following objectives, policies, and programs designed to address natural and human-caused hazards by ensuring adequate emergency response and evacuation:

Objective PHS-15 Improve emergency access between present and 2035.

Policy PHS-15.1 The City will use the Local Hazard Mitigation Plan to prepare for immediate response, adaptation, long-term recovery, and planning for future community resiliency in the event of a disaster.

Policy PHS-15.2 The City will review development and redevelopment projects, plans, and public investment decisions to ensure consistency with the Local Hazard Mitigation Plan.

Policy PHS-15.3 The City will provide public access to emergency response procedures in such locations as City Hall, Suisun City Library, and public schools and will otherwise promote awareness of emergency response and evacuation plans.

Policy PHS-15.4 The City's development and improvement standards will require a circulation system with multiple access points, adequate provision for emergency equipment access, and evacuation egress. New and redevelopment projects will be checked by the City to ensure proper emergency access is provided.

Policy PHS-15.5 The City shall designate evacuation routes in the event of a large-scale fire or other citywide emergency requiring the evacuation of a substantial portion of the City's residents.

Program PHS-15.2 Emergency Access and Evacuation Routes In the event of emergency, the following routes are designated for evacuation of the population:

- *Cordelia Road*
- *Main Street to SR 12*
- *Driftwood Drive - Marina Boulevard to SR 12*
- *SR 12*
- *Sunset Avenue*
- *Railroad Avenue*
- *Walters Road*
- *Bella Vista Drive*

These streets provide for alternate major routes east, west, and north out of the community, depending on the nature of the emergency.

The Project Site is currently vacant, located at the southeast corner of the Marina Boulevard and Buena Vista intersection, with no proposed City roadways to be constructed within the Site. According to the Solano County Emergency Operations Plan, emergency evacuation routes are major highways such as SR 80, SR 505, and SR 12. However, evacuation routes are determined by the type of event and the location (Solano County 2017). The Proposed Project would not result in the permanent modification to any of the surrounding roadways that would physically interfere with the Solano County Emergency Operations Plan. Although construction activities would be mostly confined to the Project Site, activities associated with infrastructure development, such as utility line connections and other offsite improvements, may extend to the centerlines of Marina Boulevard, Buena Vista Avenue, and SR 12; resulting in temporary or partial street closures. Access to the Project Site and the surrounding area would require an encroachment permit from the City and be maintained in accordance with a traffic control plan, which. would identify all detours and appropriate traffic controls and would ensure that adequate circulation and emergency access are provided during the construction phase. Therefore, Project construction and operation activities would not interfere with an emergency evacuation or response plan, and this impact would be less than significant.

In the event of a hazardous material emergency, several agencies are responsible for a timely response. The Solano County Hazardous Materials Response Team responds to large-scale, emergency hazardous material incidents in the County. This multi-agency hazardous materials team is currently made up of 25 to 28 members from local fire agencies including Travis Air Force Base and four members from law enforcement. (Solano County 2021a).

Additionally, an efficient circulation system is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles during an emergency. Implementation of the Project would result in an increased number of people who would require evacuation in case of an

emergency. The Project includes two access driveways and one emergency access. . Based on the information provided above, implementation of the Proposed Project would not result in the interference of an adopted emergency response plan or emergency evacuation plan. Therefore, impacts are considered 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?	☐	☐	☐	☒

No impact.

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (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 following Suisun City 2035 General Plan objectives and policies address potential risks associated with human injury or property damage from fires.

Objective PHS-12 *Manage land use change, building design, and site planning in a way that minimizes fire risk.*

Policy PHS-12.1 The City will implement state building code requirements for fire safety, as modified for historic structures and the rehabilitation of existing buildings.

Policy PHS-12.2 The City will require that new development and redevelopment projects ensure adequate water flow for fire suppression, as required by the Building Department.

Policy PHS-12.5 Suisun City will continue to be signatory to the Solano County Fire and Rescue Mutual Aid Agreement and the agreement for Local Government Fire and Emergency Assistance (California Fire Assistance Agreement).

Policy PHS-12.6 The City will require setbacks future development adjacent to Suisun Marsh to provide defensible space and reduce potential for exposure to wildfires.

The foothill and mountainous watershed areas of western Solano County and grasslands located throughout the County are subject to potential wildfires. The Benicia Hills, Potrero Hills, Cement Hills, and eastern English Hills are in areas of high fire risk. Although grasslands on the edges of Suisun City's SOI area may be prone to wildfire, grassland fires are not as potentially intensive as mountainous brush fires. Areas within the City's SOI are characterized as moderate fire risk, for the most part (Suisun City 2015a). According to the City's Local Hazard Mitigation Plan, the Project Site is not subject to the threat of

significant wildland fires. Fire Hazard Severity Zone mapping is performed by the California Department of Forestry and Fire Protection (Cal-Fire) and is based on factors such as fuels, terrain, and weather. According to the Cal-Fire Fire Hazard Severity Zone mapping, no unique or significant fire hazards exist in the Project Site, nor is the Project Site within a state or federal responsibility area. The Project would have no impact in this area.

4.9.3 Mitigation Measures

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

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 Suisun Slough Hydrologic Unit within the San Francisco Bay Hydrological Region, and within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB). The Suisun Slough Hydrologic Unit drains approximately 157 square miles into the Suisun Bay and Suisun Marsh.

According to the California Department of Water Resources (DWR), the state has been subdivided into ten hydrologic regions (DWR 2021a). The Project Site is located in the northeastern portion of the San Francisco Bay Hydrologic Region (SFHR), which includes all or portions of Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara, and San Mateo counties. The SFHR extends south from the Mayacamas Mountains, near the town of Calistoga in Napa County, to Kickham Peak in the Diablo Mountain Range in southeast Santa Clara County. The SFHR encompasses approximately 2.88 million acres (4,500 square miles) and includes significant geological features and sensitive habitat located near densely populated areas. Valleys of Santa Clara, Napa, Petaluma, Livermore, Sonoma, and Suisun-Fairfield; the peninsulas of Marin and San Francisco; the bays of San Francisco, San Pablo, and Suisun; and the mountain ranges of Santa Cruz, Diablo, Bolinas Ridge, and the Vaca Mountains of the Coast Range all make up significant geological features that shape the SFHR.

Suisun Bay is a shallow tidal estuary that lies at the confluence of the Sacramento and San Joaquin Rivers and forms the entrance to the Sacramento Delta. On its western end, Suisun Bay is drained by the Carquinez Strait, which connects to San Pablo Bay, a northern extension of San Francisco Bay. The Suisun Marsh, being the largest contiguous brackish water marsh remaining on the west coast of North America, is a critical component of the San Francisco Bay-Delta estuary ecosystem. The marsh is generally bound by the Sacramento-San Joaquin Delta to the east, Suisun Bay to the south, Interstate 680 to the west, and on the north by SR 12 (traversing adjacent to the Project Site) and Suisun City and Fairfield. Encompassing more than 10 percent of California's remaining wetlands (approximately 52,000 acres), the Suisun Marsh provides essential habitat for more than 221 species of birds, 45 animal species, 16 different reptilian and amphibian species, and more than 40 fish species. In 1987, the DWR, CDFW, U.S. Bureau of Reclamation (USBR), and the Suisun Resource Conservation District signed the Suisun Marsh Preservation Agreement,

which included the construction of water conveyance facilities monitoring programs for water quality, elevations, vegetation, and wildlife; wetlands mitigation for effects of facilities construction and water diversions; and wetland improvements through the use of management plans and cost-share programs to improve water conveyance facilities (Suisun City 2015a).

Groundwater

Suisun City overlies the Suisun–Fairfield Valley groundwater basin, one of four groundwater basins within Solano County, as defined by DWR. It is the second largest groundwater basin in Solano County and is located west of English Hills beneath the cities of Fairfield and Suisun City. Groundwater is not used for domestic or irrigation purposes in the Suisun City area and is not considered a viable source for domestic water due to tidal inflows that affect water quality. Groundwater in the area is brackish and unsuitable for use without prohibitively expensive treatment (Suisun City 2015a).

The City of Suisun and the Project Site lie above the Suisun Valley Sub-Area of the Suisun-Fairfield Valley groundwater basin within the SFHR. The Suisun Valley Sub-Area encompasses all of Suisun Valley and extends from the Napa-Solano County line to the Suisun Marsh.

The principal hydrogeologic features of this Sub-Area include the younger and older alluvial deposits from Suisun and Ledgewood Creeks and the underlying old sedimentary and volcanic rocks. The alluvium from Suisun and Ledgewood creeks was deposited during the same geologic time periods as the corresponding alluvium in the Putah Creek Fan. However, both Suisun and Ledgewood Creek are significantly smaller than Putah Creek and accordingly, the alluvial deposits within the Suisun Valley Sub-Area tend to be finer grained and less permeable than those of the Putah Creek Fan. Nearly all of the usable groundwater in the Suisun Valley Sub-Area is found in the alluvial deposits from Suisun and Ledgewood creeks. Groundwater is present to some extent in the old sedimentary and volcanic rocks that lie beneath the alluvium. However, the available supply is typically highly mineralized (Solano County 2015).

4.10.1.2 Project Site Hydrology and Onsite Drainage

The Project Site is located on level terrain situated at an average elevational range of 10 feet AMSL. The Project Site contains no wetlands or features classified as other waters, with the closest wetlands being the Suisun Marsh, located directly south of the Project Site beyond SR 12.

The average winter low temperature in the vicinity of the Project Site is 40.0 degrees Fahrenheit (˚F) in December and the average summer high temperature is 87.9˚F in July. Average annual precipitation is approximately 24.81 inches (National Oceanic and Atmospheric Administration 2021). In the Project vicinity, the rainy period of the year lasts for approximately five months, from November through March. On average, throughout the year there are 71.4 rainfall days, with the least rain falling in August, and an average total accumulation of 0.7 inches of precipitation (Weather Atlas 2021).

As mapped by the Federal Emergency Management Agency (FEMA, 2011) 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 (SFHA) and higher than the elevation of the 0.2-percent-annual-chance flood (Flood Insurance Rate Map [FIRM] 06095C0457F). The closest SFHA is

located directly south of the Project Site beyond SR 12; zoned AE and X for areas with 1% Annual Chance Flood Hazard, and areas with 0.2% Annual Chance Flood Hazard, respectively.

4.10.2 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.

The following proposed 2035 General Plan policies and actions address impacts to hydrology and water quality–related issues:

Objective PHS-5 *Maintain and improve water quality in a way that provides public and environmental health benefits.*

Policy PHS-5.1 New development shall incorporate site design, source control, and treatment measures to keep pollutants out of stormwater during construction and operational phases, consistent with City and Fairfield-Suisun Urban Runoff Management Program standards.

Policy PHS-5.2 New developments shall incorporate LID strategies, such as rain gardens, filter strips, swales, and other natural drainage strategies, to the greatest extent feasible, in order to reduce stormwater runoff levels, improve infiltration to replenish groundwater sources, reduce localized flooding, and reduce pollutants close to their source.

Policy PHS-5.3 New developments should minimize the land area covered with driveways, loading areas, and parking lots in order to reduce stormwater flows, reduce pollutants in urban runoff, recharge groundwater, and reduce flooding.

Policy PHS-5.4 New developments should use permeable surfaces for hardscape, where feasible.

Program PHS-5.1 *(Stormwater Development Requirements) The City will review new developments for applicable requirements of the NPDES permit. New developments must use BMPs during construction to mitigate impacts from construction work and during post construction to mitigate post-construction impacts to water quality. Long-term water quality impacts must be reduced using site design and source control measures to help keep pollutants out of stormwater. The City will encourage proactive measures that are a part of site planning and design that would reduce stormwater pollution as a priority over mitigation measures applied to projects after they are designed. Some of the many*

ways to reduce water quality impacts through site design include reducing impervious surfaces; drain rooftop downspouts to lawns or other landscaping; and use landscaping as a storm drainage and treatment feature for paved surfaces.

Objective CFS-7 *Facilitate Fairfield-Suisun Sewer District's Master Plan and ensure that future sewage systems are designed to meet or exceed all applicable water quality standards and are located to protect waterways, the Suisun Marsh, and other groundwater resources.*

Policy CFS-7.2 New developments will be required to contribute on a fair-share basis toward implementation of system improvements, as determined by the City Engineer.

Objective CFS-8 *Maintain adequate storm drainage and plan for phased improvements to drainage infrastructure to serve new growth and address existing deficiencies.*

Policy CFS-8.1 The City will establish and maintain standards for stormwater infrastructure that ensure sufficient capacity to serve buildout under the 2035 General Plan.

Policy CFS-8.2 New developments will be required to construct and dedicate facilities for drainage collection, conveyance, and detention and/or contribute on a fair-share basis to area- wide drainage facilities that serve additional demand generated by the subject project.

