Blossom Avenue Apartments Project

Initial Study/Mitigated Negative Declaration

File Nos. SP/AR 20/1-001 and CUP 20/1-001

April 21, 2021

Prepared for:

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

Prepared by:

Stantec Consulting Services Inc.
1340 Treat Boulevard, Suite 300
Walnut Creek, California 94597

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Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ABAG	Association of Bay Area Governments
AEI	AEI Consultants
Air Basin	San Francisco Bay Area Air Basin
ALS	advanced life support
applicant	FPA Multifamily, LLC
AP Zone Act	Alquist-Priolo Special Studies Zone Act of December 1972
AQP	Air Quality Plan
ATCM	air toxic control measures
BAAQMD	Bay Area Air Quality Management District
BAC	Bollard Acoustical Consultants
Basin Plan	San Francisco Bay Basin Water Quality Control Plan
bgs	below ground surface
BMP	Best Management Practice
BO	Biological Opinion
BRTR	Biological Resources Technical Report
CAAQS	California Ambient Air Quality Standards
CALGreen	California Green Building Standards Code
CALFIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CH_4	Methane
CHRIS	California Historical Resources Information System
City	City of Suisun City
Clean Air Plan	2017 Clean Air Plan, Spare the Air, Cool the Climate
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide

CO_2e	carbon dioxide equivalent
CRPR	California Rare Plant Rank
CUP	Conditional Use Permit
CWA	Clean Water Act
CY	cubic yards
dB	decibel
dB(A)	A-weighted decibels
DOC	California Department of Conservation
DPM	diesel particulate matter
ECORP	ECORP Consulting, Inc.
EIR	Environmental Impact Report
EO	Executive Order
ESL	Environmental Screening Level
˚F	Fahrenheit
FCAA	Federal Clean Air Act
FEMA	Flood Emergency Management Agency
FESA	Federal Endangered Species Act
FSSD	Fairfield-Suisun Sewer District
FSURMP	Fairfield-Suisun Urban Runoff Management Plan
FSUSD	Fairfield-Suisun Unified School District
General Plan EIR	General Plan Environmental Impact Report
GHG	greenhouse gas
gpd	gallons per day
gpy	gallons per year
HB	home-based
in/sec	inches per second
IPac	Information, Planning, and Consultation System
ISMND	Initial Study Mitigated Negative Declaration
lbs/day	pounds per day
L_{dn}	day-night sound level
L_{eq}	equivalent sound level
Leq-1-hr	hourly equivalent sound level
L_{min}	minimum sound levels
L_{max}	maximum sound levels
LUCP	Land Use Compatibility Plan
MBTA	Migratory Bird Treaty Act
MG	million gallons
mgd	million gallons per day

MLD	most likely descendant
MMTCO2e	million metric tons of carbon dioxide equivalent
MRZ	Mineral Resource Zone
$MTCO_2e$	metric tons of carbon dioxide equivalent per year
$MTCO_2e/SP/yr$	metric tons of carbon dioxide equivalent per service population per year
N_2O	Nitrous Oxide
NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide
NO_x	Nitrogen oxides
NOA	naturally occurring asbestos
NPDES	National Pollutant Discharge Elimination System
nsf	net square feet
NWIC	Northwest Information Center
OCP	organochlorine pesticide
OITC	Outdoor/Indoor Transmission Class
OPR	Governor's Office of Planning and Research
PG&E	Pacific Gas and Electric Company
PJD	Preliminary Jurisdictional Determination
PM	particulate matter
$PM_{2.5}$	particulate matter 2.5 microns in diameter or less
PM_{10}	particulate matter 10 microns in diameter or less
ppb	part per billion
ppm	part per million
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	Blossom Avenue Apartments Project
RCNM	Roadway Construction Noise Model
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCFD	Suisun City Fire Department
SCPD	Suisun City Police Department
SCWA	Suisun City Water Agency
SGC	Solano Garbage Company
SID	Solano Irrigation District
SIP	State Implementation Plan
SMCHP	Solano Multispecies Habitat Conservation Plan

SO_2	Sulfur dioxide
SR	State Route
SSWA	Suisun-Solano Water Authority
Stantec	Stantec Consulting Services Inc.
State Procedures	*State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*
STC	Sound Transmission Class
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminant
TCP	traffic control plan
Technical Advisory	*Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*
tpy	tons per year
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
UWMP	Urban Water Management Plan
VdB	vibration decibel
VMT	vehicle miles travelled
WDR	Waste Discharge Requirement

INITIAL STUDY MITIGATED NEGATIVE DECLARATION

Project Title: Blossom Avenue Apartments Project

Project Description: FPA Multifamily, LLC (applicant), is proposing the Blossom Avenue Apartments Project (proposed project) in the City of Suisun City (City). The proposed project involves the development of an approximately 9.09-acre infill site near the southeast intersection of Blossom Avenue and Railroad Avenue. The proposed project would include the construction of a garden-style apartment complex that consists of nine separate three-story buildings, totaling approximately 169,728 net square feet (nsf). The proposed buildings would provide 180 multi-family units total with a mix of one-, two-, and three-bedroom units. The proposed complex would also include a one-story community building of approximately 3,900 square feet and approximately 22,930 square feet of common open space consisting of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area. Additionally, the proposed project would include the construction of on- and off-site utility infrastructure, covered surface parking, driveways, frontage improvements, and landscaping.

Name of Lead Agency:
City of Suisun City
701 Civic Center Boulevard
Suisun City, California 94585

Lead Agency Contact Information:
John Kearns, Senior Planner
Phone: (707) 421-7337
Email: jkearns@suisun.com

Determination: The City of Suisun City has determined that a) all potentially significant or significant impacts required to be identified in the Initial Study Mitigated Negative Declaration (ISMND) have been identified and analyzed; and b) with respect to each significant impact on the environment either of the following apply: 1) changes or alterations have been required in or incorporated into the proposed project that avoid or mitigate the significant impacts to a level of less than significant; or 2) those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency. The ISMND and supporting documents are available at the City of Suisun City by appointment, located at 701 Civic Center Boulevard, and online by searching the project name at: https://www.suisun.com/departments/development-services/planning/

By: _____ Date: 4/19/2021

John Kearns, Senior Planner

1.0 INTRODUCTION

FPA Multifamily, LLC (applicant), is proposing the Blossom Avenue Apartments Project (proposed project) in the City of Suisun City (City). The proposed project involves the development of an approximately 9.09-acre infill site near the southeast intersection of Blossom Avenue and Railroad Avenue. The proposed project would include the construction of a garden-style apartment complex that consists of nine separate three-story buildings totaling approximately 169,728 net square feet (nsf). The proposed buildings would provide 180 multi-family units total with a mix of one-, two-, and three-bedroom units. The proposed complex would also include a one-story community building of approximately 3,900 square feet and approximately 22,930 square feet of common open space consisting of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area. Additionally, the proposed project would include the construction of on- and offsite utility infrastructure, covered surface parking, driveways, frontage improvements, and landscaping.

1.1 PROJECT TITLE

Blossom Avenue Apartments Project

1.2 LEAD AGENCY

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

1.3 LEAD AGENCY CONTACT

John Kearns, Senior Planner
Phone: (707) 421-7337
Email: jkearns@suisun.com

1.4 PURPOSE

The purpose of the proposed project is to allow for the development of a multi-family apartment complex on a 9.09-acre site located in the City of Suisun City, California. This Initial Study/Mitigated Negative Declaration (ISMND) has been prepared to evaluate the proposed project for potential environmental effects in compliance with the California Environmental Quality Act (CEQA). The City is the Lead Agency under CEQA and has the principal responsibility for carrying out or approving a project that may have a significant effect on the environment. This ISMND has been prepared in anticipation of determining that all potentially significant impacts from implementing the proposed project can be mitigated to less than significant levels. This document has been prepared in accordance with CEQA, Public Resources Code (PRC) Section 21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR), Title 14, Section 15000 et seq.

1.5 PROJECT LOCATION

The project site is located in the northern portion of Suisun City in Solano County, California (Figure 1.5-1). The project site is bordered by Blossom Avenue to the west and Railroad Avenue to the north, which defines the City's northern boundary with the City of Fairfield (Figure 1.5-2). This portion of the City primarily consists of residential uses. The City's downtown and waterfront are about 1.5 miles southwest of the project site, and the Travis Air Force Base is about 2.5 miles to the east.

1.6 EXISTING SETTING AND SURROUNDING LAND USES

The 9.09-acre project site consists of a single parcel identified as Assessor's Parcel Number 0037-130-010. Based on review of aerial photographs, the project site was historically used for agricultural purposes and has remained vacant since 1974 (AEI 2020a). It is mostly covered in non-native grasses and fenced along the eastern and southern sides from the adjacent residential and self-storage properties. The property primarily extends over generally flat terrain with the site elevation ranging from approximately 32 to 36 feet above mean sea level.

The project site is within a suburban residential area and surrounded primarily by single-family residences to the south, east, and west. Other land uses surrounding the project site include a self-storage facility, an auto-body shop, and multi-family residences to the east, and residential and commercial uses to the west. Additionally, the Union Pacific Railroad (UPRR) is about 75 feet north of the project site and runs parallel to Railroad Avenue. The railroad extends through the City and serves both major freight and Amtrak trains. Beyond the railroad tracks, land uses mostly consist of single-family residential development located within the City of Fairfield.

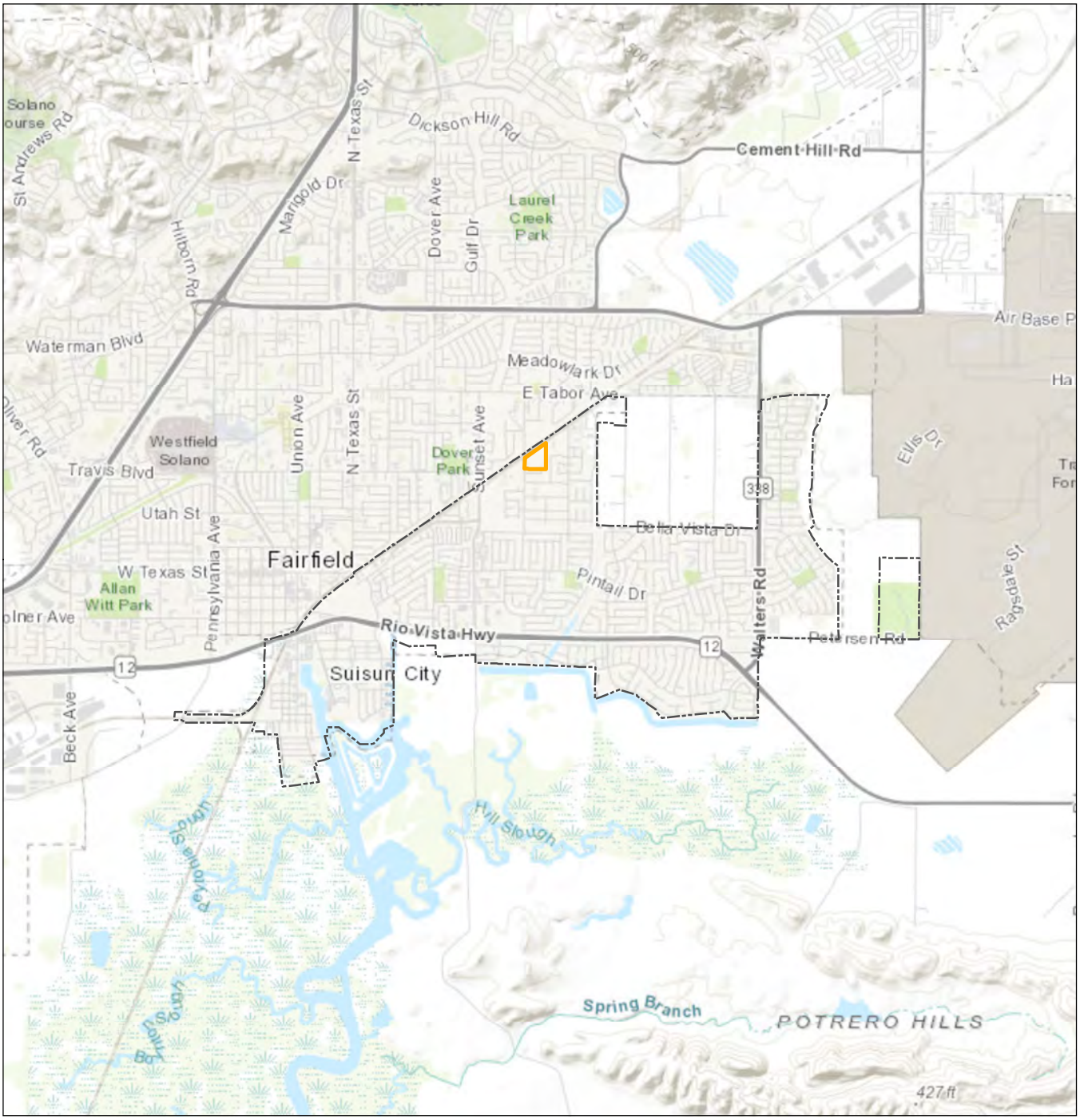
1.7 GENERAL PLAN DESIGNATION AND ZONING

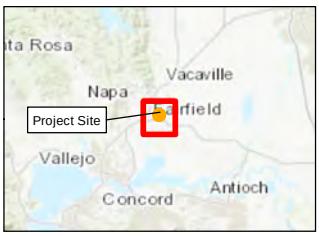
1.7.1 Land Use Designation

The project site is designated Medium-Density Residential by the General Plan. The Medium-Density Residential land use designation is intended to provide for attached and detached single-family residences of all types, including small-lot and zero-lot line homes, 'pull-apart' style and attached townhomes, clustered homes around a courtyard, "six-pack" lots, and other designs. It also provides for garden apartments, rowhouses, townhomes, condominium projects in different configurations and other types of single- and multi-family housing, second accessory units, public services and facilities, live-work units, home occupations, and other compatible uses (Suisun City 2015a).

1.7.2 Zoning

The project site is zoned Medium-Density Residential (RM). This zoning district is consistent with the Medium-Density Residential land use designation in the General Plan. It is applicable to parcels, where dwellings developed in the 10.1 to 20 dwelling units per gross acre range, are the primary land use. Residential dwelling types in the Medium-Density Residential zoning district may include single-family detached dwellings on small lots, two-family dwellings (duplexes or duets), townhomes (attached and detached), or condominiums (Suisun City 2020a). Multi-family apartments are permitted in the Medium-Density Residential zoning district with approval of a Conditional Use Permit (CUP).





Legend

- Project Site
- City Boundaries

0 0.5 1 Miles
(At original document size of 8.5x11)
1:60,000

N

Notes

1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2.Source: Solano County 2020

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Project Location
Suisun City, CA

Prepared by KJ on 2021-01-27

Client/Project
City of Suisun City
Blossom Avenue Apartments Project
ISMND

Figure No.
1.5-1

Title
Regional Location

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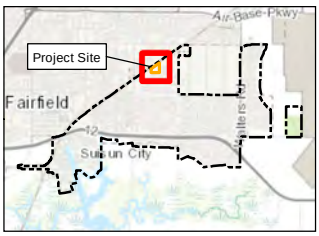

Legend

Project Site

0 200 400 Feet

(At original document size of 8.5x11)
1:197,394

N

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Notes

1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2.Source: Solano County 2020

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Project Location
Suisun City, CA

Prepared by KJ on 2021-01-27

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Figure No.
1.**5-2**

Title
Project Site Location

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1.8 CEQA AND PUBLIC AND AGENCY REVIEW

CEQA requires that project proponents disclose the significant impacts to the environment from proposed development projects. The intent of CEQA is to foster good planning and to consider environmental issues during the planning process. The City is the Lead Agency under CEQA for the preparation of this ISMND. CEQA Guidelines (Section 21067) define the Lead Agency as: "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." Approval of the proposed project is considered a public agency discretionary action, and therefore is subject to compliance with CEQA. The City has directed the preparation of an analysis to comply with CEQA.

Stantec Consulting Services Inc. (Stantec) has prepared this document at the direction of the City. The purpose of this document is to disclose the environmental consequences of implementing the proposed project to decision-makers and the public. The public, City residents, and other local and state resource agencies will be given the opportunity to review and comment on this document during a 30-day public-review period. Comments received during the review period will be considered by the City prior to certification of this ISMND and project approval.

The public review period will commence on April 21, 2021 and end on May 20, 2021, pursuant to CEQA Guidelines Section 15105. If you wish to send written comments (including via e-mail), they must be received by 5:00 p.m. on May 20, 2021. Written comments should be addressed to the following:

John Kearns, Senior Planner
Phone: (707) 421-7337
Email: jkearns@suisun.com

The ISMND and supporting documents are available at the City of Suisun City Planning Department by appointment, located at 701 Civic Center Boulevard, Suisun City, California 94585, and online at the following URL: https://www.suisun.com/departments/development-services/planning/

1.9 REQUIRED PERMITS AND APPROVAL

The City, as the Lead Agency, would use this ISMND to evaluate the potential environmental impacts of the proposed project. Anticipated approvals and actions may include but are not limited to the following:

- Adoption of ISMND: City of Suisun City
- Conditional Use Permit (CUP 20/1-001): City of Suisun City
- Site Plan/Architectural Review (SP/AR 20/1-001): City of Suisun City

Other ministerial approvals, such as building-related permits and City encroachment permits, are also anticipated. Additionally, the proposed project would be subject to the Suisun City Municipal Code including the Zoning Code, Building Code, and Fire Code.

1.10 SCOPE OF THIS INITIAL STUDY

As the Lead Agency under CEQA, the City is responsible for compliance with the environmental review process prescribed by the CEQA Guidelines. This ISMND focuses on the environmental issues identified as potentially significant in the CEQA checklist and by the CEQA Guidelines. This ISMND evaluates the

1.10 SCOPE OF THIS INITIAL STUDY

As the Lead Agency under CEQA, the City is responsible for compliance with the environmental review process prescribed by the CEQA Guidelines. This ISMND focuses on the environmental issues identified as potentially significant in the CEQA checklist and by the CEQA Guidelines. This ISMND evaluates the potentially significant effects on the environment and identifies mitigation measures to reduce the effects to a point where clearly no significant effect on the environment would occur.