Policy CFS-8.5 The City will consider the adoption of a reduced drainage fee for developments that are designed with LID that off-set increased costs of the installation of LID features, as appropriate.

Policy CFS-8.7 The City will develop fair-share impact fees for new development to support flood protection improvements needed to meet State and federal standards, while also seeking outside funding that may be available for use in flood protection improvements.

In addition to those 2035 General Plan policies and actions listed above, in accordance with NPDES regulations, the State of California requires that any construction activity affecting one acre or more, or discharges from smaller sites that are part of a larger common plan of development or sale, obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. As described previously, the Project proposes the development of a 160-unit housing complex, with accompanying features which include open space consisting of a plaza, patio, children's play area, village walks, and green space. The General Permit requires the development and implementation of a SWPPP. The SWPPP should contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect stormwater runoff and the placement of those BMPs.

Construction Related Issues

The Project proposes a new apartment development that presents a potential to result in degradation of water quality during both the construction and operational phases. Polluted runoff from the construction site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and pesticides and fertilizers from landscaped areas. Construction related to grading and vegetation removal activities could increase soil erosion rates on the areas proposed for development. Construction activities would result in the exposure of raw soil materials to the natural elements (wind, rain, etc.). In rainy periods during the summer season, grading operations may impact the surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material within the graded areas and could potentially impact downstream water quality.

Refueling and parking of construction equipment and other vehicles on-site during construction may result in spills of oil, grease, or related pollutants that may discharge into Project vicinity drainages. Improper handling, storage, or disposal of fuels and materials, or improper cleaning of machinery close to area waterways, could cause water quality degradation. However, all construction activities would be required to comply with the 2035 General Plan policies, specifically Policy and Program PHS-5.1 which requires the use of design techniques and BMPs to reduce pollutants close to their source. Policy PHS-5.2 requires incorporating LID strategies to reduce stormwater runoff levels, improve infiltration to replenish groundwater sources, reduce localized flooding, and reduce pollutants close to their source. Examples of strategies include the use of rain gardens, filter strips, swales, and other natural drainage approaches. As discussed previously, the Project, being greater than one acre in size, is required to obtain a General Permit to minimize the potential effects of construction runoff on receiving water quality. As such, construction related water quality impacts would be less than significant.

Operational Related Issues

Runoff from urban land use typically contains oils, grease, fuel, antifreeze, and byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as nutrients from fertilizers and animal waste, sediment, pesticides, herbicides, and other pollutants. Also, sizable quantities of animal waste from pets contribute bacterial pollutants into surface and source waters.

Precipitation during the early portion of the wet season displaces these pollutants into the stormwater runoff, resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff, containing peak pollutant levels, is referred to as the “first flush” of storm events. It is estimated that during the rainy season, the first flush of heavy metals and hydrocarbons would occur during the first inches of seasonal rainfall.

The amount and type of runoff generated by future operations associated with the Proposed Project would be greater than that under existing conditions due to increases in impervious surfaces. There would likely be a corresponding increase in urban runoff pollutants and first flush roadway contaminants such as heavy metals, oil, grease, nutrients (i.e., nitrates and phosphates), pesticides, and herbicides from landscaped areas. These constituents may result in water quality impacts to on- and off-site drainage flows and to downstream area waterways.

In Suisun City, development projects must comply with the NPDES permit issued to the Fairfield-Suisun Urban Runoff Management Program (FSURMP) by the San Francisco Bay RWQCB (Water Board). All construction projects have to use construction BMPs and implement appropriate site design and source control measures to reduce pollutant discharges in stormwater. Projects that meet a certain size threshold of impervious surface coverage must meet more stringent standards. FSURMP's permit includes specific requirements for projects that meet "Group 1" and "Group 2" criteria. Group 1-type projects, as is the case for the Proposed Project, include new development and redevelopment projects that create or replace one acre or more of impervious surface. To comply with the FSURMP's requirements, the Proposed Project is required to submit a Notice of Intent (NOI) and SWPPP. Consequently, the Project proposes several bioretention areas throughout the Project Site. These stormwater drainage facilities would be designed in accordance with the requirements of the City of Suisun City, including providing stormwater drainage calculations per Section 4 of the City standard specifications, as well as with FSURMP and Title 13, Chapter 13.10, Stormwater Management and Discharge Control, of the Suisun City Municipal Code. Additionally, the City requires all trash enclosures on the Project Site to be connected to the City's wastewater collection system thereby allowing any stormwater that enters the trash enclosures to be removed from the stormwater drainage facilities. This assists in protecting water quality.

As stated previously, the 2035 General Plan contains policies and actions with requirements that address surface water quality impacts. For instance, Policy PHS-5.1 requires the use of design techniques and BMPs to reduce pollutants close to their source and Policy PHS-5.2 emphasizes the dispersal of stormwater by using rain gardens, filter strips, swales, and other natural drainage approaches. Furthermore, the state requires new development to prepare stormwater management plans (SWMP) as part of the General Permit to address stormwater discharge quality issues. Compliance with the NPDES requirements (where applicable), the Project-specific SWPPP as required by the State Water Resources Control Board, Title 13 Chapter 13.10 of the City Municipal Code, and the 2035 General Plan policies and programs described above would reduce operational water quality impacts associated with implementation of the Proposed Project to a less than significant level.

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.

Both the City and Project Site receive their water through the Suisun-Solano Water Authority. Suisun City and Solano Irrigation District (SID) formed a Joint Exercise of Powers Agreement in 1976 to provide a long-term water supply for the City. The two sources of water currently supplied by the Suisun-Solano Water Authority (SSWA) consists of the USBR Federal Solano Project and the DWR State Water Project. SSWA obtains most of its water supply from Lake Berryessa, which is owned and operated by the USBR. As stated in section 4.9.6 above, groundwater in the area stems from the Suisun-Fairfield Valley

groundwater basin, which is largely brackish, and is therefore unsuitable for use without extensive treatment, which is prohibitively expensive. The state has designated the Suisun-Fairfield Valley groundwater basin as a low-priority basin, and therefore it is not subject to the requirements of the Sustainable Groundwater Management Act (SGMA [DWR 2021b]).

The City does not use groundwater for domestic or irrigation purposes because it is not considered a viable source for domestic water due to tidal inflows that affect water quality (Suisun City 2015a). Development within the Project Site would receive water from the City's municipal water supply, provided by the SSWA. The Proposed Project would not use groundwater supplies for construction or operation.

During the geotechnical investigation conducted on March 4th of 2021 by Geocon Consultants, Inc., groundwater was encountered at depths ranging from 17-19 feet below surface, within the three soil borings that were explored to a maximum depth of 30.5 feet bgs (Geocon 2021). Groundwater was not located in depths anticipated to be reached during construction activities.

The Proposed Project would have the potential to remove a portion of the Project Site's surface area available for groundwater recharge due to the increase in impervious surfaces on the Site. Impervious surfaces on the Project Site would include buildings, parking lots, and sidewalks. The majority of the of the 5.2-acre undeveloped Site would be covered with impervious surfaces. However, the Project includes 20 areas of landscaping which are designed to retain all stormwater coming from the Site. These areas would allow for the surface water to percolate into the groundwater basin. In addition, the City's MS4 Phase II permit requires development to use LID construction including techniques for groundwater recharge. As such, development of this area would only minimally affect the groundwater recharge ability of the Project Site. Therefore, the Project would have a less than significant impact on groundwater recharge.

The Project will 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) 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?	☐	☐	☐	☒

i-iii) Less than significant impact.

No creeks, streams or rivers exist on or nearby the Project Site. As such, siltation of on- or offsite waterways would not occur.

Construction activities within the Project Site would result in soil disturbances. For those activities that disturb one-acre or more of land, a 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 will be required to file an NOI 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.

Preparation of, and compliance with a required SWPPP will reduce potential runoff, erosion, and siltation associated with construction and operation.

As such, the effects of the Proposed Project on- and offsite erosion and siltation would be less than significant.

Implementation of the Proposed Project may result in the substantial increase of the rate or amount of surface runoff as the Site is developed. 2035 General Plan policies and actions designed to address stormwater runoff are as follows:

Objective PHS-5 *Maintain and improve water quality in a way that provides public and environmental health benefits.*

Policy PHS-5.1 New development shall incorporate site design, source control, and treatment measures to keep pollutants out of stormwater during construction and operational phases, consistent with City and Fairfield-Suisun Urban Runoff Management Program standards.

Policy PHS-5.2 New developments shall incorporate LID strategies, such as rain gardens, filter strips, swales, and other natural drainage strategies, to the greatest extent feasible, in order to reduce stormwater runoff levels, improve infiltration to replenish groundwater sources, reduce localized flooding, and reduce pollutants close to their source.

Policy PHS-5.3 New developments should minimize the land area covered with driveways, loading areas, and parking lots in order to reduce stormwater flows, reduce pollutants in urban runoff, recharge groundwater, and reduce flooding.

Policy PHS-5.4 New developments should use permeable surfaces for hardscape, where feasible.

Program PHS-5.1 *(Stormwater Development Requirements) The City will review new developments for applicable requirements of the NPDES permit. New developments must use BMPs during construction to mitigate impacts from construction work and during post construction to mitigate post-construction impacts to water quality. Long-term water quality impacts must be reduced using site design and source control measures to help keep pollutants out of stormwater. The City will encourage proactive measures that are a part of site planning and design that would reduce stormwater pollution as a priority over mitigation measures applied to projects after they are designed. Some of the many ways to reduce water quality impacts through site design include reducing impervious surfaces; drain rooftop downspouts to lawns or other landscaping; and use landscaping as a storm drainage and treatment feature for paved surfaces.*

In addition to those policies listed above, Policy CFS-7.2 requires new developments to contribute on a fair share basis toward system improvements; Policy CFS-8.2 requires new developments to construct and dedicate facilities for drainage, collection, conveyance, and detention, or contribute in a manner

consistent with Policy CFS-7.2; and Program PHS-5.1 requires new developments to use BMPs during construction to mitigate impacts from construction work and during post construction to mitigate post-construction impacts to water quality. Finally, as required by the FSURMP, the Proposed Project would construct bioretention areas on the Project Site to minimize the amount of stormwater generated during Project operations. The bioretention areas would meet the requirements of the FSURMP Stormwater C.3 Guidebook and Chapter 13.10, Stormwater Management and Discharge Control, of the Suisun City Municipal Code. Thus, the Proposed Project would have a less than significant impact related to erosion or flooding on- or off-site or exceeding the capacity of an existing or planned stormwater drainage system.

iv) No impact.

FEMA flood hazard map 06095C0457F indicates that the entire Project Site is in unshaded Zone X. The Project Site is not located within a flood zone. Therefore, implementation of the Proposed Project will not have an 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 located approximately about 7.3 miles north of Grizzly Bay and about 20 miles northeast of San Pablo Bay. Tsunamis typically affect coastlines and areas up to 0.25 mile inland. Although the Project Site is located near the Suisun Marshes (beyond SR 12), the geological features of the Carquinez Strait would reduce the energy of tsunamis coming into the San Pablo and Grizzly Bays, thus having a diminishing effect on tsunamis that could be experienced by residents living within the Project Site. Additionally, seiches generally affect locations adjacent to larger water bodies such as lakes or reservoirs. The Project Site is not mapped within a tsunami inundation zone (CGS 2015), and due to its distance from Grizzly Bay and San Pablo Bay, would not be susceptible to impacts resulting from a seiche. The Project Site is also located within FEMA Flood Zone X and is not located within a 100-year or 500-year flood zone. As such, a less than significant impact would occur related to inundation by seiche, tsunami, or flood flows.

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 SGMA is a state-wide planning and information law that requires local water agencies and district to form groundwater sustainability agencies for the high and medium priority basins. The state has designated the Suisun-Fairfield Valley groundwater basin as a low-priority basin. The Proposed Project is required to comply with the policies and objectives of the San Francisco Bay RWQCB. As discussed, the Project would be required to obtain coverage under the NPDES Construction General Permit requiring the preparation of a SWPPP. The SWPPP would be implemented during construction and would incorporate BMPs that meet the requirements of the San Francisco Bay RWQC's Basin Plan to reduce potential impacts to water quality. In the case that groundwater is encountered during construction activities, the Proposed Project would prepare a dewatering plan in accordance with the waste discharge requirements of the San Francisco Bay RWQCB. The dewatering plan would detail the location of dewatering activities, equipment, and discharge point in accordance with the requirements of the RWQCB. The dewatering plan would be submitted to the City for review and approval prior to the start of construction. Therefore, the Proposed Project would not conflict with or obstruct implementation of the Basin Plan for the San Francisco Bay RWQCB. As such, the Project would have no impact on the implementation of the groundwater management plan.

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

4.10.3 Mitigation Measures

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

4.11 Land Use and Planning

4.11.1 Environmental Setting

The 5.20-acre site is within the Suisun City 2035 General Plan land use designations of Higher Density Residential and Mixed Use and is zoned RH2 and CR. Surrounding uses include single family homes to the east of the Project Site. To the north is Buena Vista Avenue, the First Christian Church and single-family homes. To the west of the Site is Marina Boulevard and vacant land, and to the south is an ARCO AM/PM gas station, the Central County Bikeway, State Route 12 (SR 12), vacant land, Suisun Slough, and a shopping center (see Figure 3).

The City's 2015-2023 Housing Element identifies the northern half of the Project Site (APNs 0032-411-070, -080, -090, -100, and -110) as being designated as a high-density housing site. These particular Assessor's parcels are defined as "Site 2" in the Housing Element. The Housing Element describes Site 2 as follows:

> "Site 2 is vacant and ready for development. All of the parcels share a single owner and the site has been studied as a potential high-density housing site. The site will be redesignated to High Density Residential (R-H) with a minimum of 20 units per acres and a maximum of 45 units per acre. The City will amend the Zoning Ordinance to allow a minimum of 20 units per acres and a maximum of 45 units per acres in the R-H zone consistent with the proposed 2035 General Plan update. Refer to Table 33 for details on each of the sites."

Per the 2035 General Plan, all parcels within the Project Site are designated as Mixed Use, with a portion of the Site zoned RH2 and the other zoned CR. The CR zoning designation does not allow for a higher-density residential use. However, pursuant to state law and the General Plan, the Commercial Retail-zoned portion of the Project Site can be developed as proposed by the Project without requiring a rezoning. The state's "Housing Accountability Act" preempts local ordinances and regulations and provides that a rezone is not required for a "housing development project" when the housing development project is consistent with the general plan, but the zoning is not consistent with the general plan. (Govt. Code § 65589.5). The 2035 General Plan's Mixed-Use designation provides for the proposed higher-density residential use (Solano County 2021b).

4.11.2 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.

Due to the infill nature of the Project Site, the Proposed Project would not divide an existing community. The Project would be accommodated by existing roadways and would not require construction of new roadways that would preclude access to the surrounding area. The Project would be consistent with the surrounding residential development and with the RH2 land use designation of a portion of the Site. As described above, the portion of the Site designated as Commercial Retail does not require a rezoning per the state's Housing Accountability Act and 2035 General Plan. As such, the Proposed Project would not physically divide an established community, and no impact would occur.

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.

As explained above, the Project is consistent with the 2035 General Plan land use designations. Additionally, as discussed previously, the northern portion of the Project Site is specifically designated for

high-density housing development. The Project would rely on 2035 General Plan policies and actions, especially those adopted to assist in the protection of the environment. As analyzed in each section of this IS/MND, the Project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

4.11.3 Mitigation Measures

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

4.12 Mineral Resources

4.12.1 Environmental Setting

The state-mandated Surface Mining and Reclamation Act of 1975 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 as Mineral Resource Zones (MRZs, MRZ-1 through MRZ-4).

Neither the City, Mineral Resources Data System, nor the California DOC Division of Mine Reclamation (DMR) identify the Project Site as a mineral resource zone (Suisun City 2015a, DMR 2021, USGS 2021b).

4.12.2 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.

As discussed above, the Project Site is not identified as having mineral resources. Therefore, 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
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.

The Project Site is not identified as a mineral resource recovery site by the City or DMR. There would be no impact in this area.

4.12.3 Mitigation Measures

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

4.13 Noise

4.13.1 Environmental Setting

4.13.1.1 Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

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 for each doubling of distance from a stationary or point source. 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 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed (FHWA 2011).

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 and Hanson, Inc. [HMMH], 2006).

4.13.1.2 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high, above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1.0 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3.0-dBA change is considered a just-perceivable difference.
- A change in level of at least 5.0 dBA is required before any noticeable change in community response would be expected. An increase of 5.0 dBA is typically considered substantial.
- A 10.0-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

4.13.1.3 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 hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise-sensitive land uses to the Project Site are the single-family residences located directly adjacent and east of the Project Site. Additionally, once construction is completed, the Project itself would become a noise-sensitive land use.

4.13.1.4 Vibration Fundamentals

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively.

Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.13.1.5 Existing Ambient Noise Environment

The Project Site consists of flat grassy terrain with a minimal of 0–1-degree slope. As previously described, the Site is generally bound by Buena Vista Avenue to the north, with a single-family residential neighborhood, First Christian Church, and a small commercial/industrial park beyond; a single-family residential neighborhood to the east, with more residential neighborhoods, a community center and park, and shopping center beyond; AM/PM gas station abutting the southwest corner of the Site, with SR 12, Suisun Slough, a single-family residential neighborhood, Crystal Middle School, and a shopping center to beyond to the south; and Marina Boulevard to the west, with a vacant lot zoned Downtown Commercial in the Suisun City General Plan Downtown Waterfront Specific Plan and commercial and industrial uses beyond. Additionally, the CFNR is about 0.25 mile northwest of the Project Site and runs parallel to Railroad Avenue. Residential development within the immediate vicinity of the Project Site ranges from one to two stories tall. The principal noise source in the area is related to vehicular traffic on SR 12, Marina Boulevard, vehicular and anthropogenic sources emanating from the adjacent gas station and residential neighborhoods. According to the City General Public Health and Safety Chapter, *Noise and Vibration* section, the portion of the irregular-shaped Project Site positioned just east of the ARCO AM/PM gas station experiences traffic noise levels of 60 dBA CNEL generated on SR 12 (Suisun City 2015, Exhibit 9-1). No portion of the Project Site is located within the 65 dBA SR 12 traffic noise contour (Suisun City 2015, Exhibit 9-1). Additionally, no portion of the Project Site is located within the 65 dBA or 60 dBA noise contours for the CFNR (Suisun City 2015, Exhibit 9-1).

In order to quantify existing ambient noise levels in the Project area, ECORP Consulting, Inc. conducted a 24-hour noise measurement on August 23rd, 2021. The noise measurement site was representative of typical existing noise exposure on the Project site during a typical 24-hour day. The 24-hour measurement was taken between 1:06 p.m. and 1:05 p.m. the following day. As shown in Table 4.13-1, the existing noise levels (Baseline) in the Project vicinity is approximately 60.5 dBA L_{eq}.

Table 4.13-1. Existing (Baseline) Noise Measurements

Location Number	Location	L_{dn} dBA	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	Midway Along Fence Line of Project Site Eastern Boundary	**65.6**	60.5	42.8	88.3	1:06 p.m. - 1:06 p.m.

Source: Measurements were taken by ECORP with a Larson Davis LxT SE precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. See Attachment 4.13 for noise measurement outputs.

Notes: 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.

L_{eq} is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. L_{min} is the minimum noise level during the measurement period and L_{max} is the maximum noise level during the measurement period.

4.13.2 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 impact.

4.13.2.1 Onsite Construction Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earthmovers, 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 disturbances would be random incidents, which could last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect the health of sensitive land uses in the vicinity of the construction site.

The nearest existing noise-sensitive land uses to the Project Site are single-family residences to the north, east, and south of the Project Site, with the closest receptor located directly adjacent to the east. As

previously described, the City does not promulgate a numeric threshold pertaining to the noise associated with construction. This is due to the fact that construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Instead, Chapter 15.04 of the City Municipal Code states that no construction equipment shall be operated, nor any outdoor construction or repair work shall be permitted within 600 feet from any occupied residence except during the hours of 7:00 a.m. to 8:00 p.m., Monday through Saturday, and 8:00 a.m. to 8:00 p.m., on Sunday. Furthermore, construction would occur throughout the Project Site and would not be concentrated at one point.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptor in the Project vicinity in order to evaluate the potential health-related effects (physical damage to the ear) from construction noise, the construction equipment noise levels were calculated using the Roadway Noise Construction Model and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by the National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

The anticipated short-term construction noise levels generated for the necessary equipment were calculated using the Roadway Noise Construction Model for the demolition, site preparation, grading, building construction, paving and painting anticipated for the Proposed Project. 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 Federal Transit Administration (FTA) guidance for calculating construction noise, which recommends measuring construction noise produced by all construction equipment operating simultaneously from the center of the Project (FTA 2018), which in this case is approximately 180 feet distant from the nearest sensitive receptor.

The anticipated short-term construction noise levels generated for the necessary construction equipment are presented in Table 4.13-2.

Table 4.13-2. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level at Existing Residences	Construction Noise Standards (dBA L_{eq})	Exceed Daytime Standard?
Demolition			
Concrete/Industrial Saw	71.5	*85*	**No**
Excavators (3)	65.6 (each)	*85*	**No**
Rubber Tired Dozers (2)	66.6 (each)	*85*	**No**

Table 4.13-2. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level at Existing Residences	Construction Noise Standards (dBA L_{eq})	Exceed Daytime Standard?
Combined Demolition Equipment	**75.3**	*85*	**No**
Site Preparation			
Tractors/Loaders/Backhoes (4)	68.9 (each)	*85*	**No**
Rubber Tired Dozers (2)	66.6 (each)	*85*	**No**
Combined Site Preparation Equipment	**76.0**	*85*	**No**
Grading			
Tractors/Loaders/Backhoes (3)	68.9 (each)	*85*	**No**
Excavator	65.6	*85*	**No**
Rubber Tired Dozers (2)	66.6 (each)	*85*	**No**
Grader	69.9	*85*	**No**
Combined Grading Equipment	**76.6**	*85*	**No**
Construction, Paving, Architectural Coating			
Crane	61.5	*85*	**No**
Forklifts (3)	68.3 (each)	*85*	**No**
Generator Sets	66.5	*85*	**No**
Tractors/Loaders/Backhoes (3)	68.9 (each)	*85*	**No**
Welder	58.9	*85*	**No**
Air Compressor	62.6	*85*	**No**
Pavers (2)	63.1	*85*	**No**
Paving Equipment (2)	71.4	*85*	**No**
Rollers (2)	61.9	*85*	**No**
Combined Construction, Paving, & Architectural Coating	**79.4**	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment 4.13 for Model Data Outputs.

Notes: Construction equipment used during construction derived from CalEEMod 2020.4.0. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project Site (FTA 2018), which is 180 feet from the nearest sensitive receptor. Additionally, Construction, Paving, and Architectural Coating phases are assumed to occur simultaneously.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 4.13-2, during onsite construction activities no individual or cumulative construction equipment would exceed the NIOSH threshold of 85 dBA L_{eq} at the nearest potential receptors to onsite construction and therefore no health effects from construction noise would occur. It is noted that construction noise was modeled on a worst-case basis. It is very unlikely that all pieces of construction equipment would be operating at the same time for the various phases of Project construction as well as

at the point closest to residences. A less than significant impact would occur, and no mitigation is necessary.

4.13.2.2 Offsite Construction Worker Traffic Noise

Project construction would result in minimal additional traffic on adjacent roadways over the timeframe that construction occurs. 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). The majority of construction-related traffic trips would access the Project via SR 12. According to the Caltrans Traffic Census Program (Caltrans 2020c), the segment of SR 12 between Marina Boulevard and Sunset Avenue (the segment traversing the Project Site) experiences traffic volumes between 30,700 and 34,600 average daily trips. According to the CalEEMod model, which contains default usage parameters for typical construction projects, including the number of worker commute trips and material haul truck trips; the maximum number of construction workers and haul trucks traveling to and from the Project Site on a single day would be during the building construction phase with 155 total daily worker trips and 32 vendor trips. These trips would largely occur within two distinct segments of the day, the morning and afternoon. Therefore, Project construction would not result in a long-term, consistent doubling of traffic on SR 12. For this reason, the contribution to existing traffic noise during Project construction would not be perceptible, and a less than significant impact would occur.

4.13.2.3 Project Land Use Compatibility

The City of Suisun City uses the land use compatibility standards presented in the General Plan Public Health and Safety Chapter which provides the City with a tool to gauge the compatibility of new land users relative to existing noise levels. These standards, presented in Table 9-1 in the City General Plan, identify the maximum allowable exterior noise levels for various land uses, including for lands designated Mixed Use such as the Project Site. As previously stated, the Project Site is designated by the Suisun City General Plan as Mixed Use, which allows retail, commercial service, professional office, public services and facilities, and higher-density residential uses as described in the 'Higher-Density Residential' General Plan Land Use Designation. The City does not interpret or apply the Mixed Use General Plan designation to require a mix of non-residential and residential uses on such a designated site, but rather allows either such a mix or exclusively allows the permitted non-residential or residential uses. In the case that the noise levels identified at the Proposed Project Site fall below the limits of the General Plan standard for Mixed Use (70 dBA L_{dn}), the Project is considered compatible with the existing noise environment.