The following technical studies were conducted and reviewed in preparing this ISMND: air quality modeling outputs and a qualitative health risk assessment, a biological resources assessment, a cultural resources inventory report, a geotechnical engineering report, phase I and phase II environmental site assessments, a railroad and traffic noise assessment, and a vehicle miles travelled (VMT) memorandum. These studies and supporting data are included as appendices to this document and referred to, where appropriate, throughout this document.

1.11 DOCUMENT ORGANIZATION

This ISMND is organized as follows:

Section 1.0: Introduction. This section introduces the proposed project and describes the purpose and organization of this document.

Section 2.0: Project Description. This section provides and overview of the proposed project, project characteristics, and construction activities.

Section 3.0: Environmental Checklist and Environmental Evaluation. This section presents an analysis of the range of environmental issues identified in the CEQA Environmental Checklist and determines whether the proposed project would result in no impact, a less than significant impact, a less than significant impact with mitigation incorporated, or a potentially significant impact for each topic. If impacts are determined to be potentially significant after incorporation of applicable mitigation measures, an Environmental Impact Report (EIR) would be required. For this proposed project, mitigation measures have been incorporated, where needed, that would reduce all potentially significant impacts to a less than significant level.

Section 4.0: References. This section lists the references used in preparing this ISMND.

Section 5.0: List of Preparers. This section identifies the report preparers.

2.0 PROJECT DESCRIPTION

The proposed project involves the development of a garden-style apartment complex on an approximately 9.09-acre infill site. The proposed project would construct nine separate three-story buildings, totaling approximately 169,728 nsf. The proposed buildings would consist of three different building configurations and would provide 180 multi-family units with a mix of one-, two-, and three-bedroom units. The proposed project would also include a one-story community building of approximately 3,900 square feet and approximately 22,930 square feet of common open space. The common open space areas would consist of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area. Additionally, the proposed project would construct on- and off-site utility infrastructure, covered and uncovered surface parking, driveways, frontage improvements, and landscaping. The project site plan is shown in Figure 2.1-1.

2.1 PROJECT CHARACTERISTICS

2.1.1 Garden-Style Apartment Complex

The proposed project would provide 180 multi-family apartment units on 9.09 acres, resulting in a density of 19.8 units per acre in accordance with the development standards of the Medium-Density Residential zoning district. The proposed apartment units would be market-rate, work-force/entry-level housing available for rent. The proposed apartment complex would have frontage on Railroad Avenue, but would primarily be accessed from a new driveway on Blossom Avenue.

The proposed apartment complex would consist of nine multi-family residential buildings, totaling approximately 169,728 nsf. The proposed buildings would consist of three different building configurations, with four buildings constructed as Building Type 1, three buildings constructed as Building Type 2, and two buildings constructed as Building Type 3. Each building would be three stories tall with a maximum height of 42 feet, 6 inches. The proposed buildings would provide a total of 180 multi-family units comprised of 60 one-bedroom/one-bath units, 96 two-bedroom/two-bath units, and 24 three-bedroom/three-bath units. The proposed units would range in size from approximately 704 to 1,301 square feet. Table 2.1-1 provides the number of units and associated square footages for each building configuration. Elevations of the three different building configurations are shown in Figure 2.1-2.

Table 2.1-1: Proposed Building Configuration Types and Number of Units

Building Configuration Type[1]	Unit Net Square Feet	Number of Units per Building	Total Number of Units	Total Net Square Feet
Building Type 1				
One-bedroom/One-bath	704	12	48	33,792
Two-bedroom/ Two-bath	981	12	48	47,088
Subtotal			**96**	**80,880**
Building Type 2				
Two-bedroom/ Two-bath	981	6	18	17,658
Two-bedroom/ Two-bath	1,099	6	18	19,782
Subtotal			**36**	**37,440**

Building Configuration Type[1]	Unit Net Square Feet	Number of Units per Building	Total Number of Units	Total Net Square Feet
Building Type 3				
One-bedroom/One-bath	704	6	12	8,448
Two-bedroom/ Two-bath	978	6	12	11,736
Three-bedroom/ Three-bath	1,301	12	24	31,224
Subtotal			**48**	**51,408**
Proposed Project Total			**180**	**169,728**

Notes:

[1] The proposed nine buildings would consist of three building configurations with four buildings as Building Type 1, three buildings as Building Type 2, and two buildings as Building Type 3.

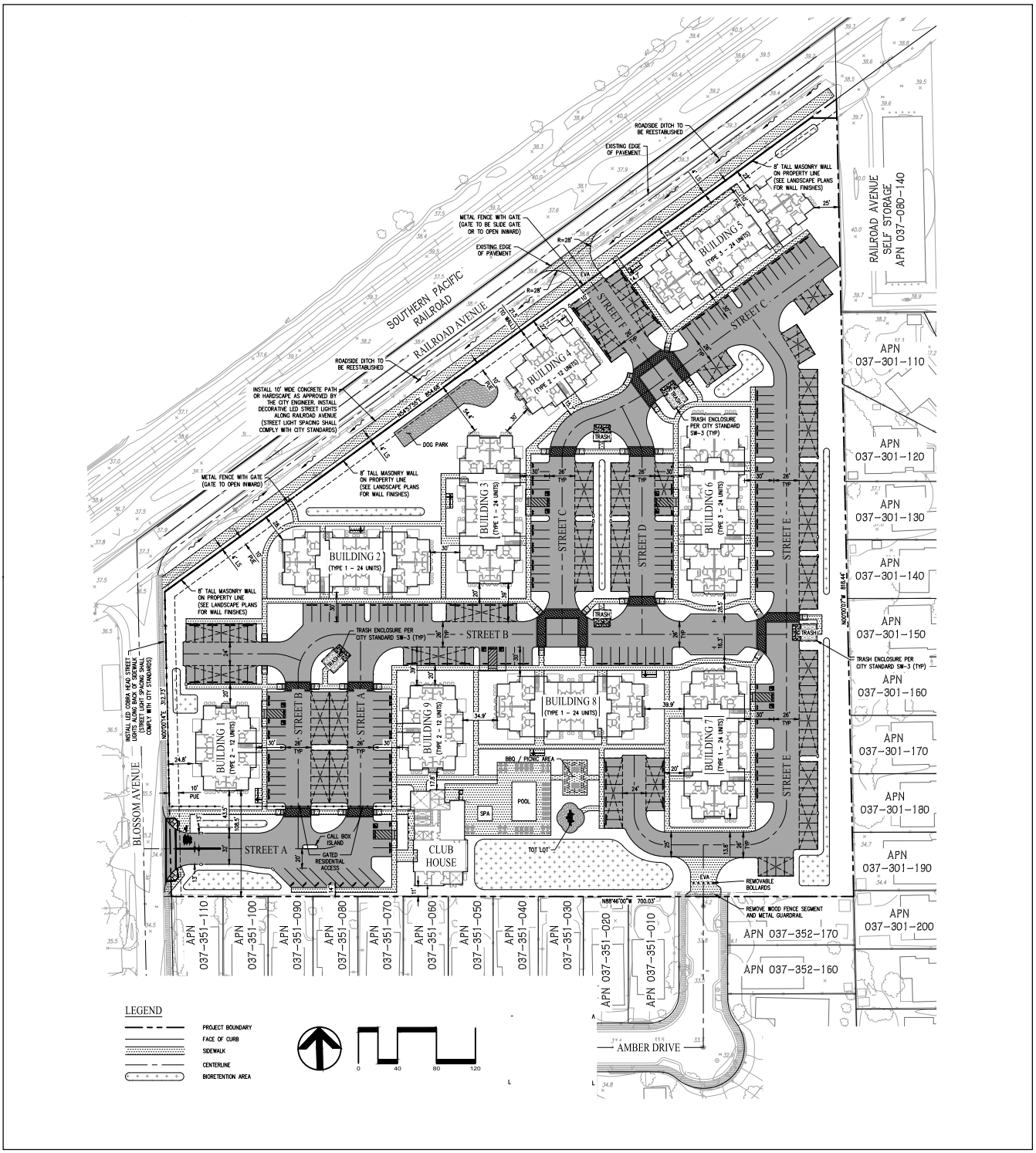
2.1.2 Community Building and Open Space Areas

The proposed project would construct an onsite community building, and common and private open space areas for residents. The community building would be a one-story building, approximately 25 feet tall, located near the project site's southern boundary (Figure 2.1-3). It would be approximately 3,900 square feet and would include a fitness room, a club/leasing area, a mail room, restrooms, a pool equipment room, a maintenance room, and two offices for onsite management and operations personnel. Common open space areas would be provided throughout the project site (Figure 2.1-4). These areas would consist of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area totaling approximately 22,930 square feet. Each apartment unit would also have a private balcony area or ground patio ranging from approximately 54 to 70 square feet for outdoor recreation opportunities.

2.1.3 Employment and Future Residents Estimate

The City's average household size is 3.1 people per household (Suisun City 2015b). Based on this average household size the proposed project would result in 558 residents if fully occupied. However, the proposed project would include a combination of one-, two-, and three-bedroom units. Based on the mix of units, the proposed project would likely result in less than 558 residents, and therefore this number represents a conservative approach.

In addition, it is anticipated that up to six staff would work at the project site. The six staff members are anticipated to be a part of the local labor force and would provide onsite management and operations support for the proposed project. With the addition of staff, the proposed project's total population would be 564.



Source: CBG 2021

Stantec

Project Location
Suisun City, CA

Prepared by KJ on 2021-04-16

Client/Project
City of Suisun City
Blossom Avenue Apartments Project
ISMND

Figure No.
2.1-1

Title
Project Site Plan

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BUILDING TYPE 1 FRONT ELEVATION

BUILDING TYPE 2 FRONT ELEVATION

BUILDING TYPE 3 FRONT ELEVATION

Source: AO Architects 2020

Stantec

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Blossom Avenue Apartments Project
ISMND

Figure No.
2.1-2

Title
Proposed Building Elevations

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COMMUNITY BUILDING FRONT ELEVATION

COMMUNITY BUILDING REAR ELEVATION

Source: AO Architects 2020

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Suisun City, CA

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City of Suisun City
Blossom Avenue Apartments Project
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Figure No.
2.1-3

Title
Proposed Community Building Elevation

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Source: AO Architects 2020

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Suisun City, CA

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City of Suisun City
Blossom Avenue Apartments Project
ISMND

Figure No.
2.1-4

Title
Open Space Areas and Landscaping

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2.1.4 Access and Circulation

Primary access to the project site would be via a new 32-foot-wide two-way driveway on Blossom Avenue. Additionally, the proposed project would construct two emergency access driveways on the north and south sides of the project site at Railroad Avenue and Amber Drive, respectively. These access points would meet the City's requirements for fire apparatus access. New private streets, ranging from 25 to 26 feet, would be constructed to provide internal vehicular access within the site. The private driveway on Blossom Avenue would be 32 feet wide, but the two emergency access driveways on the north and south sides of the project site would be 26 feet wide to allow emergency vehicles to access the project site (Figure 2.1-5). The two emergency access points would only be used for emergency ingress and egress from the project site. If not in use, the emergency access driveways would either be gated or secured with removable bollards. The main entrance on Blossom Avenue would be gated and equipped with a computerized system for security. As shown on Figure 2.1-1, the proposed project would also include the construction of an off-site concrete path (sidewalk) along the frontage of Railroad Avenue within the City's right-of-way. The off-site concrete path would be about 10 feet wide and connect to the existing sidewalk along the east side of Blossom Avenue. The City would maintain the concrete path once constructed.

2.1.5 Parking

The proposed project would provide parking in accordance with the parking ratios defined in Section 18.42.110 of the Suisun City Municipal Code for one-, two-, and three-bedroom units. As shown in Table 2.1-2, the proposed project would be required to provide 297 parking spaces consisting of 180 covered spaces for residents and 117 uncovered/guest spaces. The proposed project would exceed the City's parking ratio requirements and would provide 320 surface parking spaces consisting of 183 covered (carport) spaces for residents and 137 uncovered/guest spaces. The roof of the covered parking spaces would be designed to allow for installation of photovoltaic panels. Additionally, the proposed project would reserve 18 parking spaces for electric vehicles, 6 of which would be fully equipped with electric vehicle charging stations.

Table 2.1-2: Parking Requirements

Unit Type	Number of Units	Ratio (Stall/Dwelling Unit)			Number of Spaces Required		
		Covered	Guest	Uncovered	Covered	Guest	Uncovered
One-bedroom	60	1	0.25	0	60	15	0
Two-bedroom	96	1	0.25	0.5	96	24	48
Three-bedroom	24	1	0.25	1	24	6	24
Subtotal	**180**	**--**	**--**	**--**	**180**	**45**	**72**
Total Spaces					**297**		

Source: Suisun City 2020a

The proposed project would also provide lockable, sheltered bicycle racks with up to 25 bicycle parking spaces. The bicycle parking spaces would be provided in the lower level "breezeways" at each residential structure.

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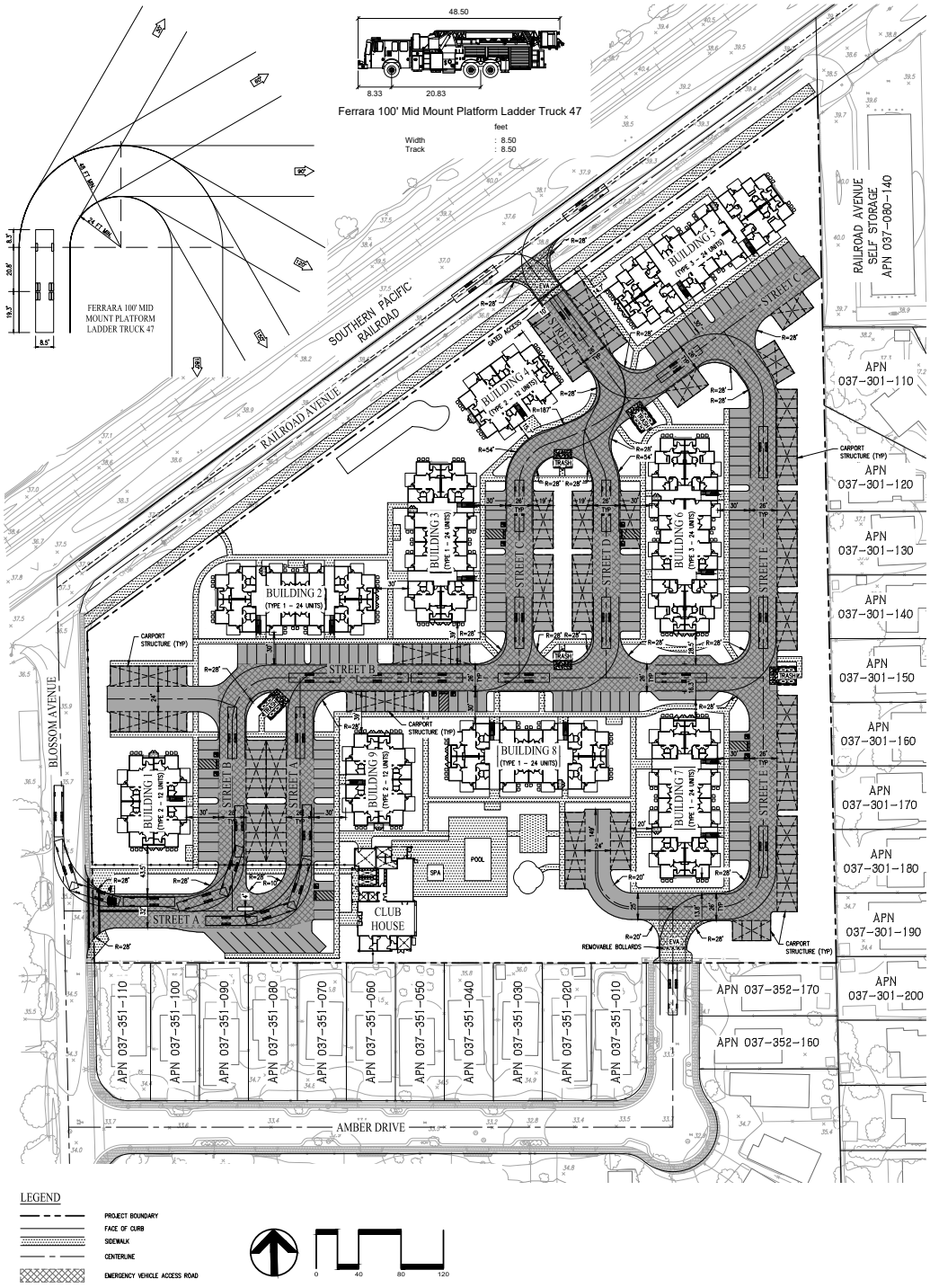

Source: CBG 2021

Stantec

Project Location
Suisun City, CA

Prepared by KJ on 2021-01-27

Client/Project
City of Suisun City
Blossom Avenue Apartments Project
ISMND

Figure No.
2.1-5

Title
Emergency Fire Access

\\A1857\Active\185705223\mxd\fig 2.1 project site plan template.mxd Revised: 2021-01-27 By: KAEJOHNSON

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2.1.6 Lighting

The proposed project would provide exterior lighting throughout the project site and would install new decorative streetlights between the concrete path and Railroad Avenue. Exterior lighting would be provided to illuminate the building entrances, walkways, driveways, parking areas, and site frontages for security and safety purposes. The exterior lighting fixtures would be directed downward and shielded in accordance with the City's outdoor lighting requirements (Section 18.42.040 of the Suisun City Municipal Code) to avoid light trespass, and minimize the potential for glare or spillover onto adjacent properties and the public right-of-way. All exterior lighting would be compliant with Title 24 California Green Building Standards (CALGreen) requirements.