In order to quantify existing ambient noise levels at the Project Site, ECORP conducted a 24-hour noise measurement from August 23rd to August 24th, 2021. The 24-hour noise measurement is representative of the typical existing noise exposure on the Project Site on a typical day. As shown in Table 4.13-1, the ambient noise level recorded on the Project Site is 65.6 dBA L_{dn}, with the predominant noise sources in the area being traffic on SR 12. This noise level is below the City's land use compatibility noise standard of 70 dBA L_{dn} for mixed use residential sites. Therefore, the Project Site is considered an appropriate noise environment to locate the proposed land use. Additionally, the Project Site is predominately surrounded by residential land uses and would be compatible with the existing noise environment.

Furthermore, as previously mentioned the exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006). Generally, in exterior noise environments ranging from 60 dBA to 65 dBA, interior noise levels can typically be maintained below 45 dBA, a typical 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 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 with proper wall construction techniques following California Building Code (CBC) methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

With the incorporation of standard CBC methods, noise levels experienced by future residents of the Proposed Project would be below the City's interior standard of 45 dBA, and a less than significant impact would occur.

4.13.2.4 Project Operations

In addition to the analysis of Project compatibility with the existing and future predicted ambient noise environment, this analysis also evaluates the effects of Project noise on the surrounding existing land uses. The main operational noise sources associated with the Proposed Project would be that of operational stationary sources. Potential stationary noise sources related to long-term operation of future development of the Project site would include mechanical equipment. Mechanical equipment (e.g., HVAC equipment) typically generates noise levels less than 40 dBA at 50 feet, which is less than the daytime and nighttime noise standards promulgated by the City. ECORP staff has conducted numerous noise measurements within various existing residential neighborhoods in order to develop a wide sampling of potential noise levels associated with such uses. Table 4.13-3 identifies daytime noise levels measured within various residential neighborhoods. These measurements were taken with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the America National Standards Institute (ANSI 2013) standard for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator.

Table 4.13-3. Representative Residential Noise Levels

Land Use Type	dBA L_{eq}
Residential Neighborhoods	46.4 dBA
	49.5 dBA
	49.7 dBA
	52.9 dBA

Table 4.13-3. Representative Residential Noise Levels	
Land Use Type	**dBA L_{eq}**
	54.0 dBA
	59.0 dBA

Source: ECORP Consulting. Measurements taken by ECORP with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator.

As shown, the measured daytime noise levels within six distinct residential neighborhoods range from 46.4 through 59.0 dBA L_{eq}, which is under the City daytime threshold for non-transportation noise sources associated with new projects. Additionally, the Project Site is predominately surrounded by residential land uses and would be compatible with the existing noise environment. The most basic planning strategy to minimize adverse impacts on new land uses due to noise is to avoid designating certain land uses at locations within the community that would negatively affect noise sensitive land uses. The Project is consistent with the types, intensity, and patterns of land use envisioned for the Project vicinity, and as previously described, the Project is considered compatible with the existing noise environment. Operation of the Project would not result in a significant noise-related impact associated with onsite sources. For these reasons, Project noise generated during the nighttime hours would also be expected to fall under the City nighttime threshold of 45 dBA L_{eq} for non-transportation noise sources associated with new projects. A less than significant impact would occur.

4.13.2.5 Operational Offsite Traffic Noise

Project operations would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project vicinity. 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 GHD (2021). Table 4.13-4 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 recommended by FICON.

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 L_{dn} and the Project creates a readily perceptible 5 dBA L_{dn} 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 L_{dn} and the Project creates a barely perceptible 3 dBA L_{dn} 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 L_{dn}, and the Project creates a community noise level increase of greater than 1.5 dBA L_{dn}.

Table 4.13-4. Existing Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway		dBA Increase	Noise Standard (dBA L_{dn})	Exceed Standard?
		Existing Conditions	Existing + Project Conditions			
State Route 12						
East of Marina Boulevard	Residential	58.3	58.3	0.0	>5.0	**No**
West of Village Drive	Residential	55.6	55.6	0.0	>5.0	**No**
East of Village Drive	Residential	61.3	61.3	0.0	>3.0	**No**
Marina Boulevard						
North of Buena Vista Avenue	Residential	48.4	48.4	0.0	>5.0	**No**
South of Railroad Avenue	Residential	46.3	46.4	0.1	>5.0	**No**
South of State Route 12	Residential	48.3	48.3	0.0	>5.0	**No**
Railroad Avenue						
East of Marina Boulevard	Residential	51.8	51.8	0.0	>5.0	**No**
West of Village Drive	Residential	49.3	49.4	0.1	>5.0	**No**
East of Village Drive	Residential	55.3	55.3	0.0	>5.0	**No**
Buena Vista Avenue						
East of Marina Boulevard	Residential	47.5	47.6	0.1	>5.0	**No**
West of Village Drive	Residential	41.7	42.2	0.5	>5.0	**No**
Pintail Drive						
East of Village Drive	Residential	45.2	45.3	0.1	>5.0	**No**
West of Sunset Avenue	Residential	43.5	43.8	0.3	>5.0	**No**

Table 4.13-4. Existing Plus Project Conditions - Predicted Traffic Noise Levels

Roadway Segment	Surrounding Uses	L_{dn} at 100 feet from Centerline of Roadway		dBA Increase	Noise Standard (dBA L_{dn})	Exceed Standard?
		Existing Conditions	Existing + Project Conditions			
East of Sunset Avenue	Residential	48.8	51.8	3.0	>5.0	**No**
Village Drive						
South of Railroad Avenue	Residential	42.1	42.1	0.0	>5.0	**No**
West of Pintail Drive	Residential	42.1	42.1	0.0	>5.0	**No**
South of Pintail Drove	Residential	43.5	43.5	0.0	>5.0	**No**
North of State Route 12	Residential	40.4	40.4	0.0	>5.0	**No**
Sunset Avenue						
North of Pintail Drive	Residential	57.8	57.8	0.0	>5.0	**No**
South of Pintail Drive	Residential	56.1	56.1	0.0	>5.0	**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 GHD 2021. Refer to Attachment 4.17 for traffic noise modeling assumptions and results.

Notes: A total of 7 intersections were analyzed in the Traffic Impact Study; however, all roadway segments that impact sensitive receptors were included for the purposes of this analysis.

As shown in Table 4.13-4, no roadway segment would experience an increase of noise beyond the FICON significance standards as a result of the Project, and the Project's contribution to existing traffic noise would not be perceptible and no impact would occur.

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.

4.13.2.6 Construction-Generated Vibration

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. 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 4.13-5.

Table 4.13-5. Representative Vibration Source Levels for Construction Equipment

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: FTA 2018; Caltrans 2020b

The City does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020b) recommended standard of 0.2 inch per second peak particle velocity (PPV) with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating vibration generated from construction equipment, construction vibration was measured from the center

of the Project Site (FTA 2018). The nearest structure of concern to the construction Site, concerning groundborne vibrations, is a single-family residence located 180 feet east of the Project Site center.

Based on the representative vibration levels presented for various construction equipment types in Table 4.13-5 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential Project construction vibration levels. The FTA provides the following equation:

$$[PPVequip = PPVref \times (25/D)^{1.5}]$$

Table 4.13-6 presents the expected Project-related vibration levels at a distance of 180 feet.

Table 4.13-6. Construction Vibration Levels at 180 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jack-hammer	Small Bulldozer	Vibratory Roller			
0.005	0.004	0.002	0.000	0.011	**0.011**	*0.2*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included in Table 4.13-5 (FTA 2018). Distance to the nearest structure of concern is approximately 180 feet measured from Project Site center.

As shown in Table 4.13-6, vibration as a result of construction activities would not exceed 0.2 PPV at the nearest structure. Thus, Project construction would not exceed the recommended threshold. This impact is less than significant.

4.13.2.7 Operational-Generated Vibration

Project operations would not include the use of any large-scale stationary equipment that would result in excessive vibration levels. Therefore, the Project would not result in groundborne vibration impacts during operations. For this reason, no impact would occur.

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 closest public airport to the Project Site is the Nut Tree Airport, a General Aviation airport located approximately 19 miles northeast of the Project Site; and the nearest private airport is the Travis Airforce

Base, located approximately 7 miles to the east. The Project Site is well outside of the airports' noise contours (Solano County Airport Land Use Commission 2015). Aircraft noise does not significantly impact the residents in the Project vicinity and the Proposed Project would not expose people visiting or working on the Project Site to excessive airport noise levels, and no impact would occur.

4.13.3 Mitigation Measures

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

4.14 Population and Housing

4.14.1 Environmental Setting

According to the California Department of Finance (DOF), which provides estimated population and housing unit demographics by year throughout the State, the City's population increased 2.74 percent between 2010 and 2020, from 28,111 to 28,882. DOF estimates that there were 9,563 total housing units in the City, and a 3.5 percent vacancy rate as of January 1, 2021. No current housing exists on the Project Site (DOF 2021).

4.14.2 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 Project poses both direct and indirect potential to substantially increase population within the City. As discussed previously, the 5.20-acre site would consist of nine three-story garden-style residential buildings and is within the Suisun City 2035 General Plan land use designations of Higher Density Residential and Mixed Use and is zoned RH2 and CR. The development would consist of a unit mix of 39 one-bedroom, 55 two-bedroom, 50 three-bedroom, and 16 four-bedroom units. The 2035 General Plan estimates an average of 3.1 persons per household (Suisun City 2015a). Based on the 2035 General Plan average number of persons per household, the projected population increase from the Proposed Project would be approximately 496 residents, if fully occupied. Because there is a proposed mix of the number of bedrooms per unit, the estimate of 496 residents is a conservative estimate; the actual number of individuals residing within the development would likely be less, with some residents already living within the City limits, which would not have an effect on population increase City-wide.

With the addition of 496 new residents, the Proposed Project could increase the population by 1.72 percent when compared to the 2021 estimated population for the City. The Suisun City General Plan EIR estimates that the City could accommodate a total of 32,400 residents by the year 2035 (Suisun City

2015c). The projected increase of residents associated with the Project would represent approximately 14.1 percent of the population growth forecasted for the year 2035, which would be consistent with the 2035 General Plan projections. Additionally, the Project would be consistent with the City's designated zoning, thus not resulting in a substantial increase in unplanned population growth. With the development of the Project, a need for staffing of the facility would increase the number of employment opportunities in the City as an indirect effect on population growth. However, it is anticipated that these employees would come from the local work force and would not contribute to a significant relocation of individuals to the area. The Project does not propose any changes to existing roadways within the Project vicinity, nor would the Project create any new roads or extend utilities beyond the requirements for the Project itself. Therefore, implementation of the Proposed Project would not directly contribute to a substantial unplanned increase of population within the City. 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) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No impact.

As previously discussed, the Project Site is currently vacant. 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.

4.14.3 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

Police protection services in the City are provided by the Suisun City Police Department (SCPD), which operates from the main police station located at 701 Civic Center Boulevard, approximately 0.6 mile southwest of the Project Site. According to the SCPD Annual Report (Suisun City 2020), the department hired five new officers and two dispatchers in 2020, resulting in a total of 32 employees. In 2020, the department received a total of 61,747 calls, resulting in 3,531 cases taken, 910 arrests, and 895 citations issued. The 2035 General Plan Policy CFS-2.5 states that the SCPD should review development proposals

and provide recommendations that would ensure adequate access and community surveillance (Suisun City 2015a).

4.15.1.2 Fire Services

Fire protection services in Suisun City are provided by the Suisun City Fire Department (SCFD). The fire station is located at 621 Pintail Drive, approximately 1.25 miles east of the Project Site. The department is an All-hazard/All-risk department, with an advance life support paramedic supported by Medic Ambulance for transport services (Suisun City 2021b). The SCFD staffing is currently comprised of a mix of full-time and volunteer personnel, including one Fire Chief and two Captains as full-time staff, leaving the remaining personnel volunteers. According to the 2035 General Plan, the SCFD response time goal is to respond to 90 percent of all calls within five minutes. The department received a total of 3,073 calls in 2020, with 70 percent coming from rescue and emergency medical service calls, 40 percent came from service and other calls, and the remaining 166 calls were in regard to fire (SCFD 2021b).

4.15.1.3 Schools

The Fairfield-Suisun Unified School District (FSUSD) is comprised of 30 schools; including three high schools, four middle schools, nineteen elementary schools, and several alternative schools that serve an estimated 21,500 multi-cultural students (FSUSD 2021). The nearest FSUSD school (Crystal Middle School) is located approximately 0.25 mile south of the Project Site.

4.15.1.4 Parks

The City of Suisun maintains 12 parks which are available for public enjoyment, recreation and sporting events. The City has a total of 95.7 acres of active parkland, including 47.7 acres of neighborhood parkland in 10 individual parks, and 48.0 acres of community parkland in two parks. The National Recreation and Park Association (NRPA) standard for city parkland is 2.5 acres per 1,000 residents. The City relies on the Quimby Act standard of 3-5 acres of community and neighborhood parks for every 1,000 residents to guide parkland development. With a current City ratio of 3.4 acres for every 1,000 residents living in the City, the City is currently exceeding the NRPA minimum standard. Other recreation facilities include 25.2 acres of regional and local hiking trails, community centers, and 4.1 acres of waterfront plazas, with easy access by boat through the Suisun Marshes (Suisun City 2015a). Heritage Park is the closest parkland and is located 0.29-mile northeast of the Project Site. The Grizzly Island Trailhead is located approximately 170 feet south of the Project Site, beyond SR 12.

4.15.1.5 Other Public Facilities

Other local public facilities managed by the City of Suisun Recreation Department include the Joseph A. Nelson Community Center, the Harbor Theater, and the Casa De Suisun senior living establishment all providing additional services and venues for community events including children and adult classes, community meetings, events, and other social activities. Additional facilities in the City include the Solano Community College, the Suisun City Library, the Suisun City Marina, and a variety of other state and federal offices (Suisun City 2015a).

4.15.2 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?	☐	☐	☒	☐

Less than significant impact.

4.15.2.1 Fire Protection

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. The following 2035 General Plan objectives, policies and programs address fire protection within the City:

Objective CFS-2 *Provide staffing levels, facilities, and community design required to maintain acceptable emergency response times and effective public safety services.*

Policy CFS-2.1 The City will strive to achieve an emergency response time of five minutes or less.

Policy CFS-2.2 New developments will be required to design, and the City will maintain streets that facilitate acceptable emergency access and response times.

Policy CFS-2.3 New developments shall be designed, constructed, and equipped consistent with requirements of the California Fire Code to reduce fire risk.

Policy CFS-2.6 The Fire Department should review development proposals and provide recommendations that would ensure adequate emergency access, fire suppression equipment, and other features that reduce fire risk.

Program CFS-2.1 (Fire Stations) The City will consider sites and seek funding for the construction of two fire stations that would serve existing and new development accommodated under the 2035 General Plan. It is anticipated that these two fire stations will replace the existing station and that there may be co-location opportunities for other services and/or facilities.

The Project Site would be designed to comply with local and state fire code, including the California Fire Code, to include emergency access to the Site. As shown in Figure 5, the Project proposes three emergency access points, designed at a minimum of 24 feet wide, to the east, west and north. These access points would be constructed in accordance with SCFD's access requirements. In accordance with Policy CFS-2.6 of the 2035 General Plan and Section 18.42.050 of the City Municipal Code, the City and Fire Department should review the Project plans and provide recommendations to reduce fire risk (Suisun City 2021a).

With regard to the CEQA standard of significance, the Proposed Project would increase the need for fire protection services; however, it does not necessitate the construction of a new fire station or expansion of an existing fire station. In addition, Section 3.16 Fees for New Construction, of the City Municipal Code, requires a fee for new construction to meet the City's needs for capital improvements, including the construction of public buildings and other facilities (Suisun City 2021a). Under Program CFS-2.1 of the 2035 General Plan, the City is seeking to fund the construction of two fire stations to serve existing and future development under the 2035 General Plan. Fees associated with the Proposed Project would contribute to such facilities, thus resulting in a less than significant impact.

4.15.2.2 Police Services

The following 2035 General Plan policies pertain to Police Services in the Project vicinity:

Policy CFS-2.4 The City will promote and support community-based crime prevention programs as an important augmentation to the provision of professional police services.

Policy CFS-2.5 The Police Department should review development proposals and provide recommendations that would ensure adequate access and community surveillance.

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 Project would require police 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. Additionally, the Project is subject to Section 3.16 of the Suisun Municipal Code. As previously discussed, Section 3.16 establishes a fee for new construction to meet the City's current and future needs for capital improvements as identified in the

General Plan (Suisun City 2021a). Payment of this fee would offset demands for additional police services associated with the Proposed Project. In accordance with Policy CFS-2.5, the Police department shall review the Project proposal and provide recommendations that would ensure adequate access and community surveillance. Therefore, this impact is less than significant.

4.15.2.3 Schools

As discussed previously, the Proposed Project development would consist of a unit-mix of 39 one-bedroom, 55 two-bedroom, 50 three-bedroom, and 16 four-bedroom units. The 2035 General Plan estimates an average of 3.1 persons per household (Suisun City 2021). Based on the 2035 General Plan average number of persons per household, the projected population increase from the Project would be approximately 496 residents, if fully occupied. According to the FSUSD's School Facility Needs Analysis and Justification Study done in July 2021 the Multi-Family generation rate for the district is 0.241, 0.044, and 0.075 for Kindergarten through 6th grade, 7th through 8th grade, and 9th through 12th grade, respectively. Based on these generation rates, the anticipated 496 residents associated with the Project would add a total of 178 students to the district (FSUSD 2021b). Under the City Municipal Code Chapter 15.16, and in accordance with SB 50, developments such as that proposed by the Project would be subject to pay school impact fees as a condition of approval. Such fees go towards ensuring adequate school and related facilities would be available. Thus, with compliance of the aforementioned municipal code and SB 50, the Project would not directly result in the need for the construction or expansion of schools. This impact would be less than significant.

4.15.2.4 Parks

The City of Suisun maintains 12 parks which are available for public enjoyment, recreation and sporting events. The City has a total of 95.7 acres of active parkland, including 47.7 acres of neighborhood parkland in 10 individual parks, and 48.0 acres of community parkland in two parks. The NRPA standard for city parkland is 2.5 acres per 1,000 residents. The City relies on the Quimby Act standard of 3-5 acres of community and neighborhood parks for every 1,000 residents to guide parkland development. With a current City ratio of 3.4 acres for every 1,000 residents living in the City, the City is currently exceeding the NRPA standard. The Proposed Project is anticipated to house an additional 496 residents within the City limits. As such, the increase in population from 28,882 to 29,378 residents (which is consistent with the 2035 General Plan EIR expected population of 32,400 by 2035) would result in a 3.3 acre per 1,000-residents ratio. This adjusted ratio remains consistent with the adopted Quimby Act standard of 3-5 acres of parkland for every 1,000 residents. The Project would also be subjected to Chapter 3.20 of the City Municipal Code, which imposes park improvement program fees to contribute toward current and future park facilities (Suisun City 2021a). Therefore, Project impacts relating to parks would be less than significant.

4.15.2.5 Other Public Facilities

The City's many public facilities include community centers, theater, community college, library, state and federal offices, and social event locals. Each of these public facilities are funded by the City through local, state, and federal public fees. The Suisun City Library, located at 601 Pintail Drive approximately 1.1 miles

northeast of the Project Site, is one branch of the Solano County Library. On March 23, 2021 the Solano County Board of Supervisors released its 20-year Master Facility Plan to renovate and expand its current system. However, at the time of the Master Facility Plan release, sources of funding for these expansions were unknown (Hansen 2021). Projects such as that proposed here would be subject to Section 3.16 of the Suisun Municipal Code, which establishes a fee for new construction to meet the City's current and future needs for capital improvements as identified in the 2035 General Plan (Suisun City 2021a). Payment of this fee would offset the costs of other public facility demands associated with the Project and would go towards funding public facility projects, such as the Solano County Library expansion. Therefore, the Proposed Project would not directly result in the construction or expansion of other public facilities, and this impact would be less than significant.

Other local public facilities managed by the City of Suisun Recreation Department include the Joseph A. Nelson Community Center, the Harbor Theater, and the Casa De Suisun senior living establishment all providing additional services and venues for community events including children and adult classes, community meetings, events, and other social activities. Additional facilities in the City include the Solano Community College, the Suisun City Library, and a variety of other state and federal offices (Suisun City 2015a).

4.15.3 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 Suisun City. A well-rounded variety of programs and activities are available to residents at City, school, and private recreational facilities. The City's Recreation and Community Services Department operates and maintains 12 parks, 4.1 acres of waterfront plazas, various multi-use trails for both pedestrian and bicyclists, a community center, marina and launch facility, and community theater which are all funded by the City's General Fund (Suisun City 2015a). As stated previously, the City of Suisun maintains 12 parks which are available for public enjoyment, recreation and sporting events. The City has a total of 95.7 acres of active parkland, including 47.7 acres of neighborhood parkland in 10 individual parks, and 48.0 acres of community parkland in two parks. The NRPA standard for city parkland is 2.5 acres per 1,000 residents. The City relies on the Quimby Act standard of 3-5 acres of community and neighborhood parks for every 1,000 residents to guide parkland development. With a current City ratio of 3.4 acres for every 1,000 residents living in the City, the City is currently exceeding the NRPA standard. Private recreational facilities include fitness centers, nature centers, and golf courses.

4.16.2 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 need for additional parkland is primarily based on an increase in population to an area. The Proposed Project is anticipated to house an additional 496 residents within the City limits. As such, the increase in population from 28,882 to 29,378 residents (which is consistent with the 2035 General Plan EIR expected population of 32,400 by 2035) would result in a 3.3 acre per 1,000-residents ratio. This adjusted ratio remains consistent with the adopted Quimby Act standard of 3-5 acres of parkland for every 1,000 residents. The Project would also be subjected to Chapter 3.20 Park Improvement Program of the City Municipal Code, which imposes park improvement program fees to contribute toward current and future park and recreational facilities (Suisun City 2021a). Therefore, Project impacts relating to parks and recreational facilities would be less than significant.

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 Project proposes a 2,400-square foot common space building with an accompanying 1,200-square foot plaza, a children's playground and common patio space, internal walkways and sitting areas, a public access bikeway, improved public access to trails, and areas of common greenspace throughout the Site. The potential environmental effects of the planning, construction, and operation of the proposed project, including the onsite common and private open space areas and off-site concrete path, are being evaluated as part of this IS/MND. No additional environmental effects would occur beyond those that have already been identified as part of the Proposed Project, and no additional mitigation would be required as a result of the Project's inclusion of onsite open space. Additionally, the Project would be subjected to Chapter 3.20 Park Improvement Program of the City Municipal Code, which imposes park improvement program fees to contribute toward current and future park and recreational facilities (Suisun City 2021a). Therefore, Project impacts relating to the inclusion, construction, or expansion of recreational facilities would be less than significant.

4.16.3 Mitigation Measures

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

4.17 Transportation

4.17.1 Environmental Setting

A traffic study was prepared for the Proposed Project in August 2021 by GHD. This traffic study is included as Attachment 4.17 of this Initial Study. The traffic study indicates that the Proposed Project would be expected to generate 870 daily trips with 51 AM peak hour trips and 66 PM peak hour trips.

4.17.2 Regulatory Setting

4.17.2.1 California Department of Transportation

Caltrans' Guide for the Preparation of Traffic Impact Studies contains the following policy pertaining to the level of service (LOS) standards within Caltrans jurisdiction:

Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS.

4.17.2.2 City of Suisun City 2035 General Plan

The 2035 General Plan contains the following transportation goals and policies related to construction and operation of a residential development and the City's roadway system:

Policy T-1.1 The City will review and condition developments to maintain level of service E or better during peak travel periods, as feasible.

Policy T-1.3 The City's Level of Service policy will be implemented in consideration of the need for pedestrian and bicycle access, the need for emergency vehicle access, and policies designed to reduce vehicle miles travelled.

Policy T-1.6: The City will design and operate streets and intersections to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

4.17.2.3 Senate Bill 743

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, automobile delay, traditionally measured as LOS, is no longer considered an environmental impact under CEQA. Instead, impacts are 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. In recognition that the character of communities, availability of travel modes options and geographic areas all differ throughout the State, each jurisdiction, from regional agency, to County, to City, has been given the opportunity to establish their own VMT thresholds consistent with the State's guidelines and regulatory framework. For this analysis, VMT will be analyzed to determine compliance under CEQA, and LOS will also be analyzed in alignment with City policy.

Existing and future vehicle miles traveled (VMT) will be estimated using the City of Fairfield travel demand model (TDM) to evaluate the amount and distance of automobile travel attributable to the project. Project VMT will be evaluated using the thresholds of significance for residential land uses as described in Exhibit A – VMT Thresholds of Significance from Resolution No. 2020-122 (September 2020).