2.1.7 Utilities

The proposed project would include utility connections in accordance with the requirements of the applicable utility providers for water, wastewater, stormwater drainage, power, and telecommunications services. These utilities would be installed as part of the initial construction and connect to the existing infrastructure in the vicinity of the site.

Water Supply

The project site is within the boundary of the Solano Irrigation District and the Suisun-Solano Water Authority but is currently not served potable water. To provide potable water to the project site, the proposed project would involve the construction of an 8-inch water main. The 8-inch water main would connect to the existing 8-inch water main in Amber Drive, which would ultimately connect to an existing 12-inch water main in Blossom Avenue and the 12-inch water main in Railroad Avenue. All water distribution improvements for the proposed project would be constructed and designed in accordance with the latest Suisun-Solano Water Authority design standards as well as with Title 13, Chapter 13.04, Water, of the Suisun City Municipal Code.

It is estimated the proposed apartment complex and community building would require approximately 150 gallons per day (gpd) per dwelling unit, totaling approximately 27,150 gpd or 9,909,750 gallons per year (gpy) (Russell Shaw, Personal Communication, February 11, 2021). The Suisun-Solano Water Authority (SSWA) provided a will serve letter for the proposed project on August 26, 2020 (Appendix A). The letter determined that the proposed project is consistent with the General Plan land use designation and SSWA's 2021 Water System Design Review. Therefore, the SSWA confirmed that there would be sufficient potable water supply to serve the proposed project.

Wastewater

The proposed project would receive sewer service from the Fairfield-Suisun Sewer District (FSSD). The proposed project would likely involve the construction of a 6-inch sewer lateral for each building, which would connect to an 8-inch sanitary sewer line within the project site. The 8-inch sanitary sewer line would then connect to the existing 8-inch sanitary sewer line in Blossom Avenue. All sewer distribution improvements for the proposed project would be constructed and designed in accordance with the City's Design and Construction Standards.

It is estimated wastewater generated by the proposed project would be equivalent to the amount of potable water required, totaling approximately 27,150 gpd or 9,909,750 gpy. FSSD provided a will serve

letter for the proposed project on August 19, 2020 (Appendix B). The letter confirmed that there would be adequate capacity to serve the proposed project's sewer connections.

Stormwater

The proposed project would be served by the City's stormwater system. The proposed project would result in approximately 249,700 square feet of onsite impervious surface and approximately 7,500 square feet of offsite impervious surface for frontage improvements (257,200 square feet total). Additionally, the proposed project would provide approximately 143,800 square feet of onsite pervious surface and approximately 22,500 square feet of off-site impervious surface (166,300 square feet total).

The proposed project would comply with the requirements of the Fairfield-Suisun Urban Runoff Management Program (FSURMP) Stormwater C.3 Guidebook and would propose to construct 11 bioretention areas totaling approximately 11,550 square feet, for the required treatment area of 6,950 square feet per the C.3 Guidebook. The bioretention areas would retain and treat stormwater prior to entering the stormwater system. Each bioretention area would be connected to either a 12-inch or an 18-inch storm drain line, which would either connect to the existing 30-inch storm drain line in Railroad Avenue or the 21-inch storm drain line in Amber Drive. The stormwater drainage facilities would be designed in accordance with the requirements of the City of Suisun City, including providing stormwater drainage calculation 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.

Electricity, Gas, and Telecommunications

Pacific Gas and Electric Company (PG&E) would provide electricity and natural gas services to the project site. AT&T and Comcast would provide telecommunication services to the project site. The proposed project would connect to the existing overhead utilities and natural gas line along Railroad Avenue. The project design would include energy conservation features to meet the state's Title 24 Energy Efficiency standards.

2.1.8 Landscaping

The proposed project would provide approximately 126,233 square feet of landscaping around the site perimeter, surface parking areas, residential buildings, and common open space areas (Figure 2.1-4). The landscape plantings would incorporate low-impact design features in accordance with the FSURMP Stormwater C.3 Guidebook. All proposed landscaping would consist of low water use plants to meet the City's Water Efficient Landscape Ordinance.

2.1.9 Aesthetics and Design

The project design would feature an American Craftsman architectural style with low-pitched roofs, mostly gabled with occasional hips; overhanging eaves with decorative brackets; and building exteriors with muted earth tone colors, such as green, brown, and taupe. As shown in Table 2.1-3, the proposed project has been designed in accordance with the applicable development standards for the Medium-Density Residential zoning district, as defined in Section 18.31 of the City's Zoning Code.

Table 2.1-3: Development Standards

Development Standards	Medium-Density (RM) Zoning District	Proposed Project
Front Setback (West)	10–20 feet	24 feet, 8 inches
Side Setback (North) Side Setback (South)	0–5 feet 0-5 feet	22 feet 11 feet[1]
Rear Setback (East)	5 feet	25 feet
Maximum Lot Coverage	80%	20%

Notes:

[1] Represents setback distance to the proposed community building, which would be a shorter distance compared to the setback distance of the proposed apartment buildings.

Source: Suisun City 2020a

The proposed buildings would be three-stories tall with a maximum building height of 42 feet, 6 inches. The maximum building height for the Medium-Density Residential zoning district is 35 feet. However, Section 18.38.040 of the Suisun City Municipal Code allows any building to exceed the height limit established for the zoning district (maximum of two additional stories) provided that the setbacks are increased proportionally. Based on the increased setbacks provided by the proposed project, the maximum building height allowed would be 55 feet pursuant to the requirements in Section 18.38.040 of the Suisun City Municipal Code. The proposed project would be subject to the City's Development Guidelines for Architecture and Site Planning, and would require site plan and architecture review (SP/AR 20/1-001) in accordance with Chapter 18.76 of the Suisun City Municipal Code. The proposed project would also require approval of a CUP (CUP 20/1-001).

Other project design features would include the placement of 6-foot hedges and screening trees along the eastern and southern boundaries of the project site, construction of an 8-foot-tall masonry sound wall along the northern boundary to attenuate noise generated from the railroad and adjacent roadways, and installation of a 6-foot-tall open visibility wrought iron style barrier along the western boundary. These site perimeter features would be constructed in accordance with Section 18.34, Fences and Walls, of the Suisun City Municipal Code.

2.2 PROJECT CONSTRUCTION

2.2.1 Construction Schedule

It is anticipated that construction of the proposed project would take approximately 18 months to complete, starting approximately in September 2021 and ending in May 2023. The anticipated construction schedule is shown in Table 2.2-1. The proposed project would be built sequentially with workers moving on to other buildings onsite as they complete each task. However, some tasks may overlap during the grading and building construction activities. It is anticipated that ancillary improvements would occur concurrently with the construction of the facilities.

Table 2.2-1: Construction Schedule

Construction Task	Start Date	End Date	Construction Working Days
Project Site			
Site Preparation	9/6/2021	10/15/2021	30
Grading	10/18/2021	5/25/2022	158
Building Construction	12/13/2021	5/24/2023	378
Paving	9/1/2022	9/30/2022	22
Architectural Coating	9/30/2022	5/24/2023	169
Off-site Improvements			
Site Preparation	5/26/2021	5/26/2021	1
Grading	5/27/2021	5/28/2021	2
Paving	5/29/2021	6/4/2021	5

Source: CalEEMod Version 2016.3.2 Blossom Avenue Apartments Project Construction Estimates

Typically, construction and grading activities of the proposed project would be consistent with the Suisun City Municipal Code and would occur between 7:00 a.m. to 6:00 p.m. Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturday. Construction and grading activities of the proposed project would not occur on Sundays or federal holidays. Some concrete pouring activities may need to occur before 7:00 a.m. and would require an exception from the City's chief building inspector (Suisun City 2020a). Construction materials and equipment would be delivered using trucks during daytime hours (between 7:00 a.m. and 6:00 p.m.). The construction worksite would be operated in accordance with applicable public health standards, including those required in response to the Coronavirus (COVID-19).

Depending on the construction phase, the number of temporary construction workers would range from approximately 75 to 85 workers per day, with an average of approximately 40 workers per day. It is anticipated that the construction workforce would be available from nearby areas.

2.2.2 Construction Equipment, Access, and Staging Areas

Construction workers would access the project site from Railroad Avenue and Blossom Avenue. All construction equipment and materials would be stored onsite. Project construction and grading activities are generally anticipated to occur within the project site. However, construction activities may extend to the centerlines of Railroad Avenue, Blossom Avenue, and Amber Drive to connect utility lines and other offsite improvements. Any offsite improvements that would require construction traffic, lane closures, or street staging would require an approved traffic control plan (TCP) and an encroachment permit from the City. Construction equipment anticipated onsite and for each phase is listed in Table 2.2-2.

Table 2.2-2: Proposed Construction Equipment

Phase Name	Equipment Type	Number of Equipment	Usage (hours/day)	Horsepower	Load Factor
Project Site					
Site Preparation	Rubber Tired Dozers	3	8	247	0.4
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	1	8	158	0.38

Phase Name	Equipment Type	Number of Equipment	Usage (hours/day)	Horsepower	Load Factor
	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	3	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38
Architectural Coating	Air Compressors	1	6	78	0.48
Off-site Improvements					
Site Preparation	Graders	1	8	187	0.41
	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Concrete/Industrial Saws	1	8	81	0.73
	Rubber Tired Dozers	1	1	247	0.40
	Tractors/Loaders/Backhoes	2	6	97	0.37
Paving	Cement and Mortar Mixers	4	6	9	0.56
	Pavers	1	7	130	0.42
	Rollers	1	7	80	0.38
	Tractors/Loaders/Backhoes	1	7	97	0.37

Source: CalEEMod Version 2016.3.2 Blossom Avenue Apartments Project Construction Estimates

2.2.3 Construction Activities

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. No pile driving is proposed.

Construction of the proposed project would involve approximately 22,000 cubic yards (CY) of earth movement. The proposed project would aim to balance the amount of soil on the site; however, the proposed project may require approximately 3,000 CY of imported soil. The maximum depth of excavation would be relatively shallow, but may extend to approximately 12 feet below ground surface (bgs) to trench utilities. The onsite and offsite project improvements would disturb approximately 10 acres and would result in approximately 257,200 square feet of impervious surface.

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3.0 ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

The environmental factors checked below would be potentially affected by this project, involving at least one impact that requires mitigation to reduce the impact from "Potentially Significant" to "Less Than Significant" as indicated by the checklist on the following pages.

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

Evaluation of Environmental Impacts

Section 3.0, Environmental Checklist and Environmental Evaluation, presents the environmental checklist form found in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures, if needed.

For the checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant and for which mitigation has not been identified. If any potentially significant impacts are identified, an EIR must be prepared. An ISMND cannot be used if there are potentially significant impacts that cannot be mitigated.

Less Than Significant with Mitigation Incorporated: This designation applies when applicable and feasible mitigation measures previously identified in prior applicable EIRs or in the General Plan and Energy Conservation Action Strategy Environmental Impact Report (General Plan EIR) have reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact" and, pursuant to Section 21155.2 of the PRC, those measures are incorporated into the ISMND.

This designation also applies when the incorporation of new project-specific mitigation measures not previously identified in prior applicable EIRs or in the General Plan EIR have reduced an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact".

Less Than Significant Impact: Any impact that would not be considered significant under CEQA, relative to existing standards.

No Impact: The proposed project would not have any impact.

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3.1 AESTHETICS

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?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
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?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Environmental Setting

Visual Character of the Project Site

The project site is currently vacant and located in the northern portion of the City within a suburban residential area. The project site is bordered by Railroad Avenue to the north, single-family residences to the south and east, and Blossom Avenue to the west. Other land uses surrounding the project site include a self-storage facility, multi-family residences, an auto-body shop, and commercial development. Additionally, the UPRR is about 75 feet north 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.

Scenic Resources

There are no officially designated state scenic highways within the City (Suisun City 2015c; Caltrans 2021). The General Plan identifies views of the Suisun Marsh, the Coastal Range, Cement Hill, the Potrero Hills, and the Vaca Mountains as important local scenic resources (Suisun City 2015c). These local scenic resources are located in the northern, southern, and western portions of the City and within 1.5 to 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.

Light and Glare Conditions

The project site is vacant, and therefore, no substantial light and glare sources exist onsite. Nighttime lighting immediately surrounding the project site consists of street lighting, headlights from vehicles using

Blossom Avenue and Railroad Avenue, and interior and exterior lighting associated with the adjacent residential and commercial developments.

3.1.2 Methodology

Analysis of the project's visual impacts is based on an evaluation of the changes to the existing visual resources that would result from implementation of the proposed project. In determining the extent and implications of the visual changes, consideration was given to the following: the existing visual quality of the affected environment; specific changes in the visual character and quality of the affected environment; the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration; and the sensitivity of viewers and their activities, and the extent to which these activities are related to the aesthetic qualities affected by the proposed project.

3.1.3 Environmental Impact Analysis

This section discusses the potential impacts on aesthetics associated with the proposed project and provides mitigation measures where necessary.

Impact AES-1 Have a substantial adverse effect on a scenic vista?

Impact Analysis

According to the General Plan, views of the Suisun Marsh, the Coastal Range, Cement Hill, the Potrero Hills, and the Vaca Mountains are considered important local scenic resources (Suisun City 2015a). These resources are located in the northern, western, and southern portions of the City and are about 1.5 to 10 miles from the project site. The project site is within a suburban setting that is primarily built out with residential development and some commercial uses. As a result, views of the Suisun Marsh and Potrero Hills are not visible from the project site, and views of the Coastal Range, Cement Hill, and Vaca Mountains are mostly blocked by the surrounding development and vegetation. The proposed project would construct a garden-style apartment complex consisting of nine multi-family residential buildings, a 3,900-square-foot community building, and common and private open space areas for residents. The multi-family residential buildings would be three stories tall with a maximum height of 42 feet, 6 inches. The proposed community building would be one-story and approximately 25 feet tall. The proposed residential structures would be taller than the existing single-family residences in the area that range from one- to two-stories tall. However, the addition of the proposed residential structures would not further limit views of the Vaca Mountains, Cement Hill, or the Coastal Range as compared to existing conditions. Furthermore, while the maximum building height allowed for the Medium-Density Residential zoning district is 35 feet, Section 18.38.040 of the Suisun City Municipal Code allows for any building to exceed the height limit established for the zoning district provided that the setbacks are increased proportionally. As discussed in Section 2.1.9, Aesthetics and Design, based on the increased setbacks provided by the proposed project, the maximum building height allowed would be 55 feet. The proposed buildings would have a maximum building height of 42 feet, 6 inches and would be consistent with the requirements in Section 18.38.040 of the Suisun City Municipal Code. Additionally, the proposed project would require a CUP, and would be subject to the City's site plan and architecture review in accordance with Chapter 18.76 of the Suisun City Municipal Code. The site plan and architecture review process would ensure that the project design is compatible with the surrounding land uses. As such, the proposed project would not have a substantial adverse effect on a scenic vista, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AES-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Impact Analysis
There are no officially designated state scenic highways within the City (Suisun City 2015c; Caltrans 2021). The project site is vacant and does not contain vegetation, rock outcroppings, or historic buildings that are identified as scenic resources by the General Plan. Therefore, the proposed project would have no impact on scenic resources within a state scenic highway.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AES-3 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?

Impact Analysis
The project site consists of an infill site in a suburban residential area. It is bordered by Railroad Avenue to the north, single-family residences to the south and east, and Blossom Avenue to the west. Other land uses surrounding the project site include a self-storage facility, multi-family residences, an auto-body shop, and commercial development. Additionally, the UPRR is about 75 feet north 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 proposed project would include the development of a garden-style apartment complex consisting of nine multi-family residential buildings totaling approximately 169,728 nsf. The proposed buildings would consist of three different building configurations and would feature an American Craftsman architectural style with low-pitched roofs, mostly gabled with occasional hips; overhanging eaves with decorative brackets; and building exteriors with muted earth tone colors, such as green, brown, and taupe. Each building would be three stories tall with a maximum height of 42 feet, 6 inches (Figure 2.1-2). The proposed project would also include development of 3,900-square-foot community building. The

community building would be one-story and approximately 25 feet tall. It would incorporate an American Craftsman architectural style, consistent with the residential buildings.

The proposed project would be subject to the development standards for the Medium-Density Residential (RM) zoning district, which allows a maximum building height of 35 feet. However, Section 18.38.040 of the Suisun City Municipal Code allows any building to exceed the height limit established for the zoning district (maximum of two additional stories) provided that the setbacks are increased proportionally. Based on the increased horizontal setbacks provided by the proposed project, the maximum building height allowed would be 55 feet tall. The proposed buildings would have a maximum building height of 42 feet, 6 inches and would be consistent with the requirements in Section 18.30.040 of the Suisun City Municipal Code. The project design would also include placement of 6-foot hedges and screening trees along the eastern and southern boundaries of the site, a 6-foot-tall open visibility wrought iron style barrier along the western boundary of the site, and an 8-foot-tall masonry sound wall along the northern boundary to attenuate noise generated from the railroad and adjacent roadways. These features would be constructed in accordance with Section 18.34, Fences and Walls, of the Suisun City Municipal Code.

The proposed project would be required to comply with the City's Development Guidelines for Architecture and Site Planning. The proposed project would also require a CUP, and therefore would be subject to the City's site plan and architecture review in accordance with Chapter 18.76 of the Suisun City Municipal Code. The site plan and architecture review process would ensure that the project design is compatible with the surrounding land uses. As such, the proposed project would not degrade the existing visual character or quality of the site or its surroundings, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact AES-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact Analysis
The project site is vacant and does not currently contain any onsite sources of light or glare, but is within a suburban residential area that includes sources of nighttime lighting from streetlights, headlights from vehicles using Blossom Avenue and Railroad Avenue, train lights on the UPRR, and interior and exterior lights associated with the adjacent residential and commercial developments. Glare is generated in the project area from parked cars, passing cars, and windows on nearby buildings.