4.17.3 Transit Service

Transit services in Suisun City include passenger rail, provided by Amtrak, and bus service provided by three agencies – Greyhound, and the Fairfield and Suisun Transit (FAST). Additionally, the Rio Vista Delta Breeze Dial-a Ride and Napa-Solano Express Route 21, which is operated by the Napa Valley Transportation Authority (NVTA), serve the Fairfield Suisun City train station. The Suisun/Fairfield Amtrak Station is located in downtown Suisun City on Main Street between Spring Street and SR 12. Amtrak's Capitol Corridor route, which travels along Union Pacific Railroad's right-of-way, stops at the Suisun Station. Greyhound Lines operates motorcoach buses between Sacramento and Oakland, some of which stop at the Suisun City Amtrak station to unload and pick up passengers. Every day, three to four Sacramento-bound coaches and three to four Oakland-bound coaches stop in Suisun City. FAST operates four local and one intercity route through Suisun City. The local routes are lines 2, 5, 6, and 8. The intercity route is line 90, which connects Suisun City to the Bay Area Rapid Transit commuter rail system. Local routes consist of eight routes, serving the cities of Fairfield and Suisun City. Local routes operate from 6:00 a.m. to 8:30 p.m. Monday through Friday, and from 9:00 a.m. to 6:30 p.m. on Saturday. Local routes are managed and operated by the City of Fairfield. The nearest FAST bus stop is located at the intersection of Marina Boulevard and Buena Vista Avenue adjacent to the Project Site. The Rio Vista Delta Breeze offers Dial-a-Ride service within the City of Rio Vista and deviated fixed route bus service between Isleton, Rio Vista, Fairfield, Suisun City, Pittsburg/Bay Point BART Station, and Antioch. Rio Vista Delta Breeze offers service Monday-Friday except major holidays. The Napa-Solano Express operates Monday through Friday and runs from Suisun City to the city of Napa.

4.17.4 Pedestrian and Bicycle Facilities

Pedestrians are served by sidewalks on most, but not all, of the arterials, collectors and local streets in the city. Crosswalks with pedestrian push-buttons are provided at major signalized intersections. Pedestrians can also make use of the paths located north of SR 12 and around the north side of the Suisun Slough Channel. The Project Site does not have sidewalks on Marina Boulevard or Buena Vista Avenue surrounding the site at this time. However, the construction of these facilities are included as a part of the Project.

The City's bicycle facilities include Class I, II and III facilities. These include a Class I path along the north side of SR 12 between Walters Road and the Suisun Amtrak Station (the Central County Bikeway); a bicycle-pedestrian path (Grizzley Island Trail) around the northern portion of the Suisun Slough Channel; and Class II bike lanes along Sunset Avenue, Railroad Avenue between Sunset and Marina, and on Waters Road between SR 12 and the northern city limit. Bicycle lanes are striped on Marina Boulevard between SR 12 and Railroad Avenue, but they lack the bicycle stencils and signs required for Class II bike lanes

4.17.5 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 impact.

General Plan *Policy T-1.1* requires the city to condition developments to maintain level of service E or better during peak travel. According to the traffic study completed for the Project (GHD 2021), all Project related intersections will not exceed the level of service E threshold during Existing Plus Project conditions. Under Cumulative Plus Project conditions, the Marina Blvd/Buena Vista Dr intersection is anticipated to exceed Cumulative No Project conditions by 5 or more seconds and therefore, exceed Policy T-1.1 thresholds. The traffic study recommends roadway alternative improvements to reduce the delay at the Marina Blvd/Buena Vista Dr intersection 1) maintain all-way stop control and add a northbound right turn pocket, or 2) construct a traffic signal. The City will require the Project's fair-share contribution to one of these two options as a part of Project approval. As such, the Project would not conflict with this 2035 General Plan policy and therefore, would be a less than significant impact.

Development of the project may increase use of public transit area. There is an existing bus stop on the corner of the Marina Blvd/Buena Vista Dr intersection, adjacent to the site. Development of the Project will not require the addition of a bus stop to service any Project residents. As such, the Project would have a less than significant impact in public transit and would not conflict with any public policies.

There is an existing Class II bike lane on Marina Boulevard as well as the Central County Bikeway and Grizzly Island Trail directly south of the Project Site. Development of the Project would not require the addition of a bike path to serve the Project nor would the Project result in the removal of the existing bike paths surrounding the site. The Project would have no impact to bicycle facilities or policies.

The Project will construct curbs gutters and sidewalks on Marina Boulevard and Buena Vista Drive and connect to existing sidewalks. The Project also provides a direct link to the Central County Bikeway and Grizzly Island Trail. Therefore, the Project would enhance pedestrian walkway access and would not conflict with any pedestrian related policies.

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.

CEQA Guidelines Section 15064.3(b) requires a traffic analysis be based on vehicle miles traveled (VMT) as it is considered to be the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. According to Section 15064.3, project VMT exceeding an applicable threshold of significance may indicate a significant impact.

Existing and future vehicle miles traveled (VMT) have been estimated using the City of Fairfield TDM to evaluate the amount and distance of automobile travel attributable to the Project. Project VMT will be evaluated using the thresholds of significance for residential land uses as described in *Exhibit A – VMT Thresholds of Significance* from Resolution No. 2020-122 (September 2020):

- The project would cause a significant transportation impact if it would generate an average homebased VMT per resident that is greater than 85-percent of the city-wide average.
- If the above threshold is exceeded, the project's VMT impact could still be found to be less-than significant if it did not cause the total City-wide VMT to increase.

The following policies pertaining to VMT impacts are found in the 2035 General Plan Transportation Element:

Policy T-3.2: The City will encourage new developments and public facility investments designed to minimize vehicle trips and vehicle miles travelled.

Policy T-3.4 The City's analytical methods, review requirements, impact fees, and investments will be designed and implemented, in part, to reduce VMT by Suisun City residents and to local commercial and employment uses.

Policy T-3.5 The City's Traffic Impact Fee Program will be designed to provide incentives for new developments that are located and designed to reduce vehicular travel demand.

The Proposed Project is considered affordable housing and could be presumed to have a less than significant impact on VMT per the Governor's Office of Planning and Research Technical Advisory (OPR 2018). However, the City of Suisun City does not currently have guidance for project screening.

Under CEQA, Project impacts must be evaluated by comparing environmental conditions after Project implementation to conditions at a point in time referred to as the baseline. The City of Suisun City has identified these VMT baselines and thresholds in the previously referred-to document. Table 4.16-1 presents the SB 743 thresholds for residential land uses which will be utilized to determine Project

impacts. The land uses analyzed for the Marina Village development project consist of Multi-Family Dwelling Units and were analyzed against corresponding thresholds below.

Table 4.16-1. VMT Thresholds

Residential	Base Year (2020)		Cumulative (2035)	
Use	SB 743 VMT Threshold	Average VMT Per Resident	SB 743 VMT Threshold	Average VMT Per Resident
Residential Units	10.7	12.59	9.63	11.33

Source: GHD 2021.
Notes: Derived from City of Fairfield travel demand model. Threshold applied is 85 percent of the average for the associated land use type.

Existing 2020 and future 2035 vehicle miles traveled (VMT) and associated VMT efficiency metrics were estimated using the City of Fairfield travel demand model, last updated in 2020, to evaluate the amount and distance of automobile travel attributable to the Project. The City's model generates daily trip-based VMT estimates for each traffic analysis zone (TAZ) by land use. The Project's land uses were added to new TAZs for each model scenario, 2020 and 2035. As identified in the City's VMT guidance, Residential VMT from the model reflects "home-based trip productions" only. The VMT estimates reflect the full length of trips that enter/exit the City of Suisun City by incorporating external trip lengths for trips external to the City on one end, and internal to the City on the other end.

Table 4.16-2 presents the existing travel demand model land uses associated with the TAZ in which the Project is located, utilized for the VMT evaluation. The model land use inputs include DU for residential uses and KSF for non-residential uses. The Project land uses were isolated into separate TAZs to evaluate the VMT of the different uses.

Table 4.16-2. Travel Demand Model Land Use within the Vicinity of the Project

TAZ	Unit Type	Dwelling Units	Location
526	Single Family	735	South of Buena Vista Avenue, North of Central County Bikeway
	Multifamily	0	

Source: GHD 2021

In addition to the VMT efficiency metrics, the net change in total VMT has been calculated using a trip based VMT methodology with and without the Project under both existing (2015) and future (2050) model conditions. The trip-based methodology incorporates both the length and number of vehicle trips that are generated in the model. The total trip-based VMT comparison supports the evaluation of the Project's resulting change in net VMT and is not used in determining significant impacts of the proposed Project. Project impacts are determined based on the VMT efficiency metrics for each use compared to the City's interim thresholds previously identified.

2020 Model VMT Results

Table 4.16-3 presents the model output trip and VMT results for 2020, for TAZ 526 and the Project. Table 4.16-4 presents the vehicle trips and resulting VMT per DU for the residential uses of the Project for 2020. (Note: The population estimate for the Project was based on the Census average population per household estimate for 2015 through 2019 for the City of Suisun City.) As shown, the Project's multi-family VMT per Resident for 2020 is 7.9 which is below the VMT per Resident threshold of 10.7.

Table 4.16-3. 2020 Model VMT Outputs & Average Trip Length

TAZ or Project	Land Use	Number of Units	Trips	VMT	Average Trip Length (miles)
526	Single Family	735	5,675	25,921	4.57
	Multifamily	0			
Project	Multifamily	160	870	3,974	4.57

Source : GHD 2021

Table 4.16-4. 2020 Residential VMT Per Resident Results

TAZ or Project	Land Use	VMT	Population	VMT per Resident Threshold	VMT per resident	Project over Threshold?
Project	Residential Multifamily	3,974	504	10.7	7.9	No

Source : GHD 2021

2035 Model VMT Results

In the Project TAZ 526, the Fairfield Travel Demand Model reflects a total of 66 multifamily dwelling units. For purposes of analyzing the 2035 Without Project scenario, the 2035 travel demand model was re-run to exclude these 66 Multifamily Units. Table 4.16-5 presents the model output trip and VMT result for 2035, for TAZ 526 and the Project. Table 4.16-6 presents the vehicle trips and resulting VMT per Resident for the residential uses of the Project for 2035. (Note: The population estimate for the Project was based on the Census average population per household estimate for 2015 through 2019 for the City of Suisun City.) As shown, the Project's multifamily VMT per Resident for 2035 is 7.0 which is below the VMT per Resident threshold of 9.63.

Table 4.16-5. 2035 Model VMT Outputs & Average Trip Length					
TAZ or Project	**Land Use**	**Number of Units**	**Trips**	**VMT**	**Average Trip Length (miles)**
526	Single Family	735	5,675	25,647	4.05
	Multifamily	0			
Project	Multifamily	160	870	3,526	4.05

Source: GHD 2021

Table 4.16-6. 2020 Residential VMT Per Resident Results						
TAZ or Project	**Land Use**	**VMT**	**Population**	**VMT per Resident Threshold**	**VMT per resident**	**Project over Threshold?**
Project	Residential Multifamily	3,974	504	10.7	7.9	No

Source : GHD 2021

Net Change in Total VMT

Using a trip-based methodology, VMT was quantified by the lengths of all vehicle trips that are generated within the model (for the model TAZs). Table 4.16.7 presents the VMT results for both 2020 and 2035 model scenarios, with and without the Project, and the net change in total VMT. As shown, the model's total VMT will increase with the Project in both scenarios, and the model has a larger increase in 2020 than 2035. This VMT comparison is for reference and information only and is not used in determining significant impacts of the Proposed Project.

Table 4.16-7. Net Change in Total Residential VMT Model-Wide	
Model Scenario	**Net VMT**
2020	**330,447**
2020 With Project	334,421
2020 Net change	3,974
2035	**275,665**
2013 With Project	279,191
2035 Net Change	3.526

Source: GHD 2021

VMT Conclusion

The VMT analysis for the Proposed Project quantified VMT per Resident for the proposed multifamily dwelling units utilizing the City of Fairfield travel demand model outputs. For the Project's multifamily use

for both years 2020 and 2035, the calculated VMT per resident is lower than the City's interim thresholds. Therefore, the Project does not have a significant impact on VMT and does not have a significant impact on transportation.

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 does not propose, nor would it require new roadways or changes in existing roadways that would result in an increase hazard due to a design feature.

The traffic report completed a driveway sight distance analysis to determine if Project implementation would increase hazards to adjacent roadways. Because Marina Boulevard lies on the convex side of a horizontal curve, there is a potential for a blind spot approximately mid-way through the curve. It is essential that the required line of sight be maintained from approximately the curb return at the intersection with SR 12 through the driveway opening.

Based on the considerations discussed above, the one of following is recommended to ensure the safety and proper function of the proposed Project driveway on Marina Boulevard:

1) Provide no additional right turn treatment, but maintain the required sight distance area, such that it remains free of visual obstructions, or

2) Add a right turn flare in advance of the Marina Boulevard Driveway.

Although sight distance calculations suggest adequate stopping sight distance at the Buena Vista driveway, existing on-street parking could impact visibility at this driveway. The following is recommended to ensure the safety and proper function of the proposed Project driveway on Buena Vista Avenue:

1) Add a striped right turn pocket which would remove space for approximately two (2) on-street parking spaces immediately preceding the Buena Vista driveway.

The City will require one of the two Marina Boulevard improvement options and the Buena Vista Avenue improvement as a part of Project approval. As such, the Project 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
d) Result in inadequate emergency access?	☐	☐	☒	☐

Less than significant impact.

Access to the Project site is provided via Marina Boulevard and Buena Vista Drive. An emergency access is also provided at the southern parking lot from Chipman lane. These entrances/exists would provide emergency access redundancy. A less than significant impact would occur.

4.17.6 Mitigation Measures

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

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

The Project Site is located in an urban setting in western Suisun City, with vacant land to the west and residential neighborhoods to the north, east, and south. The Site is bound by Buena Vista Avenue to the north, Marina Boulevard to the west, SR 12 to the south, and a residential neighborhood to the east. On June 7, 2021, ECORP Consulting, Inc. conducted a field investigation of the Project Site and found no evidence of tribal cultural resources. The Cultural Resources Inventory Report provides information for the following sections.

4.18.2 Ethnography

Prior to the arrival of European-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Kroeber and others recognized the uniqueness of California's indigenous groups and classified them as belonging to the California culture area. Kroeber further subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central.

When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about a third of the state's native population, lived in the Central Valley. At least seven distinct languages of Penutian stock were spoken among these populations: Wintu, Nomlaki, Konkow, River Patwin, Nisenan, Miwok, and Yokuts. Common linguistic roots and similar cultural and technological characteristics indicate that these groups shared a long history of interaction. The Central area (as defined by Kroeber) encompasses the current Project Site and includes the Patwin.

Ethnographically, the Project Site lies within the southern portion of the territorial boundaries of the Penutian-speaking Hill Patwin. The Patwin territory included both the River and Hill Patwin and extended from the southern portion of the Sacramento River Valley to the west of the river, from the town of Princeton south to San Pablo and Suisun bays. As a language, Patwin (meaning "people") for part of the Wintu linguistic family has three main groups: Southern or Patwin; Central, of Glenn and Tehama counties;

and the Northern, of the upper Sacramento, lower Pit, and the upper Trinity drainages. The Hill Patwin territory includes the lower hills of the eastern Coast Range mountain slope (Long, Indian, Bear, Capay, Cortina, and Napa valleys). Patwin pre-contact population numbers are not precise, but Kroeber estimates 12,500 for the Wintu, *Nomlaki*, and Patwin groups. These numbers reflect groups prior to the 1833 malaria epidemic. Politically, the Patwin 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. The chief had unrestricted power and presided over economic and ceremonial decisions.

The earliest historical accounts of the Project vicinity begin with Spanish mission registers of baptisms, marriages, and deaths of Indians. By 1800, Native Americans were taken from the Patwin settlement of *Aguastos* in the south-central area, and from other villages, by emissaries of Mission Dolores. In addition, missions San Jose and Sonoma actively proselytized the southern Patwin. During the 1830s and 1840s, both Mexicans and Americans rapidly occupied Patwin territory under the authority of the Mexican government.

4.18.3 Tribal Consultation

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 City sent consultation requests to those tribes that requested consultation pursuant to AB 52. Those tribes are listed in Section 2.2.5.

On May 9, 2021, as part of outreach for the Project pursuant to Assembly Bill 52 (AB 52), ECORP Consulting, Inc. sent a certified letter to the Native American Heritage Commission informing them of the Project and offering an opportunity to consult about the potential for Tribal Cultural Resources to exist in the Project Site. Tribal Cultural Resources may be synonymous with cultural resources. On June 7, 2021, the Native American Heritage Commission responded stating that there were no known Tribal Cultural Resources within the Project Site.

As of March 1, 2005, Senate Bill (SB) 18 (Government Code Sections 65352.3 and 65352.4) requires that, prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction. The City sent consultation requests on September 14, 2021 to seven Native American Tribes listed in Section 2.2.5.

As of October 21, 2021. the City received responses from two tribes: 1) the United Auburn Indian Community of the Auburn Rancheria stating that the project location and determined that it falls outside of the UAIC's geographic area of traditional and cultural affiliations, and 2) the Yocha Dehe Wintun Nation stating that the project location is within the aboriginal territories of the Yocha Dehe Wintun Nation and the Tribe recommends cultural sensitivity training for all project personnel prior to all ground disturbance

activities and that the Yocha Dehe Wintun Nation's Treatment Protocol be incorporated into the mitigation measures for this project.

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.	☐	☒	☐	☐

Less than significant with mitigation incorporated.

As conveyed in the Cultural Resources Inventory Report conducted by ECORP Consulting, Inc., no known tribal cultural resources were identified at the Project Site or within a 0.5-mile radius during the records search and literature review performed. On June 7, 2021, ECORP Consulting, Inc. performed a field investigation of the Project Site and APE which concluded that no cultural resources were observed onsite. Additionally, on June 7, 2021 the NAHC responded to ECORP stating that through a record search of the NAHC Sacred Lands File was completed for the Proposed Project revealing a negative search result for sacred lands within the Project Site.

No known tribal cultural resources have been identified within the Project Site. The Site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. However, the Yocha Dehe Wintun Nation states that the project location is within their aboriginal territories recommends cultural sensitivity training for all project personnel prior to all ground disturbance activities and that the Yocha Dehe Wintun Nation's Treatment Protocol be

incorporated into the mitigation measures for this project. As such, mitigation measures **TRI-1** and **TRI-2** have been included to reduce the potential for impacts to Yocha Dehe tribal resources to a less than significant.

Mitigation measures **TRI-1**, **TRI-2**, and **CUL-1** have been included to reduce the potential for impacts to tribal cultural resources to a less than significant level.

4.18.5 Mitigation Measures

TRI-1: **Tribal Cultural Sensitivity Training.** Prior to any groundbreaking or construction, the Project shall facilitate and require Tribal cultural sensitivity training for all project personnel. The project proponent shall contact the Yocha Dehe Wintun Nation, as shown below, to request and schedule this training.

Laverne Bill, Interim Director of Cultural Resources
Yocha Dehe Wintun Nation
Office: (530) 723-3891
Email: lbill@yochadehe-nsn.gov

Timing/Implementation: *Training shall occur prior to the initiation of any groundbreaking or construction activities*

Enforcement/Monitoring: *City of Suisun City Development Services Department, Project proponent and construction lead.*

TRI-2: **Native American Human Remains Discovery.** All construction plans and grading plans shall include the following:

If subsurface deposits believed to be cultural or human in origin are discovered during any roadway or future construction, all work must halt within a 100-foot radius of the discovery. If it is determined that these subsurface deposits are Native American human remains and these remains are affiliated to the Yocha Dehe as determined by the by the Native American Heritage Commission, the "*Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation*" shall be initiated by the tribe, City of Suisun City and Project. If the NAHC determines that the remains are not of Yocha Dehe heritage but of another tribe, the treatment protocol of that tribe shall be initiated.

Timing/Implementation: *During groundbreaking or construction activities*

Monitoring/Enforcement: *The City of Suisun City Development Services Department, Project proponent and construction lead.*

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

As stated in Section 4.9 above, both the City and Project Site receive their water through the Suisun-Solano Water Authority. Suisun City and SID formed a Joint Exercise of Powers Agreement in 1976 to provide a long-term water supply for the City. The two sources of water currently supplied by the SSWA consists of the USBR Federal Solano Project and the DWR State Water Project. SSWA obtains most of its water supply from Lake Berryessa, which is owned and operated by the USBR and is a primary component of the Solano Project. Lake Berryessa has a storage capacity of approximately 1.6 million acre-feet. Lake Berryessa water is diverted through the Putah South Canal to the Cement Hill Water Treatment Plant prior to its delivery to the service area.

In 2011, the SSWA prepared an Urban Water Management Plan (UWMP) to be in compliance with The Urban Water Management Planning Act to support their long-term water resource planning and ensure that water supplies are available to meet the agency's existing and future water demands (Suisun City 2015a). According to the UWMP, the Association of Bay Area Governments estimates the population of Suisun City to increase approximately 16 percent from 28,926 in 2015 to 33,704 residents in 2040 (SSWA 2016). Future growth in the service area from 2015 to 2040 is planned to be at the same level of growth per year (0.66 percent). This actual historic growth, as well as future planned growth, has been taken into account in the demand forecasts and future water management planning. The UWMP calculated that the demand for potable and raw water in 2015 was 1,058 million gallons (MG) per year, and projects water usage by the City would increase to 1,517 MG per year by 2025 and 1,573 MG by 2040. According to the projected water supply available to the City, there would be sufficient water supply available to adequately offset future water demands projected for the City. The SID is under contract with SSWA to provide Solano Project water to the SSWA to meet water demands of new developments after full use of the City's allocated supplies (SSWA 2016).

The Proposed Project Site lies within the SID and SSWA boundaries for potable water services on site. In order to provide water for future residents and irrigation management, the Project proposes connecting to the existing 12-inch water main within Marina Boulevard for both domestic and fire water supply and an 8-inch within Buena Vista Avenue for fire water supply. Water utility connections and on-site infrastructure would be subject to the Suisun City Municipal Code, Chapter 13.04, Water, as well as compliance with SSWA design standards.

4.19.1.2 Wastewater

The Fairfield-Suisun Sewer District (FSSD) manages wastewater collection and treatment, water recycling, and stormwater management services in a 41-square-mile area of Solano County, including the Proposed Project Site. The FSSD serves 135,000 residential, commercial, industrial, and governmental agencies. The 70-mile network of 12–48-inch diameter sewer pipes collect and transfer sanitary waste from 13 pump stations, to a modern 150-acre wastewater treatment facility. With the 116,000-acre region of the Suisun Marsh being located just south of the FSSD boundary, the District has made it part of their mission to

safeguard the environmental health of this sensitive wetland by meeting stringent water quality standards set by local, state, and federal agencies. Additionally, in 2017 the FSSD unveiled its plan to be the first-of-its-kind facility to take treated sewage and convert it to high-grade fertilizer that can be customized to meet the needs of farmers. This will be the first technology of its kind in the country, and contracts are currently proposed for expanding the process to include treated sewage from other districts including Santa Rosa and Central Marin Sanitation Agency (FSSD 2021).

The Proposed Project Site is currently vacant with no sewage service infrastructure. The Project would construct internal sewage infrastructure to accommodate the increase in sewage associated with the residential apartments proposed. Each building onsite would consist of an underground sewer lateral, all connecting to a Site-specific sewer main, prior to connecting to the existing sanitary sewer main within SR 12, immediately south of the Project Site.

4.19.1.3 Storm Drainage

The City is traversed by a number of natural and man-made drainages that all eventually lead to two main drainage systems, McCoy Creek and Laurel Creek. All stormwater from these two creeks eventually outflows into the Suisun Marsh. The FSSD operates and maintains four stormwater pump stations for the City (Suisun City 2019). Due to the geological characteristics of the City being in a low-elevation area, adequate separation of groundwater is difficult. The City is prone to tidal influence and potential flood risk, thus resulting in a rigorous network of levees throughout the City. In 1988, the FSSD entered into a Drainage Maintenance Agreement between the cities of Fairfield and Suisun. This agreement allowed for the creation of a storm drainage maintenance enterprise fund and established fees subjected to system users, including the Proposed Project. Currently, the FSSD oversees the URMP and operating and maintaining city-owned stormwater pumping stations. The Project proposes a number of drainage areas and features to adequately address stormwater throughout the Site.

4.19.1.4 Solid Waste

The Solano Garbage Company is the current franchise that provides solid waste collection and disposal services to the City and Project Site. Collected solid waste is transported to the Potrero Hills Landfill (PHL), located approximately 3.7 miles southeast of the Project Site. The PHL has a maximum permitted throughput of 4,330 tons per day, with a maximum total permitted capacity of 83.1 million cubic yards, and an anticipated closure date of February 14th, 2048 (Suisun City 2015a). According to the California Department of Resources Recycling Recovery (CalRecycle 2021a), the current remaining capacity of the PHL sits at 13,872,000 cubic yards. The California Integrated Waste Management Act of 1989 (AB 939) requires each city and county to divert 50 percent of its waste stream from landfill disposal by the year 2000. As of January 1, 2020, the use of green material as alternative daily cover will be considered disposal in terms of measuring a jurisdiction's annual 50 percent-per-capita disposal rate. In 2019, the City has a disposal rate of 2.9 lbs/day per population, and a 24.7 lbs/day disposal rate per employment (CalRecycle 2021b).