Activities during the project's construction phase would contribute additional light to the site, primarily due to reflection from equipment surfaces and the use of headlights and work lights if construction activities occur outside of daylight hours. However, construction activities would be temporary and would not substantially increase light levels in the project area. During operation, the primary sources of nighttime lighting would be from interior building and exterior lighting provided to illuminate the building entrances, walkways, driveways, parking areas, and site frontages for security and safety purposes. The proposed

project would also install new decorative streetlights between the concrete path and Railroad Avenue. All exterior lighting fixtures would be directed downward and shielded in accordance with the City's outdoor lighting requirements (Section 18.42.040 of the Suisun City Municipal Code) to avoid light trespass, and minimize the potential for glare or spillover onto adjacent properties and the public right-of-way. As required by General Plan Policy CCD-8.6, the proposed project would be designed to not include reflective surfaces that would cast glare toward pedestrians, bicyclists, or motorists. The proposed project would be subject to site plan and architecture review in accordance with Chapter 18.76 of the Suisun City Municipal Code, which requires submittal of an exterior lighting plan that indicates the size, orientation, location, height, and appearance of lighting fixtures. The site plan and architecture review would ensure that light and glare created by the proposed project would not affect day- or nighttime views in the area. Therefore, the proposed project would not create a new source of substantial light or glare, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.2 AGRICULTURE AND FORESTRY RESOURCES

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forestland (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))?	☐	☐	☐	☒
d)	Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
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 forestland to non-forest use?	☐	☐	☐	☒

3.2.1 Environmental Setting

The project site is in the northern portion of the City limits within a suburban residential area. It is currently vacant and bordered primarily by single-family residences to the south and east. Other land uses surrounding the project site include a self-storage facility, multi-family residences, an auto-body shop, and commercial development. Additionally, the UPRR is about 75 feet north of the project site and runs parallel to Railroad Avenue.

The California Department of Conservation (DOC) administers the Farmland Mapping and Monitoring Program, California's statewide agricultural land inventory. The DOC Farmland Mapping and Monitoring Program classifies agricultural land according to soil quality and irrigation status. As discussed in the General Plan EIR, there are no lands within the City limits designated as Important Farmland (e.g., Prime Farmland, Farmland of Statewide Importance, or Unique Farmland). Additionally, there are no lands within the City's limits that are contracted under the Williamson Act or zoned for forest land, timberland, or timberland production (Suisun City 2015c). The DOC Important Farmland Finder Map has designated 2,288 acres of land within the City limits as Urban and Built-Up Land, 118 acres as Grazing Land, and 218 acres as Other Land (Suisun City 2015c). According to the DOC Important Farmland Finder Map, the project site and adjoining lands are designated "Urban and Built-up Land," and therefore do not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2021).

3.2.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, and the DOC Important Farmland Finder Map.

3.2.3 Environmental Impact Analysis

This section discusses potential impacts on agriculture and forestry resources associated with the proposed project and provides mitigation measures where necessary.

Impact AG-1 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?

Impact Analysis
The project site is within the northern portion of the City limits and is currently vacant. As discussed in the General Plan EIR, none of the lands planned for development under the General Plan are designated Important Farmland (Suisun City 2015c). The DOC Important Farmland Finder Map classifies the project site and surrounding area as "Urban and Built-up Land" and do not contain agricultural resources (DOC 2021). As such, the proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-2 Conflict with existing zoning for agricultural use or a Williamson Act contract?

Impact Analysis
The project site is within the northern portion of the city limits and is currently vacant. According to the General Plan EIR, there are no lands within the city limits zoned for agricultural use or enrolled in a Williamson Act contract (Suisun City 2015c). Lands zoned for agricultural use and enrolled in a Williamson Act contract are primarily outside of the City limits and within the eastern and western portions of the City's Planning Area (Suisun City 2015a). The project site is currently zoned Medium-Density Residential (RM), which is intended for the development of residential uses and does not permit agricultural uses (Suisun City 2020a). As such, the proposed project would not conflict with existing zoning for agricultural use or with a Williamson Act Contract. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-3 Conflict with existing zoning for, or cause rezoning of, forestland (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])?

Impact Analysis
Under PRC Section 12220(g), "Forest land" is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

As discussed in the General Plan EIR, there are no lands within the City limits that contain forestry resources, timberland production zones, or active timberland uses (Suisun City 2015c). The project site is currently vacant and does contain "forest land" as defined by PRC Section 12220(g). Furthermore, the project site is zoned Medium-Density Residential (RM), which does not permit agriculture uses or timberland production zones. The proposed project would not conflict with existing zoning or result in rezoning of forest land, timberland, or a timberland production zone. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-4 Result in the loss of forestland or conversion of forestland to non-forest use?

Impact Analysis
According to the General Plan EIR, there no forestry resources, timberland resource zones, or active timberland production within the City limits (Suisun City 2015c). The project site is currently vacant and does not contain "forest land" as defined by PRC Section 12220(g). As such, the proposed project would not result in the loss of forest land or convert forestland to non-forest use. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact AG-5 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 forestland to non-forest use?

Impact Analysis

As discussed, the project site is within the northern portion of the City limits and is currently vacant. The project site is within a suburban residential area and does not contain important farmland, forest land, or timberland resources (DOC 2021; Suisun City 2015c). Land uses surrounding the project site primarily include single-family residences to the south, east, and west and south. There are no lands adjacent to the project site that contain important farmland or are zoned for agricultural uses (Suisun City 2015c). Additionally, there are no lands adjacent to the project site that contain forest land, timberland, or a timberland production zone (Suisun City 2015c). 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.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

3.3 AIR QUALITY

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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

Suisun City is in Solano County, which lies within the two air basins, the San Francisco Bay Area Air Basin (Air Basin) under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and Sacramento Valley Air Basin under the jurisdiction of the Yolo-Solano Air Quality Management District. The project site is located in the San Francisco Air Basin under BAAQMD's jurisdiction.

The regional climate within the San Francisco Bay Area is driven by a summertime high-pressure cell centered over the northeastern Pacific Ocean that dominates the summer climate of the west coast. The persistence of this high-pressure cell generally results in negligible precipitation during the summer, and meteorological conditions are typically stable with a steady northwesterly wind flow. This flow causes upwelling of cold ocean water from below the surface, which produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts to the south, resulting in wind flows offshore, the absence of upwelling, and an increase in the occurrence of storms. Winter stagnation episodes are characterized by nocturnal drainage wind flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the Air Basin.

Criteria Air Pollutants

The Federal Clean Air Act (FCAA) establishes the framework for modern air pollution control. The FCAA, enacted in 1970 and amended in 1990, directs the U.S. Environmental Protection Agency (USEPA) to establish ambient air quality standards. These standards are divided into primary and secondary standards. The primary standards are set to protect human health, and the secondary standards are set to protect environmental values, such as plant and animal life. The FCAA requires the USEPA to set National Ambient Air Quality Standards for the six criteria air pollutants. These pollutants include particulate matter, ground-level ozone, carbon monoxide (CO), sulfur oxides, nitrogen oxides (NOx), and lead. According to the BAAQMD, ozone and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) are

the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily an issue in the summer and $PM_{2.5}$ in the winter (BAAQMD 2020).

Air Quality Standards

The FCAA requires states to develop a general plan to attain and maintain the standards in all areas of the country and a specific plan to attain the standards for each area designated nonattainment. These plans, known as State Implementation Plans (SIPs), are developed by state and local air quality management agencies and submitted to the USEPA for approval.

The SIP for the State of California is administered by the California Air Resources Board (CARB), which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for each regional air district. SIPs are prepared by the regional air district and sent to CARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

CARB also administers the California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the California Clean Air Act. The 10 state air pollutants include the six federal criteria pollutant standards listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The federal and state ambient air quality standards are summarized in Table 3.3-1.

Table 3.3-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone	1 Hour	0.09 ppm (180 µg/m^3)	—	Same as Primary Standard
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Respirable Particulate Matter	24 Hour	50 µg/m^3	150 µg/m3	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m^3	—	
Fine Particulate Matter	24 Hour	—	35 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	
Carbon Monoxide	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	—	—
Nitrogen Dioxide	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
	3 Hour	—	—	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)	—
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)	—
Lead	30-Day Average	1.5 µg/m^3	—	—
	Calendar Quarter	—	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m^3	
Visibility-Reducing Particles	8 Hour	See Footnote 1	No National Standards	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	—	

Notes:

[1] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

µg/m^3 = micrograms per cubic meter

mg/m^3 = milligrams per cubic meter

Source: CARB 2016

As summarized in Table 3.3-2, the Air Basin and Solano County are currently designated as nonattainment areas for state ozone, $PM_{2.5,}$ and particulate matter 10 microns or less in diameter (PM_{10}) standards, as well as national ozone and $PM_{2.5}$ standards, but are listed as unclassified under national PM_{10}. The standards for CO, NOx, sulfur dioxide, and lead are being met in the Bay Area. The BAAQMD has developed its 2017 Clean Air Plan, Spare the Air, Cool the Climate (2017 Clean Air Plan) to update the most recent Bay Area ozone plan, the 2010 Clean Air Plan, pursuant to air quality planning requirements defined in the California Health and Safety Code. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors—reactive organic gases (ROG) and NOx—and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Clean Air Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants (TAC) (BAAQMD 2017a).

Table 3.3-2: Solano County Area Designations for State and National Ambient Air Quality

Criteria Pollutants	State Designation	National Designation
Ozone (1-hour)	Nonattainment	—
Ozone (8-hour)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Unclassified	Attainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	Attainment	—
Lead	Attainment	Attainment
Hydrogen Sulfide	Unclassified	—
Visibility Reducing Particles	Unclassified	—

$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
Source: BAAQMD 2017b

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The project site is considered a sensitive receptor.

The closest off-site sensitive receptors are the residential uses directly east and south of the project site.

Bay Area Air Quality Management District

Nearly all development projects in the Bay Area have the potential to generate air pollutants that may increase the difficultly of attaining National Ambient Air Quality Standards and CAAQS. Therefore, for most projects, evaluation of air quality impacts is required to comply with CEQA. The BAAQMD has developed the *CEQA Air Quality Guidelines* to help public agencies evaluate air quality impacts (BAAQMD 2017c). The BAAQMD's guide includes recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors. The May 2017 version of the Guidelines includes revisions made to the BAAQMD's 2010 Guidelines to address the California Supreme Court's 2015 opinion in *Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Cal.4th 369*. Table 3.3-3 provides a summary of the recommended thresholds.

Table 3.3-3: BAAQMD Project-Level Air Quality CEQA Thresholds of Significance

Criteria Pollutants	Construction-Related	Operational-Related	
Criteria Air Pollutants and Precursors (regional)	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO_x	54	54	10
PM_{10} (exhaust)	82	82	15
$PM_{2.5}$ (exhaust)	54	54	10
$PM_{10}/PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
GHGs (projects other than stationary sources)	None	Compliance with Qualified GHG Reduction Strategy OR 1,100 $MTCO_2e/yr$ OR 4.6 $MTCO_2e/SP/yr$ (residents + employees)	

Notes:
CO = carbon monoxide
GHG = greenhouse gases
lbs/day = pounds per day
$MTCO_2e/yr$ = metric tons of carbon dioxide equivalent per year
$MTCO_2e/SP/yr$ = metric tons of carbon dioxide equivalent per service population per year
NOx = nitrogen oxide
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
ppm = parts per million
ROG = reactive organic gas
tpy = tons per year
Source: BAAQMD 2017c

The BAAQMD has established rules and regulations to attain and maintain state and national air quality standards. The rules and regulations that apply to this proposed project include but are not limited to the following:

Regulation 8, Rule 3

Architectural Coatings. This rule governs the manufacture, distribution, and sale of architectural coatings and limits the ROG content in paints and paint solvents. Although this rule does not directly apply to the proposed project, it does dictate the ROG content of paint available for use during the construction.

Regulation 8, Rule 15

Emulsified and Liquid Asphalts. Although this rule does not directly apply to the proposed project, it does dictate the ROG content of asphalt available for use during construction through the regulation of the sale and use of asphalt and limitations to the ROG content in asphalt.

BAAQMD manages a naturally occurring asbestos program that administers the requirements of CARB's naturally occurring asbestos air toxic control measures (ATCM). The BAAQMD provides an exemption application, notification form for road construction and maintenance operations, and asbestos dust

mitigation plan applications for projects to submit prior to the start of construction, or upon discovery of asbestos, ultramafic rock, or serpentine during construction. Forms must be submitted to the BAAQMD in accordance with the procedures detailed in the BAAQMD Asbestos ATCM Inspection Guidelines Policies and Procedures.

City of Suisun City

The City of Suisun City's 2035 General Plan includes policies and actions to reduce potential exposure of sensitive receptors to unhealthy CO concentrations from roadways and intersections. The following policies would be applicable to the proposed project:

> *Policy T-3.2: The City will encourage new developments and public facility investments designed to minimize vehicle trips and vehicle miles traveled.*
>
> *Policy T-6.1: The City will facilitate construction and maintenance of an accessible, safe, pleasant, convenient, and integrated bicycle and pedestrian system that connects local destinations and surrounding communities. The City will support development of a safe and accessible trail network connected to the on-street bicycle and transportation system that provides transportation and recreational opportunities for Suisun City residents and employees.*
>
> *Policy T-6.2: The City will require design, construction, operation, and maintenance of "complete streets" that provide safe and convenient access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.*
>
> *Policy PHS 3.4: The City will require implementation of applicable emission control measures recommended by the Bay Area Air Quality Management District for construction, grading, excavation, and demolition.*
>
> *Program PHS-3.1. Health Risk Analyses. When development involving sensitive receptors, such as residential development, is proposed in areas within 134 feet of SR 12 or when uses are proposed that may produce hazardous air contaminants, the City will require screening level analysis, and if necessary, more detailed health risk analysis to analyze and mitigate potential impacts. For projects proposing sensitive uses within 134 feet of SR 12, the City will require either ventilation that demonstrates the ability to remove more than 80% of ambient $PM_{2.5}$ prepared by a licensed design professional or site-specific analysis to determine whether health risks would exceed the applicable BAAQMD-recommended threshold and alternative mitigation demonstrated to achieve the BAAQMD threshold. Site-specific analysis may include dispersion modeling, a health risk assessment, or screening analysis. For proposed sources of toxic air contaminants, the City will consult with the BAAQMD on analytical methods, mitigation strategies, and significance criteria to use within the context of California Environmental Quality Act documents, with the objective of avoiding or mitigating significant impacts*
>
> *Program PHS-3.2. Construction Mitigation. The City will require new developments to incorporate applicable construction mitigation measures maintained by the BAAQMD to reduce potentially significant impacts. Basic Control Measures are designed to minimize fugitive PM dust and exhaust emissions from construction activities. Additional Control Measures may be required when impacts would be significant after application of Basic Control Measures.*

Program PHS-3.3. Construction Mitigation for Health Risk. Construction equipment over 50 brake horsepower (bhp) used in locations within 300 feet of an existing sensitive receptor shall meet Tier 4 engine emission standards. Alternatively, a project applicant may prepare a site-specific estimate of diesel PM emissions associated with total construction activities and evaluate for health risk impact on existing sensitive receptors in order to demonstrate that applicable BAAQMD-recommended thresholds for toxic air contaminants would not be exceeded or that applicable thresholds would not be exceeded with the application of alternative mitigation techniques approved by BAAQMD.

3.3.2 Methodology

Construction and operational emissions for the proposed project were modeled using the California Emissions Estimator Model (CalEEMod). The model inputs were based on some project-specific information as described in Section 2.0, Project Description, and where project-specific information was unavailable the use of CalEEMod default values. The model output and detailed assumptions are provided in Appendix C.

3.3.3 Environmental Impact Analysis

This section discusses potential impacts related to air quality associated with the proposed project and provides mitigation measures where necessary.

Impact AIR-1 Conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

The BAAQMD's 2017 Clean Air Plan is the regional air quality plan (AQP) for the Air Basin. It identifies strategies to bring regional emissions into compliance with federal and state air quality standards. The BAAQMD's Guidance provides three criteria for determining if a plan-level project is consistent with the current AQP control measures. However, the BAAQMD does not provide a threshold of significance for project-level consistency analysis. Therefore, the following criteria will be used for determining a project's consistency with the AQP.

- Criterion 1: Does the project support the primary goals of the AQP?
- Criterion 2: Does the project include applicable control measures from the AQP?
- Criterion 3: Does the project disrupt or hinder implementation of any AQP control measures?

Criterion 1

The primary goals of the 2017 Clean Air Plan, the current AQP, are to:

- Protect public health through the attainment air quality standards;
- Protect the climate.

The proposed project would not significantly contribute to cumulative nonattainment pollutant violations, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people after implementation of Mitigation Measure AIR-1. Therefore, the proposed project would be consistent with criterion 1 with incorporation of Mitigation Measure AIR-1,

which would require all construction contractors to implement the basic construction mitigation measures recommended by the BAAQMD to reduce fugitive dust emissions.

Criterion 2

The 2017 Clean Air Plan contains 85 control measures aimed at reducing air and climate pollutants in the Bay Area. The sectors are as follows:

- Stationary Sources
- Transportation
- Energy
- Buildings
- Agriculture
- Natural and Working Lands
- Waste Management
- Water
- Super-Greenhouse Gas (GHG) Pollutants

Of the 85 measures, only the following would be applicable:

TR9 Bicycle and Pedestrian Facilities – the proposed project would construct up to 25 bicycle spaces throughout the project site and would make the required pedestrian improvements within the project site and off-site (sidewalks) pursuant to the Suisun City Municipal Code.

TR10 Land Use Strategies – the proposed project would provide multi-family housing which would support the Plan Bay Area strategy for higher density development to help reduce emissions and cool the climate.

The applicant would also be required to conform to the energy efficiency requirements of the California Building Standards Code, also known as Title 24. Specifically, the proposed project must implement the requirements of the most recent Building Energy Efficiency Standards, which is the current version of Title 24. The proposed project would comply with all applicable rules and regulations and would not impede attainment because the proposed project's emissions would fall below the BAAQMD regional significance thresholds as shown in Impact AIR-2.