4.19.1.5 Electricity/Natural Gas Services

Refer to Section 4.6. Energy.

4.19.2 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 impact.

4.19.2.1 Water

The following 2035 General Plan objectives and policies relate to water supply within the Project Site:

Objective CFS-6 *Ensure ongoing maintenance and improvements to the water system and adequate supply to meet the needs of existing and new development.*

Policy CFS-6.1 New developments will be required to demonstrate the availability of adequate water supply and infrastructure, including during multiple dry years and adequate fire flow pressure, prior to approval.

Policy CFS-6-2 As part of the Suisun-Solano Water Authority, the City will implement a water strategy that serves the City and addresses potential impacts to water users and the environment as a part of the approval process for new development.

Policy CFS-6.3 As part of the Suisun-Solano Water Authority, the City will maintain, and require as a condition of approval for new development, actions that ensure adequate emergency water supplies.

Policy CFS-6.4 New developments shall include water conservation technologies, such as low-flow toilets, efficient clothes washers, and efficient water-using industrial equipment, in accordance with State law.

Development of the Project would increase the demand for water in the City due to human consumption and irrigation required for landscaping. As previously stated, the Proposed Project Site lies within the SID and SSWA boundaries for potable water services on site. In order to provide water for future residents and irrigation management, the Project proposes connecting to the existing 12-inch water main within Marina Boulevard for both domestic and fire water supply and an 8-inch within Buena Vista Avenue for fire water supply. Water utility connections and on-site infrastructure would be subject to the Suisun City Municipal Code, Chapter 13.04, Water, as well as compliance with SSWA design standards through the SSWA 2021 Water System Design Review process.

The Project is anticipated to increase the local population by 496 residents, as a conservative estimate. Water use data for the Proposed Project was obtained from rates provided by the USGS Water Resources, which provides water consumption information based on type of use by state. According to the USGS Water Resources database, the County domestic water consumption rate for the year 2015 was 76 gallons per day (USGS 2018). Based on the 2019 domestic usage per capita, and the anticipated 496 additional residents accompanying the Proposed Project, the Project is estimated to generate approximately 37,696 gallons per day, or 13.8 MG per year. The UWMP calculated that the demand for potable and raw water in 2015 was 1,058 MG per year, and projects water usage by the City would increase to 1,517 MG per year by 2025 and 1,573 MG by 2040. According to the projected water supply available to the City, there would be sufficient water supply available to adequately offset future water demands projected for the City, including demands associated with the Proposed Project.

As such, the additional demand of 37,696 gallons per day would not result in a need for new or expanded water treatment facilities. Therefore, the Proposed Project would have a less than significant impact to the City's water treatment facilities.

4.19.2.2 Wastewater

The FSSD provides sewer service to the City and Project Site. The FSSD's collection system includes 13 wastewater pump stations and 70 miles of gravity sewers. Recently, the FSSD completed a treatment plant expansion to increase the average dry weather capacity to 23.7 MG per day and a peak-flow capacity of 52.3 MG per day. The wastewater treatment processes include screening, primary treatment, intermediate treatment by oxidation towers and intermediate clarifiers, secondary treatment with aeration basins, and secondary clarifiers and tertiary treatment via filtration and disinfection. Waste solids are thickened, treated in anaerobic digesters, and further concentrated prior to being disposed of at the PHL. A treatment plant project to replace chlorine disinfection with ultra-violet disinfection was completed in 2011. The Central-Suisun Forcemain Equalization Project, completed in 2013, increased the peak capacity of the Suisun Pump Station from 31.7 to 38.3 MG per day (Suisun City 2015a). The following 2035 General Plan policies relate to the City's goal of providing adequate sewage system capacity, treatment, and disposal to the City and Project Site:

Policy CFS-7.1 The City will establish and maintain standards for the location and capacity of sewer infrastructure and ensure sufficient capacity to serve buildout under the 2035 General Plan.

Policy CFS-7.2 New developments will be required to contribute on a fair-share basis toward implementation of system improvements, as determined by the City Engineer.

Policy CFS-7.3 The City will encourage the use of recycled water for outdoor irrigation, toilet flushing, fire hydrants; commercial and industrial processes, carwashes, concrete batching, laundromats; dust control; parks and other landscaped areas, and other appropriate water-intensive uses. New developments that include recycled water systems should enjoy proportionally lower development impact fees.

As previously discussed, the Proposed Project Site is currently vacant with no sewage service infrastructure. The Project would construct internal sewage infrastructure to accommodate the increase in sewage associated with the residential apartments proposed. Each building onsite would consist of an underground sewer lateral, all connecting to a Site-specific sewer main, prior to connecting to the existing sanitary sewer main within Marina Boulevard, immediately west of the Project Site. Consistent with Policies CFS-7.1 and 7.2, the Project is required to contribute to the implementation of system improvements to ensure a sufficient capacity that is consistent with the 2035 General Plan buildout. Because the Project Site is consistent with the 2035 General Plan land use designations and forecasted population growth in the City, compliance with the City Engineer's Site-specific sewage plan requirements ensures the Proposed Project would supply an adequate wastewater capacity for future residents onsite. Therefore, the Proposed Project would not result in the relocation or construction of new or expanded wastewater facilities, and impacts would be less than significant.

4.19.2.3 Storm Drainage

As described in section 4.9 above, development projects must comply with the NPDES permit issued to the FSURMP by the San Francisco Bay RWQCB (Water Board). All construction projects have to use construction BMPs and implement appropriate site design and source control measures to reduce pollutant discharges in stormwater. Projects that meet a certain size threshold of impervious surface coverage must meet more stringent standards. FSURMP's permit includes specific requirements for projects that meet "Group 1" and "Group 2" criteria. Group 1-type projects, as is the case for the Proposed Project, include new development and redevelopment projects that create or replace one acre or more of impervious surface. To comply with the FSURMP's requirements, the Proposed Project is required to submit a NOI and SWPPP. Consequently, the Project proposes several stormwater bioretention areas throughout the Project Site. These stormwater drainage facilities would be designed in accordance with the requirements of the City of Suisun City, including providing stormwater drainage calculations per Section 4 of the City standard specifications, as well as with FSURMP and Title 13, Chapter 13.10, Stormwater Management and Discharge Control, of the Suisun City Municipal Code.

As stated previously, the 2035 General Plan contains policies with requirements that address stormwater. For instance, Policy PHS-5.2 emphasizes the dispersal of stormwater by using rain gardens, filter strips, swales, and other natural drainage approaches; and Policy CFS-7.2 above requires development projects to contribute on a fair-share basis for stormwater infrastructure improvements. Furthermore, the state requires new development to prepare SWMPs as part of the General Permit to address stormwater discharge quality issues. Compliance with the NPDES requirements (where applicable), the Project-specific SWPPP as required by the State Water Resources Control Board, Title 13 Chapter 13.10 of the City Municipal Code, and the 2035 General Plan policies and programs described above would reduce operational water quality impacts associated with implementation of the Proposed Project and would not require the construction or relocation of stormwater drainage facilities that would have an impact on the environment. Therefore, this impact was found to be less than significant.

4.19.2.4 Electric Power

Electricity is provided to the Project Site by PG&E. The electricity provider's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand. During operation of Project-induced residential development, the ability of the electricity provider to power the site would be evaluated. As explained under Section 4.6 Energy, a significant energy use impact would not result. As such, no new electric facilities will be required to provide electricity to the Project. Therefore, the Project would have a less than significant impact in this area.

4.19.2.5 Natural Gas

PG&E is the service provider of natural gas for the City and Project Site. The Project proposes a designated utility easement area in the southeast corner of the Site where connections to the existing utility lines traversing the Project Site within SR 12 would occur. Utility connections will be in accordance with state, local, and PG&E standards and would not result in the need for the construction or expansion of utility facilities. Therefore, impacts would be less than significant.

4.19.2.6 Telecommunications

Telecommunication will be through existing company and personal cell phones. No new telecommunication facilities will be required to serve the Project.

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 impact.

Refer to Item a) above. The Project will 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) 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.

Refer to Item a) above. The Project will 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
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 (2021a), the estimated solid waste generation rates for residents is 2.9 pounds per resident per day. Based on this information and an anticipated 496 additional residents to the area at full operation of the Project, the Project would produce approximately 1,438 lbs/day or 262.4 tons annually.

The Proposed Project's annual solid waste of 262.4 tons represents a 2.15-percent increase in solid waste from the City of Suisun, and a 0.06-percent increase countywide. According to the Environmental Protection Agency Volume-to-Weight Conversion Factors, compacted municipal solid waste (MSW) at a large landfill facility, with best management and cover practices, has an estimated one ton per cubic yard conversion factor. Therefore, the Proposed Project's annual waste of 262.4 tons would convert to roughly 262.4 cubic yards of MSW, which represents approximately 0.002 percent of the total remaining PHL maximum capacity. Additionally, the Proposed Project is subject to 2035 General Plan policies, such as Policy CFS-9.2 and CFS-9.5 which require new developments to demonstrate adequate capacity to accommodate solid waste demands, and to incorporate exterior storage areas for solid waste. Compliance with the aforementioned 2035 General Plan policies and the rules and regulations promulgated by the PHL, the Project would not substantially increase solid waste generated and disposed of by the City or County. 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.

The Proposed Project is required to comply with all local, state, and federal statutes regarding solid waste, including Section 8.10, Recyclable Materials, of the City Municipal Code. No operations-generated acutely toxic or otherwise hazardous materials are expected to be generated by the proposed residential Project. This impact is considered less than significant.

4.19.3 Mitigation Measures

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

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 Site is relatively flat and dominated by vacant undeveloped land. As discussed in Section 4.8, the Project Site is not subject to the threat of significant wildland fires, according to the City's Local Hazard Mitigation Plan. Fire Hazard Severity Zone mapping is performed by the Cal-Fire and is based on factors such as fuels, terrain, and weather. According to the Cal-Fire Fire Hazard Severity Zone mapping, no unique or significant fire hazards exist in the Project Site, nor is the Project Site within a state or federal responsibility area (CAL FIRE 2008).

4.20.2 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 2008). 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 (CAL FIRE 2009). Also, the Project Site is not located in a state responsibility area (CAL FIRE 2008). 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 2008). 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 2008). The Project would have no impact in this area.

4.20.3 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 impact.

Section 4.4 Biological Resources describes how the Proposed Project has the potential to impact protected birds including Swainson's Hawk and Burrowing owl. However, with the implementation of mitigation measures **BIO-1** and **BIO-2**, these potential impacts to biological resources will be reduced to a less than significant level.

Sections 4.5 Cultural Resource and 4.18 Tribal Cultural Resources describes the potential that the Proposed Project has to impact subsurface deposits believed to be cultural or human in origin. However, with the implementation of mitigation measure **CUL-1**, these potential impacts to biological resources will be reduced to a less than significant level.

Section 4.7 Geology and Soils describes how the Proposed Project has the potential to impact paleontological or sensitive geologic resources. However, with the imposition of mitigation measure **GEO-1**, potential impacts to geological and/or paleontological resources will be reduced to a less than significant level.

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, with implementation of Suisun City 2035 General Plan Policies and Programs, compliance with local, state, and federal rules and regulations, and implementation of BMPs where applicable and as proposed in the relevant subsections of this IS/MND, these potential impacts would be reduced to a level that is considered less than significant.

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 impact.

Direct and indirect impacts to human beings would be less than significant. As explained under item a) above, the Project has the potential to have a substantial adverse impact on the environment. However, none of these potential impacts would directly or indirectly impact human beings. The Project has no other potentially significant impacts. As such, the Project has a less than significant impact in this area.

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5.0 LIST OF PREPARERS

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LIST OF ATTACHMENTS

Attachment 4.3: Air Quality & Greenhouse Gas Emissions Assessment, Marina Village - Housing Project, ECORP Consulting, Inc., September 2021

Attachment 4.4: Biological Report for Marina Village Project, Suisun City, CA LSA Associates, Inc., September 10, 2020

Attachment 4.6: Energy, Total Construction-Related and Operational Gasoline Usage, ECORP Consulting, Inc., September 2021

Attachment 4.7: Geotechnical Investigation: Marina Village, 201 Marina Boulevard, Suisun City, California, Geocon Consultants, Inc., April 2021

Attachment 4.13: Noise Impact Assessment Marina Village Housing Project, ECORP Consulting, Inc., September 2021

Attachment 4.17: Technical Memorandum, Marina Village Project Traffic Study & VMT Analysis GHD Transportation, , August 20, 2021

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