Criterion 3

If the approval of a project would not cause a disruption, delay, or otherwise hinder the implementation of any clean air plan control measure, it would be considered consistent with the 2017 Clean Air Plan. Examples of how a project may cause the disruption or delay of control measures include a project that precludes an extension of a transit line or bike path or proposes excessive parking beyond parking requirements. The proposed project would not preclude extension of a transit line or bike path, propose excessive parking beyond parking requirements, or otherwise create an impediment or disruption to implementation of any AQP control measures. As shown above, the proposed project would incorporate the applicable AQP control measures as project design features.

Conclusion

The proposed project would be consistent with the criteria of the AQP with incorporation of Mitigation Measure AIR-1. As such, with the incorporation of this mitigation measure this impact would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM AIR-1 **Implement Construction Best Management Practices.** The applicant shall require all construction contractors to implement the basic construction mitigation measures recommended by the Bay Area Air Quality Management District (BAAQMD) to reduce fugitive dust emissions. Emission reduction measures shall include, at a minimum, the following measures. Additional measures may be identified by the BAAQMD or contractor as appropriate:

- 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 miles per hour;
- 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 by reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations. 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 City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?

Impact Analysis

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The proposed project's construction and operational impacts are assessed separately below.

Construction Emissions

Emissions from construction-related activities are generally short-term in duration but may still cause adverse air quality impacts. The proposed project would generate emissions from construction equipment exhaust, worker travel, and fugitive dust. These construction emissions would include criteria air pollutants from the operation of heavy construction equipment.

Construction of the proposed project would be completed in 18 months and become operational in 2023. The construction schedule used in the analysis represents a "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule extended to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required pursuant to CEQA guidelines. Table 3.3-4 provides the construction emissions estimate for the proposed project. As shown, the proposed project would not exceed BAAQMD's recommended thresholds.

Table 3.3-4: Construction Annual and Daily Average Emissions Estimates (Unmitigated Average Daily Rate)

Parameter	Air Pollutants			
	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
2021 Construction Year (tons/year)[1]	2.14	7.00	0.28	0.26
2022 Construction Year (tons/year)	1.04	4.35	0.17	0.16
2023 Construction Year (tons/year)	0.94	1.14	0.04	0.04
Total Emissions (tons/year)	***2.14***	***7.00***	***0.28***	***0.26***
Total Emissions (pounds/year)	**4,295**	**14,067**	**561**	**524**
Average Daily Emissions (pounds/day)[2]	**9.59**	**31.40**	**1.25**	**1.17**
Significance Threshold (pounds/day)	**54**	**54**	**82**	**54**
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**

Parameter	Air Pollutants			
	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)

Notes:
[1] Includes emissions from off-site improvements.
[2] Calculated by dividing the total number of pounds by the total 448 working days of construction for the entire construction period. Calculations use unrounded numbers.
lbs = pounds
NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
ROG = reactive organic gases
Source of thresholds: BAAQMD 2017
Source of emissions: CalEEMod Output (see Appendix C).

The City's General Plan includes Program PHS-3.3 requiring the use of clean construction equipment for all equipment 50 brake horsepower or greater when construction would occur within 300 feet of existing sensitive receptor. Because the proposed project would be located directly adjacent to existing sensitive receptors, implementation of Mitigation Measure AIR-2 (Tier 4 equipment) would be required. Table 3.3-5 provides the summary of construction emissions with compliance to General Plan Program PHS-3.3. Emissions are substantially reduced compared to the unmitigated scenario shown in Table 3.3-4; impacts are less than BAAQMD's thresholds and are less than significant with mitigation incorporated.

Table 3.3-5: Construction Annual and Daily Average Emissions Estimates (With Incorporation of Tier 4 Equipment)

Parameter	Air Pollutants			
	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
2021 Construction Year (tons/year)[1]	0.06	0.20	0.00	0.00
2022 Construction Year (tons/year)	0.79	1.53	0.02	0.02
2023 Construction Year (tons/year)	0.88	0.47	0.01	0.01
Total Emissions (tons/year)	1.72	2.20	0.03	0.03
Total Emissions (pounds/year)	3,448	4,394	63	62
Average Daily Emissions (pounds/day)[2]	**7.70**	**9.81**	**0.14**	**0.14**
Significance Threshold (pounds/day)	**54**	**54**	**82**	**54**
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**

Notes:
[1] Includes emissions from off-site improvements.
[2] Calculated by dividing the total number of pounds by the total 448 working days of construction for the entire construction period. Calculations use unrounded numbers.
lbs = pounds
NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
ROG = reactive organic gases
Source of thresholds: BAAQMD 2017
Source of emissions: CalEEMod Output (see Appendix C).

Operational Emissions

Operational emissions would occur over the lifetime of the proposed project and would be from two main sources: area sources and motor vehicles, or mobile sources. Full buildout of the proposed project is anticipated to occur in 2023, immediately following the completion of construction. Emissions were assessed for full buildout operations in the 2023 operational year. If the later buildout year were used, the emissions would be lower due to cleaner vehicles from increasing regulations. Therefore, using an earlier year to consider full buildout of the proposed project would provide a worst-case scenario of emissions.

Table 3.3-6 and Table 3.3-7 provide the annual and daily operational emissions, respectively. As shown, neither the annual nor daily thresholds would be exceeded. The impact would be less than significant.

Table 3.3-6: Operational Annual Emissions for Full Buildout (Unmitigated)

Emissions Source	Tons per Year			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	0.70	0.02	0.01	0.01
Energy	0.01	0.08	0.01	0.01
Mobile (Motor Vehicles)	0.26	1.35	0.99	0.27
Total Project Annual Emissions	**0.96**	**1.45**	**1.00**	**0.29**
Thresholds of Significance	**10**	**10**	**15**	**10**
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**

Notes:
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
ROG = reactive organic gases
Source: CalEEMod output (see Appendix C).

Table 3.3-7: Operational Average Daily Emissions (Unmitigated)

Emissions Source	Tons per Year			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Total Project Annual Emissions[1] (tons/year)	0.96	1.45	1.00	0.29
Total Project Annual Emissions[2] (lbs/year)	1,925	2,890	2,010	570
Average Daily Emissions[3] (lbs/day)	**5.27**	**7.92**	**5.51**	**1.56**
BAAQMD Average Daily Emission Thresholds (lbs/day)	**54**	**54**	**82**	**54**
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**

Notes:
[1] Tons per year are shown in Table 3.3-6.
[2] Pounds per year were calculated using the unrounded annual project operational emissions.
[3] The average daily construction emissions were estimated based on the total annual emissions divided by the number of days in 2023 (365 days).

NO_X = oxides of nitrogen

$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

PM_{10} = particulate matter 10 microns or less in diameter

ROG = reactive organic gases

Source: CalEEMod output (see Appendix C).

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM AIR-2 **Implement Construction Mitigation for Health Risk.** As construction would occur within 300 feet of sensitive receptors, all construction equipment greater than 50 brake horsepower shall meet Tier 4 engine emission standards as required by Program PHS-3.3 in the General Plan.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation.

Impact AIR-3 Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis

This discussion addresses whether the proposed project would expose sensitive receptors to substantial pollutant concentrations. The localized pollutants that could impact sensitive receptors include: naturally occurring asbestos (NOA), construction-generated fugitive dust (PM_{10}), construction generated DPM, CO hotspots and operational-related TACs. Project construction and operational impacts are assessed separately below.

Project as a Source - Construction

Construction-Generated DPM

Construction activity using diesel-powered equipment emits DPM, a known carcinogen. Diesel particulate matter includes exhaust $PM_{2.5}$. A 10-year research program (CARB 2015) demonstrated that DPM (exhaust $PM_{2.5}$) from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. Health risks from TACs are a function of both concentration and duration of exposure. Construction diesel emissions are temporary, affecting an area for a period of weeks or months. Additionally, construction-related sources are mobile and transient in nature. Lastly, the City's General Plan Program PHS 3.3 requires the use of Tier 4 engines for all equipment over 50 brake horsepower when located within 300 feet of sensitive receptors, such as the proposed project. Tier 4 compliant engines significantly reduce emissions of particulate matter (PM) and oxides of nitrogen (NOx) to near zero levels. Relative to previous emissions standards, Tier 4 compliant engines reduce emissions by over 95 percent for most construction equipment. Compliance with General Plan Program PHS 3.3 would be required with implementation of Mitigation Measure AIR-2, and would effectively reduce construction health risks to a less than significant level.

Construction Fugitive Dust

During construction (grading), fugitive dust (PM_{10}) is generated. As detailed in Impact AIR-1, the proposed project would result in a less than significant dust impact after incorporation of Mitigation Measure AIR-1. Therefore, the proposed project would not expose adjacent receptors to significant amounts of construction dust after incorporation of mitigation.

Naturally Occurring Asbestos

The DOC and the U.S. Geological Survey (USGS) have published a guide for generally identifying areas that are likely to contain NOA. There are no NOA areas located in Solano County. Therefore, there is no impact.

Project as a Source – Operation

CO Hotspot

Localized high levels of CO (CO hotspot) are associated with traffic congestion and idling or slow-moving vehicles. The BAAQMD recommends a screening analysis to determine if a project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. The proposed project would result in a less than significant impact to air quality for local CO if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or

- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

A review of the 2019 Solano County Congestion Management Plan did not reveal any project inconsistencies. The proposed project would generate at most 83 peak-hour trips and would not substantially increase traffic volumes on nearby roadways above 44,000 vehicles per hour (based on Institute of Transportation Engineers a.m. peak-hour rate of 0.46 trips/dwelling unit). Furthermore, the adjacent roadways are not located in an area where vertical and/or horizontal mixing, or the free movement of the air mass, is substantially limited by physical barriers such as bridge overpasses or urban or natural canyon walls. Therefore, the proposed project would not significantly contribute to an existing or projected CO hotspot. Impacts would be less than significant.

Toxic Air Contaminants

As a residential development, the proposed project is not a source of TACs and would not exacerbate air quality conditions with respect to TACs; impacts would be less than significant.

Project as a Receptor– Operation

As a residential development, the proposed project would site sensitive receptors near a known source of TACs – the UPRR. The UPRR is about 75 feet from the project boundaries. The General Plan EIR evaluated potential health risks and determined that a 10-foot buffer between land uses and the railroad line would result in cancer risks less than the BAAQMD thresholds of 10 in a million at the project-level. At 10 feet, sensitive receptors would be exposed to $PM_{2.5}$ concentrations and cancer risks of 0.072 µg/m^3 and 1.76 excess cases in a million. Concentrations and cancer risks would decrease as receptors are located further from the railroad line. At 75 feet from the UPRR, the proposed project would not be exposed to a $PM_{2.5}$ concentrations and cancer risks greater than BAAQMD's thresholds. The impact would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures AIR-1 and AIR-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact AIR-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Analysis
Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roasters, asphalt batch plants, and rendering plants. The proposed project would not engage in any of these activities. Therefore, the proposed project would not be considered a generator of objectionable odors during operations.

During construction, the various diesel-powered vehicles and equipment in use onsite would create localized odors. These odors would be temporary and would not likely be noticeable for extended periods of time beyond the project's site boundaries. The potential for diesel odor impacts would therefore be less than significant.

Project as a Receptor– Operation

With the California Building Industry Association v. BAAQMD ruling, analysis of odor impacts on receivers is not required for CEQA compliance. Therefore, the following analysis is provided for information only.

As a residential development, the proposed project has the potential to place sensitive receptors near existing odor sources. There are no major odor-generating sources (as listed in Table 3-3 in the BAAQMD CEQA Guidelines) within screening distance of the site. Therefore, the uses in the vicinity of the project site would not result in substantial odor impacts to the proposed project. Impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.4 BIOLOGICAL RESOURCES

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 in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.4.1 Environmental Setting

The 9.09-acre project site is currently vacant and located within a suburban residential area. It is mostly covered in non-native grasses and fenced along the east and south sides from the adjacent single-family residences. The project site also has signs of past and ongoing disturbance, including a small gravel patch in the northwest corner. Additionally, tire tracks were observed within the grassland adjacent to the gravel patch (ECORP 2021). The property primarily extends over generally flat terrain with the site elevation ranging from approximately 32 to 36 feet above mean sea level. Other land uses surrounding the project site include a self-storage facility, multi-family residences, an auto-body shop, and commercial development. The UPRR is about 75 feet north of the project site and runs parallel to Railroad Avenue.

The project site is located within the Sacramento Valley Subregion of the Great Central Valley floristic region of California (Baldwin et. al. 2012). The average winter low temperature in the vicinity of the project

site is 48.4 degrees Fahrenheit (˚F) and the average summer high temperature is 72.4˚F. Average annual precipitation is approximately 24.81 inches (NOAA 2020).

3.4.2 Methodology

This section summarizes the methods used to identify and analyze potential impacts on sensitive habitats and effects on special-status plants and animals that may occur on the project site. As described below, biologists at ECORP Consulting Inc. (ECORP) completed database searches and field surveys of an approximately 9.8-acre biological study area to determine which rare natural communities and special-status species have the potential to occur on the project site. The 9.8-acre biological study area included the 9.08-acre project site and the Blossom Avenue and Railroad Avenue frontages. A more detailed description of these methods is provided in the project's Biological Resources Technical Report (BRTR) prepared by ECORP on April 12, 2021. The BRTR is included in this ISMND as Appendix D (ECORP 2021).

Background Research

This analysis is based on a review of existing information about sensitive biological resources known to occur near the project site and followed by field surveys to determine whether biological resources are absent, present, and/or are likely to be present. For the purposes of this evaluation, special-status plant species include plants that are: 1) listed as threatened or endangered under the California Endangered Species Act (CESA) or Federal Endangered Species Act (FESA); 2) proposed for federal listing as threatened or endangered; 3) State or federal candidate species; 4) designated as rare by the California Department of Fish and Wildlife (CDFW); or 5) California Rare Plant Rank (CRPR) 1A, 1B, 2A, 2B, 3, or 4 species. Special-status animal species include species that are 1) listed as threatened or endangered under the CESA or FESA; 2) proposed for federal listing as threatened or endangered; 3) state or federal candidate species; or 4) identified by the CDFW as species of special concern or fully protected species.

Sensitive natural communities are those communities that are highly limited in distribution and may or may not contain rare, threatened, or endangered species. The California Natural Diversity Database (CNDDB) ranks natural communities according to their rarity and endangerment in California. Habitats are considered sensitive if they are identified on the CDFW List of Vegetation Alliances and Associations as being highly imperiled or classified by CDFW in the CNDDB as natural communities of special concern – Ranks S1 to S3.

The potential for special-status species to occur within the project site were classified under one of four categories, as described below. Those special-status species with an occurrence potential of low or greater are evaluated in detail in the BRTR.

- **Present:** The species was observed during field surveys or is known to occur within the project site based on documented occurrences within the CNDDB or other literature.
- **Potential to Occur:** Habitat (including soils and elevation requirements) for the species occurs within the project site.
- **Low Potential to Occur:** Marginal or limited amounts of habitat occur, and/or the species is not known to occur within the vicinity of the project site based on CNDDB records and other available documentation.

- **Absent:** No suitable habitat (including soils and elevation requirements), and/or the species is not known to occur within the project site, or the vicinity of the project site based on CNDDB records and other documentation or determinate field surveys.

The following resources were queried to determine the special-status species that had been documented within or in the vicinity of the project site (ECORP 2021):

- CDFW CNDDB data for the "Fairfield North " 7.5-minute USGS quadrangle and the eight surrounding USGS quadrangles (CDFW 2020a).
- U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (IPaC) Resource Report List for the project site (USFWS 2020a).
- California Native Plant Society electronic Inventory of Rare and Endangered Plants of California for the "Fairfield North" 7.5-minute USGS quadrangle and the eight surrounding USGS quadrangles (CNPS 2020).

Based on this background research, a list of special-status species that have the potential to occur or are known to occur in the project site and vicinity was developed (Appendix D, ECORP 2021). The list was refined based on reconnaissance-level biological field surveys to determine the potential for those species to occur in the project site.

Field Surveys

Field surveys were conducted to identify and characterize the resources onsite. The following seven field surveys were conducted by biologists at ECORP in support of this analysis:

- April 29, 2020 – field assessment for special-status species;
- April 29, 2020 – preliminary field assessment for potential aquatic resources;
- June 11, 2020 – aquatic resources delineation sampling and survey;
- June 12, 2020 – burrowing owl (*Athene cunicularia*) habitat assessment and survey (morning and evening surveys);
- June 22, 2020 – habitat assessment for California tiger salamander (*Ambystoma californiense*); and
- August 25, 2020 – dry-season soil sampling for vernal pool branchiopods.
- February 9, 2021- wet season survey for vernal pool branchiopods

For complete details on each survey conducted, please see the complete assessment in Appendix D (ECORP 2021).

Vegetation Communities

The project site consists primarily of annual grassland dominated by non-native annual grasses, including wild oat (*Avena* sp.), Italian ryegrass (*Festuca perennis*), and red brome (*Bromus madritensis* ssp.

rubens) (ECORP 2021). Other species observed within the grassland include purple wild radish (*Raphanus sativus*), hairy vetch (*Vicia villosa*), and field bindweed (*Convolvulus arvensis*). One horticultural tree is present in the northeast corner of the site and a few coyote bushes (*Baccharis pilularis*) are scattered along the southern boundary. A small gravel patch is present in the northwest corner and tire tracks were observed within the grassland adjacent to this area (ECORP 2021).

Soils

The project site is underlain by one soil map unit: "Antioch-San Ysidro complex, thick surface, 0 to 2 percent slopes" (NRCS 2020a). Both the Antioch and San Ysidro series consist of moderately well-drained soils that formed in alluvium derived from sedimentary rock. Both soil series are non-saline to very slightly or slightly saline. However, no halophytic plant communities or other indicators of alkali soils were observed during the special-status species assessment or the aquatic resources delineation. This soil unit does not contain any listed hydric components. No soil units derived from serpentinite or other ultramafic parent materials have been reported to occur within the project site or its immediate vicinity (NRCS 2020b; Jennings et al. 1977).

Aquatic Habitats

An aquatic resources delineation of potential Waters of the U.S. was conducted for the project site as per USACE guidelines (ECORP 2021). A total of 0.38 acre of seasonal wetlands were mapped within the project site (Figure 3.4-1). The USACE issued a Preliminary Jurisdictional Determination (PJD) on August 25, 2020 for the site (SPN-2020-00295; see Appendix D, Attachment D), and in March 2021 determined the seasonal wetlands onsite would be subject to USACE regulatory authority under Section 404 of the Clean Water Act (CWA) (ECORP, Personal Communication, March 2021).

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short and they are commonly dominated by non-native annual and sometimes perennial hydrophytic species. Six seasonal wetlands were mapped within the project site. Four of these features were dominated by Italian ryegrass (*Festuca perennis*) and Mediterranean barley (*Hordeum marinum*). Two of these features were dominated by either least spikerush (*Eleocharis acicularis*) or hyssop loosestrife (*Lythrum hyssopifolia*).

Special-Status Species

Plants

Seventy-six special-status plant species were identified by the literature review as having the potential to occur within the vicinity of the project site. Of those, 49 species were determined to be absent from the project site due to the lack of suitable habitat and based on the conditions observed during the site visit. In total, two special-status species have the potential to occur due to suitable habitat being present onsite and 25 species have a low potential to occur onsite due to marginally suitable habitat being present. A brief description of the 27 special-status species that have the potential to occur within the project site is presented in Appendix D. No special-status plant species were observed during the reconnaissance-level field assessment.

Source: ECORP Consulting 2020

Map Features

- Parcel Boundary - 9.6 ac.
- Reference Coordinate (NAD83)

Sample Points

- Upland Point
- Waters Point

Waters Type

- Seasonal Wetland - 0.380 ac.

Stantec

Project Location
Suisun City, CA

Prepared by KJ on 2021-01-27

Client/Project
City of Suisun City
Blossom Avenue Apartments Project
ISMND

Figure No.
3.4-1

Title
Seasonal Wetlands

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Wildlife

Fifty-four special-status wildlife species were identified in the literature and database review as known to or having potential to occur within the vicinity of the project site. Of those, 48 species were determined to be absent from the project site due to the lack of suitable habitat and based on the conditions observed during the site visits. A brief description of the six special-status wildlife species that have the potential to be present in the project site is presented in Appendix D. More information about the habitat requirements for each of these species can be found in Appendix D.

Critical Habitat

No designated critical habitat is present at the project site or within the immediate vicinity.

3.4.3 Environmental Impact Analysis

This section discusses potential impacts on biological resources associated with the proposed project and provides mitigation measures where necessary.

Impact BIO-1	**Have a substantial adverse effect, either directly or through habitat modifications on any 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?**

Impact Analysis

Special-Status Plant Species

On April 29, 2020, an ECORP biologist conducted a field assessment of the project site. The survey classified habitats onsite to assess the suitability for the special-status species identified during the desktop query. Table 1 of Appendix D contains the results of the special-status species query and includes the habitat suitability ratings that establish the queried special-status species' potential to occur on the project site or within the project site. Species identified with potential to occur and to be potentially impacted by the proposed project are further discussed and potential impacts are analyzed in the subheadings below.

The proposed project has the greatest potential to have a substantial adverse effect on species with a potential to occur onsite as determined by high habitat suitability or by the species' variable range and mobility. While the potential for adverse effects on species with low potential to occur is possible, it is unlikely due to limited suitable habitat and/or a species limited mobility from a nearby occurrence to reach the project site. The potential impacts to species with potential to occur are discussed in the following subsections.

Impacts to Special-Status Plant Species

The habitat classification identified the majority of the project site as annual grassland dominated by non-native annual grasses; therefore, the overall potential for impacts to special-status plant species as a result of project activities is low. However, there are seasonal wetlands throughout the project site that would be impacted, and those areas are suitable habitat for some special-status species. Of the 76 special-status plant species identified and assessed through desktop research and field surveys, two species, Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*) and dwarf downingia (*Downingia pusilla*)

were determined to have a potential to occur within the project site. No special-status species were identified during the reconnaissance-level survey. However, the survey was a habitat assessment for suitability rather than surveying to determine presence or absence. Thus, there is a potential for the species to be present onsite and to be potentially impacted by project construction activities.

Mitigation Measure BIO-1 would be required to limit this potential impact by assessing the project site for presence of special-status species during the bloom period, prior to construction, and if present provides avoidance or replanting procedures as well as a provision for consultation with CDFW, which would limit potential impacts on special-status plant species to less than significant levels.

Special-Status Wildlife Species

Three vernal pool invertebrates and three special-status bird species were identified as having potential to occur onsite.

Vernal Pool Branchiopods

During the site visits, six seasonal wetlands were identified of varying sizes on the project site and total 0.38 acres (Figure 3.4-1, ECORP 2021). ECORP conducted dry season and wet season surveys for federally listed large branchiopods and did not find evidence of their presence within the study area. During the dry season survey on August 25, 2020, soil samples were collected from each seasonal wetland and processed in accordance with USFWS dry season survey protocols. The purpose of the investigation was to determine the presence of eggs of federally listed large branchiopod species (e.g., conservancy shrimp, vernal pool fairy shrimp, or vernal pool tadpole shrimp). No federally listed large branchiopod eggs were detected (ECORP 2021).

The wet season survey for federally listed large branchiopod species was conducted in February 2021. Wet season sampling began February 9, 2021 after initial inundation of potential habitat and occurred at 14-day intervals thereafter throughout the wet season, following methods outlined in the 2017 Guidelines. No federally listed large branchiopod species were detected. However, only one feature could be sampled. The other features never experienced inundation during the wet season. This may be due to current drought conditions, but the typical duration of inundation for these features during a normal water year is unknown. Results of the wet season survey is inconclusive for features that could not be sampled. Because of the inconclusive wet season survey results, federally listed large branchiopod species are presumed to occur on the project site (ECORP 2021).

Due to size of the seasonal wetlands (0.38 acres), there is marginal habitat for federally listed vernal pool invertebrates to occur. However, direct impacts to federally listed vernal pool invertebrates would require consultation with USFWS and compliance with FESA through the Section 7 consultation process. As such, to reduce potential impacts to federally listed vernal pool invertebrates, the proposed project would implement Mitigation Measure BIO-2 which would require that no project construction activities proceed within 250 feet (or less as deemed sufficient by a qualified biologist) of supporting potential habitat for federally listed vernal pool invertebrates until a biological opinion (BO) and incidental take permit has been issued by USFWS and the applicant has abided by conditions in the BO. The BO would include conservation and minimization measures, as well as preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction, a detailed monitoring plan, and reporting requirements. Additionally, the applicant would be required to identify mitigation acceptable to the City, USACE, and USFWS for the impacts to vernal pools and other seasonal wetland habitats that

support federally listed vernal pool invertebrates in such a manner that there would be no net loss of habitat (acreage and function) for these species following project implementation. As such, impacts on vernal pool branchiopod special-status species would be less than significant with implementation of Mitigation Measure BIO-2.

Burrowing Owl, White-Tailed Kite, Swainson's Hawks, and Other Nesting Birds

Biologists at ECORP conducted a burrowing owl (*Athene cunicularia*) habitat assessment and focused survey of the project site on June 12, 2020 (ECORP 2021). Two burrows were identified as potentially suitable for burrowing owls but showed no signs of use (i.e., there were no feathers, whitewash, pellets, or owls present). It was noted that the grass was overgrown which may discourage burrowing owl usage of the burrows. Morning and evening observations of the project site and the railroad corridor about 75 feet to the north did not detect any burrowing owls.

Biologists also noted that the project site offers suitable foraging habitat for white-tailed kite (*Elanus leucurus*) and Swainson's hawk (*Buteo swainsoni*), though nesting habitat for either species is absent onsite (ECORP 2021). Potential nesting habitat for these species may be present in the vicinity of the project, particularly to the east where rural residences continue to dominate the landscape.

Burrowing owls and Swainson's hawks have been documented within 5 miles of the project site, but white-tailed kites have not been documented (ECORP 2021). Burrowing owls have long been known to occupy urban landscapes (Trulio and Chromczak 2003, Wilkerson and Siegel 2010) and the presence of suitable burrows on the project site suggests burrowing owls could be present on the project site. Swainson's hawks have also shown tolerance for human activity (Bechard et al. 2020, Estep 1989). White-tailed kites are not as well known for nesting near human developed landscapes and, in fact, are often excluded from nest sites by Swainson's hawks (Erichsen et al. 1996).

Additionally, the site provides potential nesting habitat for a variety of native bird species protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, such as mourning doves (*Zenaida macroura*) and killdeer (*Charadrius vociferus*). Based on the analysis above, there is a low potential for any of the special-status bird species (burrowing owl, white-tailed kite, and Swainson's hawk) to be present and there is a moderate potential for other nesting bird species to be present on the project site. These bird species have the potential to be impacted by project construction activities. However, the implementation of Mitigation Measure BIO-3 would ensure protected bird species are identified and appropriately avoided by scheduling disturbance activities during non-nesting season or implementing other prescribed avoidance measures that would reduce the potential significance of any potential impact. Additionally, Mitigation Measure BIO-4 would ensure that burrowing owls are identified and appropriately avoided and excluded, if they are present. Therefore, with the implementation of Mitigation Measures BIO-3 and BIO-4, potential impacts to nesting migratory birds or raptors, including burrowing owls, would be reduced to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM BIO-1: **Protocol Special-Status Plant Surveys.** Protocol surveys for special-status plant species shall be conducted by qualified botanists in accordance with established agency

protocols. The surveys shall be floristic in nature and shall be timed to coincide with the bloom periods for the target species.

If special-status plants are not detected during pre-construction botanical surveys, no further mitigation is required. However, if special-status plant species are identified within the project site, all positive detections shall be recorded as counts of individuals and mapped as either individuals or acres (depending on distribution) using GPS. The results of the survey shall be summarized in a report which shall be provided to the City for review and acceptance within 90 days following completion of the final survey. The report shall include maps, photographs, methods, results, and be accompanied by global positioning system (GPS) data.

Furthermore, if special-status plant species are confirmed present during protocol surveys, a copy of the report shall be provided to the CDFW (and USFWS if federally listed species are found).

Additionally, compensatory mitigation for direct impacts to special-status plant species shall be determined in coordination with CDFW (and USFWS if federally listed species are found) and may include (1) acquisition of credits at an Agency-approved conservation bank or other approved location at a ratio acceptable by the Agency and/or (2) Translocation of plants or seeds from impacted areas for unaffected habitats. Compensatory mitigation shall be fulfilled prior to impacts to special-status plant species onsite.

MM BIO-2: **Mitigation for Vernal Pool Branchiopods**. No project construction shall proceed in areas supporting potential habitat for federally listed vernal pool invertebrates or within adequate buffer areas (250 feet or lesser distance deemed sufficiently protective by a qualified biologist with approval from U.S. Fish and Wildlife Service [USFWS]) until a biological opinion (BO) and incidental take permit has been issued by USFWS and the applicant has abided by conditions in the BO, including all conservation and minimization measures. A similar process shall be followed for future subsequent improvement plans and conservation and minimization measures for those phases shall also be implemented according to the BO. Conservation and minimization measures shall include preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction, a detailed monitoring plan, and reporting requirements.

The applicant shall identify mitigation acceptable to the City, U.S. Army Corps of Engineers (USACE), and USFWS for the impacts to vernal pools and other seasonal wetland habitats that support federally listed vernal pool invertebrates in such a manner that there will be no net loss of habitat (acreage and function) for these species following project implementation. The applicant shall complete the purchase of a certified bank describing how loss of vernal pool and other wetland habitats shall be offset, including details for creating habitat; accounting for the temporal loss of habitat, performance standards to ensure success, and remedial actions to be implemented if performance standards are not met. Mitigation shall include, where feasible and practicable, preservation and or restoration of in-kind wetland habitats within the Jepson Prairie core

habitat area at ratios satisfactory to ensure no net loss of habitat acreage, function, and value within the Jepson Prairie core habitat area.

The applicant shall preserve acreage of vernal pool habitat for each wetted acre of any indirectly affected vernal pool habitat at a ratio approved by USFWS at the conclusion of the Section 7 consultation. This mitigation shall occur before the approval of any grading or improvement plans for any project phase that would allow work within 250 feet of such habitat, and before any ground-disturbing activity within 250 feet of the habitat. Unless otherwise agreed to by USFWS, vernal pool habitat within 250 feet of development will be considered indirectly affected. The applicant will not be required to complete this mitigation measure for direct or indirect impacts that have already been mitigated to the satisfaction of USFWS through another BO or mitigation plan. A standard set of BMPs shall be applied when working in areas within 250 feet of off-site vernal pool habitat or within any lesser distance deemed by a qualified biologist to constitute a sufficient buffer from such habitat with approval from USFWS.

MM BIO-3: **Pre-construction Nesting Bird Surveys**. If project activities occur during the nesting season (February 15 to August 31), the following measures shall be implemented to avoid or minimize potential impacts on nesting migratory birds and raptors:

- Pre-construction nesting bird survey for species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code shall be conducted by a qualified biologist within a 100-foot radius of proposed construction activities for passerines, a 300-foot radius for raptors, and 0.5-mile radius for Swainson's hawk no more than 14 days prior to the start of construction activities.
- If active nests are found, a qualified biologist shall determine the size of the buffers based on the nesting species and its sensitivity to disturbance. The size of the buffers may be reduced at the discretion of a qualified biologist, but no construction activities shall be permitted within the buffer if they are demonstrated to likely disturb nesting birds. Active nest sites shall be monitored periodically to determine time of fledging.

Any portion of the site not graded within two weeks of completion of the survey shall require a follow-up nesting bird survey to ensure a new nest has not become established.

MM BIO-4: **Conduct Burrowing Owl Surveys.**

- The applicant shall retain a qualified biologist to conduct a habitat assessment in the same year as construction. If no habitat is present, no further measures are necessary.
- If suitable burrowing owl habitat is found onsite, a survey should be conducted in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFG 2012).

- If no occupied burrows are found, a letter report documenting the survey methods and results shall be submitted to CDFW and the City and no further mitigation is required.

- If an occupied burrow is found during the nonbreeding season (September 1 through January 31), the applicant shall consult with CDFW to develop a burrowing owl exclusion plan, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls shall not be excluded from occupied burrows until the Project's burrowing owl plan is approved by CDFW. CDFW would have 30 days to comment on the exclusion plan; if no comments are received, CDFW approval shall be assumed and the plan can be implemented.

- If exclusion during the nonbreeding season is not feasible, and an occupied burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and will be provided with a 150-to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer shall depend on the time of year and level of disturbance as outlined in the CDFW Staff Report (CDFG 2012) or the most recent CDFW protocols. The size of the buffer may be reduced if a broad-scale, long-term monitoring program acceptable to CDFW is implemented to ensure burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted, and the burrow can be destroyed during the nonbreeding season per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report or the most recent CDFW protocols.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact BIO-2	**Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Impact Analysis
The project site does not contain any sensitive natural communities as classified by CDFW. As discussed above, six seasonal wetlands were identified on the project site (Appendix D, Figure 3.4-1). The USACE issued a PJD for the site in August 2020, and in March 2021 determined the seasonal wetlands onsite would be subject to USACE regulatory authority under Section 404 of the CWA (ECORP, Personal Communication, March 2021). The seasonal wetlands onsite are also considered Waters of the State under the Porter-Cologne Water Quality Control Act. Potential impacts to the seasonal features are further discussed in Impact BIO-3. As discussed in Impact BIO-1, results of the wet season survey were inconclusive and therefore federally listed large branchiopod species are presumed to occur on the project site (ECORP 2021). Vernal pools are considered sensitive natural habitats by the USFWS and CDFW, though only the USFWS has regulatory authority over this habitat if they are occupied by federally listed vernal pool branchiopods. Direct impacts to federally listed vernal pool invertebrates would require consultation with USFWS and compliance with FESA through the Section 7 consultation process. Due to

size of the seasonal wetlands (0.38 acres), there is marginal habitat for federally listed vernal pool invertebrates to occur. However, the proposed project would implement Mitigation Measure BIO-2, which would require that no project construction activities proceed within 250 feet (or less as deemed sufficient by a qualified biologist) of supporting potential habitat for federally listed vernal pool branchiopods until a BO and incidental take permit has been issued by USFWS and the applicant has abided by conditions in the BO. The BO would include conservation and minimization measures, as well as preparation of supporting documentation describing methods to protect existing vernal pools during and after project construction, a detailed monitoring plan, and reporting requirements. Additionally, the applicant would be required to identify mitigation acceptable to the City, USACE, and USFWS for the impacts to vernal pools and other seasonal wetland habitats that support federally listed vernal pool invertebrates in such a manner that there would be no net loss of habitat (acreage and function) for these species following project implementation. As such, impacts on vernal pool branchiopod special-status species would be less than significant with implementation of Mitigation Measure BIO-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure BIO-2 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact BIO-3	**Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Impact Analysis
As noted above, the onsite seasonal wetlands are considered Waters of the U.S. under Section 404/401 of the CWA and Waters of the State under the Porter-Cologne Water Quality Control Act.

The project site is in the Suisun Basin sub-portion of the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) (San Francisco Bay RWQCB 2019). The Basin Plan provides guidance on water quality and the preservation of aquatic habitats throughout the Bay Area and identifies wetlands as a beneficial use in that they provide wildlife habitat (including for rare and endangered species), support recreational uses, and provide groundwater recharge, flood control, and erosion control. The seasonal wetlands on the project site do not provide much in the way of beneficial uses, particularly given the disturbed nature of the site and dominance of non-native plant species. The seasonal wetlands on the project site are isolated from other aquatic features by urban development as confirmed by the site visits and Aquatic Resources Delineation conducted by biologists at ECORP (ECORP 2021, USGS 2021, USFWS 2021). The source of water for these wetlands comes from stormwater runoff, much of which comes from the neighboring roadways.

As discussed, the dry season wetland survey (conducted in August 2020) and the wet season survey (conducted in February 2021) did not detect federally listed vernal pool branchiopods. However, only one feature could be sampled during the wet season survey. The other features never experienced inundation during the wet season. This may be due to current drought conditions, but the typical duration of inundation for these features during a normal water year is unknown. Results of the wet season survey is

inconclusive for features that could not be sampled. Because of the inconclusive wet season survey results, federally listed large branchiopod species are presumed to occur on the project (ECORP 2021). As discussed in Impacts BIO-1 and BIO-2, potential impacts on federally listed vernal pool branchiopods would be reduced to a less than significant level with implementation of Mitigation Measure BIO-2.

The USACE issued a PJD for the site in August 2020, and in March 2021 determined the seasonal wetlands onsite would be subject to USACE regulatory authority under Section 404 of the CWA (ECORP, Personal Communication, March 2021). Therefore, the seasonal wetlands onsite are considered Waters of the U.S. and would be subject to Section 404 of the CWA and Water Quality Certification under Section 401 of the CWA. The Section 404 Permit would be obtained from USACE and the Section 401 Water Quality Certification would be obtained from the San Francisco Bay RWQCB prior to discharging any dredged or fill materials into any Waters of the U.S.

The wetlands onsite are also considered Waters of the State and would require authorization to discharge dredged or fill material from the San Francisco Bay RWQCB under the Porter-Cologne Water Quality Act. Filling of the seasonal wetlands onsite would require a Waste Discharge Requirement from the San Francisco Bay RWQCB. In April 2019, the State Water Resources Control Board adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (State Procedures), which went into effect on May 28, 2020. Under the State Procedures, filling of the seasonal wetlands requires preparation of an Application for Waste Discharge Requirement. The application process requires a Tier 3 alternatives analysis, to evaluate potential onsite and off-site alternatives that may result in fewer wetland impacts than the proposed project. An alternatives analysis was previously prepared and submitted to the San Francisco Bay RWQCB in 2006. However, this alternatives analysis only assessed onsite alternatives and was prepared prior to the adoption of the State Procedures. A supplemental alternatives analysis is currently being prepared that includes an assessment of offsite alternatives and updates the onsite alternatives with the current development plan for the site.

The total acreage of the six seasonal wetlands mapped on the project site is 0.38 acre. Due to the locations and scattered nature of the features, avoidance would be infeasible for development of this small parcel. As such, the seasonal wetlands would be directly and permanently impacted through direct filling. However, the proposed project would implement Mitigation Measure BIO-5, which would require the applicant to obtain all necessary permits under Section 404 of the CWA and restore or replace wetlands or Waters of the State at an acreage and location by methods agreeable to USACE, the San Francisco Bay RWQCB, and the City as determined during the Section 404 permitting process to achieve the “no net loss” standard. As such, impacts on state or federally protected wetlands would be less than significant with implementation of Mitigation Measure BIO-5.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures BIO-2 and BIO-5 are required.

MM BIO-5: **Mitigation for Wetlands**. Before the approval of grading and improvement plans and before any ground-disturbing activity requiring fill of wetlands or other waters of the U.S. or Waters of the State, the applicant shall obtain all necessary permits under Section 404 of the Clean Water Act (CWA). For each respective discretionary development

entitlement, all permits, regulatory approvals, and permit conditions for effects on wetland habitats shall be secured before implementation of any grading activities within 250 feet (or lesser distance deemed sufficiently protective by a qualified biologist approved by U.S. Fish and Wildlife Service [USFWS] and U.S. Army Corps of Engineers [USACE]) of Waters of the U.S. or wetland habitats, including Waters of the State, that support federally listed species, or within 100 feet of any other Waters of the U.S. or wetland habitats, including Waters of the State. The applicant shall commit to replace or restore on a "no net loss" of function basis (in accordance with USACE and the San Francisco Bay RWQCB) the acreage of all wetlands and other Waters of the U.S. that would be removed, lost, and/or degraded as a result of implementing project plans for that phase.

Wetland habitat shall be restored or replaced at an acreage and location and by methods agreeable to USACE, the San Francisco Bay RWQCB, and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 404 permitting processes, sufficient to achieve the "no net loss" standard.

As part of the Section 404 permitting process, a draft wetland mitigation credit purchase must be provided for the proposed project and submitted to USACE, and the City for review and approval of those portions of the mitigation credit purchase over which they have jurisdiction. The mitigation credit purchase would have to be finalized and approved prior to issuance of a grading permit for any project activity that would adversely affect wetlands or other Waters of the U.S. or Waters of the State. The Mitigation Credit Purchase shall be implemented before beginning ground-disturbing activities in any project phase that would adversely affect wetlands or other Waters of the U.S. or Waters of the State.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact BIO-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact Analysis
The project site is in a suburban residential area and surrounded by development on all sides. It is not mapped within an identified essential connectivity area or within a modeled connectivity corridor for regional movement and does not contain any features that would support local movement (e.g., stream corridors) or potential nursery sites (CDFW 2021). Therefore, no impacts on the movement of any native resident, migratory, or wildlife species would occur.

Level of Significance Before Mitigation
No Impact

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis
There are no ordinances specific to biological resources in the Suisun City Municipal Code. The General Plan includes numerous policies aimed at the preservation of biological and aquatic resources and open spaces. While there are seasonal wetlands on the project site, the proposed project is effectively an infill development project which is consistent with the goals and policies of the City in that the project site does not provide high quality habitat, is not contiguous with other open space, and is not located within or near wildlife movement corridors. Additionally, the proposed project does not include the removal of onsite trees. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact BIO-6 Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

Impact Analysis
The City falls within the jurisdiction of the proposed Solano Multispecies Habitat Conservation Plan (SMHCP), which was released in administrative draft form in 2012. The draft of the SMHCP is currently being prepared for public release. The City is not within the jurisdiction of any adopted Habitat Conservation Plans.

The General Plan acknowledges that the SMHCP is currently in preparation and designed the General Plan goals and policies to align with it; however, the General Plan also acknowledges that the SMHCP may not be adopted and provides alternative pathways for mitigation for habitat impacts. As the SMHCP is still in the planning stages, the requirements therein are not applicable to the proposed project. Therefore, the proposed project would not conflict with any adopted Habitat Conservation Plans or other approved local, regional, or state habitat conservation plan. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.5 CULTURAL RESOURCES

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 as identified in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

The project site is located in a suburban setting about 1.5 miles northeast of downtown Suisun City. Suburban residential developments surround the project site on the west, south, and east, with agricultural and empty lots to the north and in the surrounding neighborhood. Laurel Creek meanders north-south approximately 800 feet west of the project site and the Vaca Mountains lie 2.5 miles to the north. Elevation onsite ranges from 32 to 36 feet above mean sea level.

3.5.2 Methodology

To determine the presence or absence of cultural resources within the project site and vicinity, ECORP prepared a Cultural Resources Inventory Report on November 5, 2020 (ECORP 2020). The report included a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), literature review, and a pedestrian field survey of the project site. The cultural resources inventory was conducted to satisfy the requirements of CEQA and follows CEQA Appendix G Guidelines. As the CEQA Lead Agency, the City completed Assembly Bill (AB) 52 consultations. The results of the consultations are described below and in Section 3.18, Tribal Cultural Resources, of this document. The ECORP Cultural Resources Inventory Report is provided as confidential Appendix E.

Records Search and Literature Review

A records search (NWIC File No. 19-1836) was completed at the NWIC of the CHRIS on April 20, 2020. As an affiliate of the State of California Office of Historic Preservation, the NWIC is the official state repository of cultural resource records and reports for the region that includes Solano County. The search included the entire project site, as well as a 0.5-mile buffer around the project site.

No previous studies have been conducted within the project site and thirteen previous studies were conducted within 0.5 mile of the project site. No cultural resources have been previously recorded within the project site and two cultural resources have been previously recorded within 0.5 mile of the project site.

The review of historical aerial photographs and maps of the project site provided information on past land uses of the property and potential for buried archaeological sites. The project site was vacant agricultural land since 1853, and from 1937 to the late 1960s contained one small building, and two narrow linear buildings (possibly warehouses or sheds). From 1970 to the present, the property has been vacant with no buildings or structures.

ECORP contacted the California Native American Heritage Commission (NAHC), on April 22, 2020, to request a search of the Sacred Lands File. The request included a description of the proposed project, as well as a location map. A search of the NAHC Sacred Lands File was completed on April 27, 2020, and there was no indication of the presence of Native American cultural resources in the project site (Appendix E).

Field Survey

On October 22, 2020, ECORP completed an intensive pedestrian survey of the project site using 15-meter transects. 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. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits.

The overall visibility throughout the project site was poor (approximately 20 to 30 percent visibility) due to the dense cover of invasive grasses. The surface vegetation was dense, about 1-foot-thick above ground. The only visible surface areas in the field were rodent back dirt piles, the northwestern corner of the project site from the graveled access point, and some tilled areas. The soil throughout the fields appeared to have been disked in the past, as it was relatively flat with some evidence of grooved indentations in the surface. Modern trash was observed in portions of the project site.

In order to determine whether or not there are archaeological deposits present, ECORP conducted exploratory subsurface testing around the previous location of three buildings depicted on historic period aerial photographs from at least 1937 through the 1960s. No indications of the past buildings were identified as a result of the survey and exploratory subsurface testing.

No cultural resources were identified in the project site as a result of the survey and exploratory testing. More information about the survey can be found in Appendix E.

AB 52

Native American consultation efforts are discussed in more detail in Section 3.18, Tribal Cultural Resources.

3.5.3 Environmental Impact Analysis

This section discusses potential impacts on cultural resources associated with the proposed project and provides mitigation measures where necessary.

Impact CUL-1 Cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

Impact Analysis
An archival record search and literature review, Native American consultation, and pedestrian survey were performed as part of the cultural resources inventory for the proposed project. No historical resources were identified within the project site, and there are no standing structures requiring evaluation. Therefore, the proposed project would not have an impact on any known or potential historical resources.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact CUL-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact Analysis
An archival record search and literature review, Native American consultation, and pedestrian survey were performed as part of the cultural resources inventory for the project. No archaeological resources were identified within the project site. The proposed project is therefore not anticipated to have an impact on any known or potential archeological resources. However, subsurface construction activities associated with the proposed project could potentially damage or destroy previously undiscovered unique archaeological resources. The proposed project would be required to implement Mitigation Measure CUL-1 in the event a previously undiscovered subsurface unique archaeological resource is found at the project site. The implementation of Mitigation Measure CUL-1 would be in accordance with the standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface unique archaeological resources. Therefore, with the implementation of Mitigation Measure CUL-1 potential impacts to undiscovered archaeological resources would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM CUL-1: **Cultural Materials Discovered During Construction**. If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

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

- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the U.S. Army Corps of Engineers and the City. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines, or a Historic Property under Section 106. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

- 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 Solano County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California PRC, and AB 2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner shall notify the Native American Heritage Commission (NAHC), which then shall designate a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code [PRC]). The designated MLD shall have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they shall not be further disturbed (Section 5097.98 of the PRC). This shall also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact CUL-3 Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis
There are no known human remains within the project site and no indications that the project site has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, ground disturbance and subsurface construction activities

associated with the proposed project could potentially disturb previously undiscovered human burial sites. If previously undiscovered human burial sites are found on the project site, the proposed project would be required to implement Mitigation Measure CUL-1. Implementation of Mitigation Measure CUL-1 would require all work to stop within 100 feet of the remains and to contact the Solano County Coroner and the appropriate City contact to evaluate the discovery. If the human remains are of Native American origin, the County Coroner must notify the NAHC within 24 hours of this identification. The NAHC would identify a Native American MLD to inspect the site and provide recommendations for the proper treatment of the remains within 48 hours. As such, implementation of Mitigation Measure CUL-1 would reduce impacts to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure CUL-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

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3.6 ENERGY

	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?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

3.6.1 Environmental Setting

Pacific Gas and Electric Company provides electricity and natural gas service to the City. Upon buildout of the project site, electricity to the project site would be provided by PG&E. All electricity infrastructure would be located underground and would tie-in to existing infrastructure.

In February 2018, PG&E announced that it had reached California's 2020 renewable energy goal 3 years ahead of schedule, and now delivers nearly 80 percent of its electricity from GHG-free resources. Approximately 33 percent of PG&E's electricity came from renewable resources including solar, wind, geothermal, biomass and small hydroelectric sources in 2017. Additionally, approximately 78.8 percent of PG&E's total electric power mix is from GHG-free sources including nuclear, large hydro and renewable sources of energy.

3.6.2 Methodology

The energy requirements for the proposed project were determined using the construction and operational estimates generated from the Air Quality Analysis (refer to Appendix C). The calculation worksheets for diesel fuel consumption rates for off-road construction equipment and on-road vehicles are provided in Appendix C. Short-term construction energy consumption is discussed below.

3.6.3 Environmental Impact Analysis

This section discusses potential energy impacts associated with the proposed project and provides mitigation measures where necessary.

Impact EN-1	**Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

Impact Analysis
This impact addresses the energy consumption from both the short-term construction and long-term operations are discussed separately below.

Short-Term Construction

The proposed project is anticipated to be constructed in 18 months beginning in 2021 with completion in 2023. Table 3.6-1 provides an estimate of the project's energy use during construction.

Table 3.6-1: Summary of Energy Use During Construction (Annual)

Source	Energy Use
Construction worker vehicle fuel	90,466 gallons (gasoline, diesel)
Construction offroad equipment fuel	75,296 gallons (diesel)
Construction office trailer (electricity)	21,982 kilowatt hours

Source: Stantec 2021a

As shown in Table 3.6-1, construction activities associated with the proposed project would be estimated to consume 96,466 gallons of gasoline and diesel fuel for construction worker vehicles, 75,296 gallons of diesel fuel for offroad construction equipment, and 21,982 kilowatt hours for a construction office trailer. There are no unusual project characteristics that would necessitate the use of construction vehicles or equipment that would be less energy efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Long-Term Operations

Table 3.6-2 provides an estimate of the long-term energy use associated with the proposed project. These estimates were derived using the same assumptions used in the operational air quality analysis for the proposed project.

Table 3.6-2: Summary of Energy Use During Operation (Annual)

Source	Energy Use
Operational vehicle fuel consumption	97,200 gallons (gasoline, diesel)
Operational natural gas consumption	1,657,982 kilo-British Thermal Units
Operational electrical consumption	922,597 kilowatt hours

Source: Stantec 2021a

Annual consumption is estimated at 97,200 gallons. The proposed project would constitute development within an established community and would not be opening a new geographical area for development such that it would draw mostly new trips or substantially lengthen existing trips. The proposed project would be well positioned to accommodate existing population and reduce VMT. For these reasons, it would be expected that vehicular fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use activities in the region, and impacts would be less than significant.

Buildings constructed pursuant to the proposed project would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued. The proposed project is estimated to demand 922,597 kilowatt hours of electricity per year and 1,657,982 kilo-

British Thermal Units of natural gas per year. This would represent an increase in demand for electricity and natural gas.

It would be expected that building energy consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than for any other similar buildings in the region. Current state regulatory requirements for new building construction contained in the 2019 CALGreen and Title 24 standards would increase energy efficiency and reduce energy demand in comparison to existing commercial structures, and therefore would reduce actual environmental effects associated with energy use from the proposed project. Additionally, the CALGreen and Title 24 standards have increased efficiency standards through each update.

Therefore, while the proposed project would result in increased electricity and natural gas demand, the electricity and natural gas would be consumed more efficiently and would be typical of residential development. Compliance with future building code standards would result in increased energy efficiency.

For the above reasons, energy impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact EN-2	**Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

Impact Analysis
There is no state plan for energy efficiency, however, there are existing regulations under CCR Titles 20 and 24, including CALGreen. There is no applicable local plan for renewable energy or energy efficiency. The City has addressed energy use in buildings and other structures by promoting energy conservation through various General Plan policies. For example, the City would require new developments to use different techniques to improve energy efficiency, including building/site orientation and construction, articulated windows, roof overhangs, appropriate building and insulation materials and techniques, and other architectural features that improve passive interior climate control. The City would also encourage landscaping methods, materials, and designs that promote energy conservation and would preserve existing trees and plant new trees along streetscapes to provide shade.

The proposed project would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued and with all applicable City measures.

The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency through adherence to state regulatory measures and City General Plan policies; impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

3.7 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☒	☐	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.7.1 Environmental Setting

The following background setting information focuses on the existing topography of the project site, the underlying bedrock and site seismicity, and the general conditions and expansiveness of the onsite soils. A Geotechnical Engineering Report dated May 8, 2020, was prepared for the proposed project by Wallace Kuhl & Associates (Appendix F).

Geology, Seismicity, and Soils

The City is located within the southern portion of the Sacramento Valley, which together with the San Joaquin Valley, makes up the Great Valley geomorphic province (Suisun City 2015c). Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium. It is characterized by thick sequences of alluvial and floodplain deposits that contain sediments from the Coast Ranges to the west and the Sierra Nevada mountain range to the east (WKA 2020). The primary types of sedimentary deposits found within the Great Valley include siltstone, claystone, and sandstone. According to the Geotechnical Engineering Report, the project site is predominantly underlain by Quaternary-aged alluvium deposits of sand, gravel, silt, and clay (WKA 2020).

The project site is located in the western Sacramento Valley, which is considered a seismically active region. The Alquist-Priolo Special Studies Zone Act of December 1972 (AP Zone Act) regulates development near active faults to mitigate the hazard of surface fault rupture. The AP Zone Act requires that the State Geologist (Chief of the California Department of Mines and Geology) delineate “special study zones” along known active faults in California. Cities and counties affected by these zones must regulate certain development projects within these zones. The AP Zone Act prohibits the development of structures for human occupancy across the faults displaced during the last 11,000 years. “Potentially” active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity is sometimes difficult to obtain and may not exist locally.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone (CGS 2015). The nearest active faults that are zoned under the AP Zone Act include the Green Valley Fault and the Cordelia Fault, located near the western edge of the City’s Planning Area, about 7 miles west of the project site. The Vaca-Kirby Hills Fault also passes through the eastern portion of the city, and is located about 0.8 mile north of the project site. The Vaca-Kirby Hills Fault is an active fault, but is not considered by the California Geological Survey to have a high potential for surface rupture. Therefore, the Vaca-Kirby Hills Fault is not zoned under the AP Zone Act (Suisun City 2015c). However, seismic hazards could result from any of the three faults in the vicinity of the project site, as well as from other active faults in the San Francisco Bay Area, such as the Rodgers Creek and the San Andreas faults (Suisun City 2015c).

Soil properties can affect the construction and maintenance of roads, building foundations, and infrastructure. According to the Geotechnical Engineering Report, near surface soils across the project site are highly expansive and consist of one soil type, the “Antioch-San Ysidro complex, thick surface, 0 to 2 percent slopes” (WKA 2020). The geotechnical investigation conducted two hand augered borings on the project site which indicated that the surface and near-surface soils generally consisted of a layer of sandy silt to a depth of about 1.5 feet bgs. Silty fat clay was encountered below the surface silts from a depth of about 1.5 to 4 feet. Sandy clays were encountered from a depth of about 4 feet up to the maximum explored depth of about 5 feet bgs. Groundwater was not encountered within the borings hand augered on April 22,2020, to the maximum depth explored of about 5 feet bgs. However, the Geotechnical Engineering Report indicates that additional studies conducted near the project site in July 2010 encountered groundwater at depths ranging from 8 to 12 feet bgs (WKA 2020).

According to Exhibit 9-7 in the General Plan, there is low potential for liquefaction to occur within the project site and surrounding area (Suisun City 2015a). Additionally, the project site and surrounding area are relatively flat, and are not located near a slope that would result in a landslide hazard.

Paleontological Resources

According to Exhibit 7-10 in the General Plan, the project site is underlain with Pleistocene alluvium (Suisun City 2015a). Pleistocene alluvium ranges from 1.8 million to 11,000 years old, and is composed of freshwater stream deposits along canyons and at the heads of older alluvial fans, and fresh-water marsh deposits. Vertebrae fossils found in Late Pleistocene alluvium include but are not limited to bison, mammoth, ground sloths, saber-toothed cats, dire wolves, cave bears, rodents, birds, reptiles, and amphibians. As such, these deposits are considered highly sensitive for paleontological resources (Suisun City 2015c).

3.7.2 Methodology

A Geotechnical Engineering Report was prepared for the proposed project by Wallace Kuhl & Associates on May 8, 2020. The results of the geotechnical engineering report were reviewed to determine potential geology and soils impacts from the proposed project and are summarized herein. The Geotechnical Engineering Report is provided in Appendix F.

3.7.3 Environmental Impact Analysis

This section discusses potential impacts related to geology and soils associated with the proposed project and provides mitigation measures where necessary.

Impact GEO-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- **i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**
- **ii) Strong seismic ground shaking?**
- **iii) Seismic-related ground failure, including liquefaction?**
- **iv) Landslides?**

Impact Analysis

i) Fault Rupture

Ground rupture is the visible breaking and displacement of the Earth's surface along the trace of a fault during an earthquake. The project site is not located in a designated Alquist-Priolo earthquake fault zone, and there are no potentially active faults mapped within the project site (CGS 2015). The nearest active faults zoned under the AP Zone Act include the Green Valley Fault and the Cordelia Fault, located about 7 miles west of the project site (CGS 2019). The Vaca-Kirby Hills Fault is also located about 0.8 mile north of the project site; however, this fault is not considered by the California Geological Survey to have a high potential for surface rupture and is not zoned under the AP Zone Act (Suisun City 2015c). Due to the lack of Alquist-Priolo fault zones within the project site, the potential for damage to structures at the project site from rupture of a known earthquake fault is very low. Therefore, impacts associated with surface rupture from a known earthquake fault would be less than significant.

ii) Ground Shaking

The project site is in a seismically active region, and earthquake-related ground shaking is expected to occur during the design life of the proposed project. Construction of the proposed project would be required to conform to the latest edition of the California Building Code (CBC), which includes engineering standards appropriate to withstand anticipated ground accelerations at the project site. Conformance with the earthquake design parameters of the CBC would be subject to City review as part of the building permit review process. Additionally, the proposed project would be subject to General Plan Policy PHS-14.2, which requires new developments to prepare geotechnical site investigations and incorporate any recommendations into the project development plans to address potential seismic hazards (Suisun City 2015a). A Geotechnical Engineering Report was prepared for the proposed project on May 8, 2020, which included a preliminary seismic design of the proposed structures. However, the Geotechnical Engineering Report indicates a final geotechnical investigation would be required for the proposed project. The proposed project would be required to implement Mitigation Measure GEO-1 and complete a final geotechnical investigation prior to site grading. The proposed project would be required to implement the recommendations of the final geotechnical investigation into the project design, which would ensure that all structures would withstand anticipated ground accelerations at the project site. Therefore, impacts related to ground shaking at the project site would be less than significant with implementation of Mitigation Measure GEO-1.

iii) Ground Failure, including Liquefaction

According to Exhibit 7-10 in the General Plan, the potential for liquefaction to occur on the project site is low (Suisun City 2015a). As discussed, the proposed project would be required to conform to the latest edition of the CBC and implement Mitigation Measure GEO-1, which requires the completion of a final geotechnical investigation. The proposed project would be required to implement the recommendations of the final geotechnical investigation related to soils, foundation support, and floor slab support to reduce the low potential for liquefaction to occur on the project site. Therefore, compliance with the CBC and implementation of Mitigation Measure GEO-1 would reduce impacts from ground failure and liquefaction to a less than significant level.

iv) Landslides

The project site and surrounding area are relatively flat and not located near a slope that would result in a landslide hazard. Therefore, the project site would not be subject to seismically induced landslide hazards, and no impact would occur.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM GEO-1: **Prepare a Final Geotechnical Investigation Report.** Prior to issuance of grading permits, the applicant shall hire a licensed geotechnical engineer to prepare a final detailed geotechnical investigation of the project site. The final geotechnical investigation shall conduct additional test borings or test pits with soil sampling, laboratory testing, and additional engineering evaluation. The final report shall present geotechnical engineering conclusions and specific recommendations regarding site preparation, foundation

alternates, floor support, site drainage, and pavement design. The applicant shall incorporate all design specifications and recommendations contained within the final geotechnical investigation report into relevant project plans and specifications. The project site plans shall be submitted to the City and reviewed as part of the building permit review process.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-2 Result in substantial soil erosion or the loss of topsoil?

Impact Analysis
The project site is currently vacant and does not contain any onsite structures. 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. The proposed project would disturb approximately 10 acres and involve approximately 22,000 CY of earth movement. Additionally, the proposed project would require approximately 3,000 CY of imported soil. The maximum depth of excavation would be relatively shallow, but may extend to approximately 12 feet bgs to trench utilities.

Earth-movement activities could expose unprotected soils to stormwater runoff causing erosion and loss of topsoil. However, compliance with existing regulatory requirements, such as the implementation of grading erosion control measures specified in the CBC and Chapter 15.12 of the Suisun City Municipal Code, also known as the City's Grading and Erosion Control Ordinance, would reduce impacts from erosion and the loss of topsoil. Additionally, projects that involve grading are required to obtain a grading permit in accordance with Section 15.12.050 of the Suisun City Municipal Code and implement a site runoff control plan that includes erosion and dust control measures (Suisun City 2020a).

In addition, the proposed project would disturb more than 1 acre of land, and be required to comply with the National Pollutant Discharge Elimination System (NPDES) permitting program and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would identify best management practices (BMPs) to control the discharge of sediment and other pollutants during construction. As discussed in Section 3.10, Hydrology and Water Quality, the proposed project would implement a SWPPP and associated BMPs as part of Mitigation Measure HYD-1 to reduce potential erosion impacts. Therefore, the proposed project would not result in substantial soil erosion or loss of topsoil, and impacts would be less than significant with implementation of Mitigation Measure HYD-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-3 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?

Impact Analysis

The project site and surrounding area are relatively flat and not located near a slope that would result in a landslide hazard (Suisun City 2015a). According to Exhibit 9-7 in the General Plan, there is low potential for liquefaction to occur within the project site and surrounding area (Suisun City 2015a). The surface and near-surface soils on the project site generally consist of sandy silt and clay soils from about 1.5 to 5 feet bgs (WKA 2020). As discussed in the Geotechnical Engineering Report, the onsite clay soils are highly expansive and could exert pressures on building foundations, interior floor slabs, and exterior flatwork if not properly managed. Groundwater was not encountered within the soil borings that extended to a maximum depth of about 5 feet bgs (WKA 2020). However, the Geotechnical Engineering Report indicates that additional studies conducted near the project site in July 2010, encountered groundwater at depths ranging from 8 to 12 feet bgs (WKA 2020). The maximum depth of excavation for the proposed project would be relatively shallow, but may extend to approximately 12 feet bgs to trench utilities. As such, there is a possibility that the proposed project may encounter groundwater during construction activities.

The proposed project would comply with the latest edition of the CBC and would implement the recommendations of the final geotechnical report as required by Mitigation Measure GEO-1 to ensure the stability of foundations and soils. In the event construction activities, such as trenching utilities, encounter groundwater, temporary dewatering would be required. All temporary dewatering activities would be required to comply with the waste discharge requirements issued by the San Francisco Bay Regional Water Quality Control Board (RWQCB). According to the Geotechnical Engineering Report, if seepage in utility excavations is encountered, it could be removed from utility excavations without major dewatering efforts (WKA 2020). However, the project contractor would determine the design, operation, and maintenance of the temporary dewatering system. As required by Mitigation Measure GEO-2, the project contractor would prepare a dewatering plan outlining the selected temporary dewatering system for the proposed project. If shoring methods are implemented for any excavations, the project contractor would be required to prepare shoring plans in accordance with the California Division of Occupational Safety and Health regulations and the City's Public Works Department engineering standards and specifications. The shoring plans would be submitted to the City for approval. As such, impacts related to unstable soils would be less than significant with implementation of Mitigation Measure GEO-1 and Mitigation Measure GEO-2.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

Mitigation Measures GEO-1 and GEO-2 are required.

MM GEO-2: **Prepare and Implement Dewatering and Shoring Plans.** If excavation to 8 to 12 feet bgs or deeper is required for the project, a dewatering plan shall be submitted to the City for approval prior to the issuance of a grading permit. At a minimum, the dewatering plan shall detail dewatering methods, location of dewatering activities, equipment, groundwater sampling, disposal, and discharge point in accordance with the applicable

waste discharge requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB). In the event that shoring methods are implemented for any excavations, shoring plans shall be prepared in accordance with the requirements of the final geotechnical investigation report and submitted to the City for approval prior to the issuance of a grading permit. All shoring plans shall be prepared in accordance with the California Division of Occupational Safety and Health regulations and the Suisun City Public Works Department engineering standards and specifications.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-4 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?

Impact Analysis
The project site contains highly expansive soils that could be subject to shrinking and swelling as moisture is lost and gained throughout the year. The Geotechnical Engineering Report indicates that the highly expansive clay soils could exert pressures on building foundations, interior floor slabs, and exterior flatwork if not properly managed (WKA 2020). The proposed project would be required to comply with the latest edition of the CBC. Additionally, the proposed project would implement the soil and structure stabilization recommendations identified in the final geotechnical investigation report as required by Mitigation Measure GEO-1. Therefore, compliance with the requirements of the CBC and implementation of Mitigation Measure GEO-1 would ensure that the proposed project would not be located on expansive soils, and impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure GEO-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact GEO-5 Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact Analysis
The proposed project would connect directly to the City's sewer system and would not require the construction of septic tanks or any other alternative wastewater disposal system. Therefore, the proposed project would have no impact regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis
The project site consists of a vacant infill site within a suburban residential area. According to the General Plan, the project site is underlain with Pleistocene alluvium, which is considered highly sensitive for paleontological resources (Suisun City 2015a). The General Plan does not identify any known paleontological resources on the project site. However, the proposed project would include some ground-disturbance during construction, including grading and excavations up to 12 feet, which could directly or indirectly destroy an unknown unique paleontological or unique geologic feature. The proposed project would implement Mitigation Measure GEO-3, which would require a qualified paleontologist to provide a brief training session for all construction personnel regarding the possibility of encountering fossils, and for the implementation of standard inadvertent discovery procedures as identified by Program OSC-5 in the General Plan. Therefore, impacts to unknown paleontological or unique geologic features would be less than significant with implementation of Mitigation Measure GEO-3.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM GEO-3 **Procedures for Paleontological Resources Discovered During Construction.** The project shall follow the requirements of Program OSC-5 identified in the General Plan EIR. The applicant shall retain a qualified paleontologist to provide a brief training session for all construction personnel involved with earth-moving 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 earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find and notify the Suisun City Department of Community Development. The applicant 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 would be implemented before construction activities can resume at the site where the paleontological resources were discovered.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation

3.8 GREENHOUSE GASES

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?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.8.1 Environmental Setting

The issue of combating climate change and reducing GHG emissions has been the subject of substantial state legislation (AB 32, AB 1493, AB 398, and Senate Bill [SB] 375, SB 32, SB 350, SB 100, SB 1368, SB 350, SBX 7-7) and Executive Orders ([EO] B-30-15, EO B-55-18, EO S-01-07, EO S-13-08).

The City has not formally adopted its Draft Climate Action Plan that was first released in 2012. The City's General Plan EIR identified a reduction target for 2020 and a significance threshold of 4.6 metric tons of carbon dioxide equivalents ($MTCO_2e$) per capita efficiency standard, however given the post-2020 timeline for development of the proposed project, that efficiency metric would not be applicable. The City identified its "fair-share" GHG reductions associated with the 2035 buildout, which was estimated to be 2.4 $MTCO_2e$ per capita per year.

Greenhouse Gases

Greenhouse gases and climate change are cumulative global issues. The CARB and USEPA regulate GHG emissions within the State of California and the U.S., respectively. While the CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction.

Many chemical compounds in the Earth's atmosphere act as GHGs as they absorb and emit radiation within the thermal infrared range. When radiation from the sun reaches the earth's surface, some of it is reflected back into the atmosphere as infrared radiation (heat). Greenhouse gases absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy from the sun to the earth's surface should be approximately equal to the amount of energy radiated back into space, leaving the temperature of the earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide [CO_2], methane [CH_4], and nitrous oxide [N_2O]), while others are exclusively human made (like gases used for aerosols).

The principal climate change gases resulting from human activity that enter and accumulate in the atmosphere are listed below:

Carbon Dioxide

Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane

Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.

Nitrous Oxide

Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Fluorinated Gases

Hydrofluorocarbons, perfluorinated chemicals, and Sulfur hexafluoride are synthetic, powerful climate-change gases that are emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in smaller quantities, but because they are potent climate-change gases, they are sometimes referred to as high global warming potential gases.

Emissions Inventories and Trends

California uses the annual statewide GHG emission inventory to track progress toward meeting statewide GHG targets. In 2018, emissions from routine GHG emitting activities statewide were 425 million metric tons of carbon dioxide equivalent ($MMTCO_2e$), 0.8 $MMTCO_2e$ higher than 2017 levels. This puts total emissions 6 MMTCO2e below the 2020 target of 431 million metric tons (CARB 2020). California statewide GHG emissions dropped below the 2020 GHG limit in 2016 and have remained below the 2020 GHG limit since then.

Potential Environmental Impacts

For California, climate change in the form of warming has the potential to incur or exacerbate environmental impacts, including but not limited to changes to precipitation and runoff patterns, increased agricultural demand for water, inundation of low-lying coastal areas by sea-level rise, and increased incidents and severity of wildfire events. Cooling of the climate may have the opposite effects. Although certain environmental effects are widely accepted to be a potential hazard to certain locations, such as rising sea level for low-lying coastal areas, it is currently infeasible to predict all environmental effects of climate change on any one location.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG

emissions are at a micro-scale relative to global emissions but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

Regulatory Requirements

California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The governor has also issued several EOs related to the state's evolving climate change policy. Of particular importance are AB 32 and SB 32, which outline the state's GHG reduction goals of achieving 1990 emissions levels by 2020 and a 40 percent reduction below 1990 emissions levels by 2030.

In the absence of federal regulations, control of GHGs is generally regulated at the state level and is typically approached by setting emission reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans.

3.8.2 Methodology

Construction and operational emissions for the proposed project were estimated using CalEEMod version 2016.3.2. The model output and detailed assumptions are provided in Appendix C.

Thresholds

The BAAQMD's project-level significance threshold for operational GHG generation included in the 2017 BAAQMD CEQA Guidelines are as follows:

- Compliance with a qualified GHG Reduction Strategy, or
- 1,100 $MTCO_2e$ per year, or
- 4.6 $MTCO_2e$ per service population (employees plus residents) per year.

It should be noted that the BAAQMD's thresholds of significance were established based on meeting the 2020 GHG targets presented in the AB 32 Scoping Plan. Although BAAQMD does not have an adopted threshold for 2030, BAAQMD is currently recommending evaluation of GHG significance based on 2030 GHG targets established in SB 32. For developments that would occur beyond 2020, the quantitative thresholds can be adjusted to determine a "substantial progress" threshold based on the SB 32 2030 GHG reduction goals, this would result in a threshold of 2.6 $MTCO_2e$.

The City also identified its "fair-share" GHG reductions associated with the 2035 buildout, which was estimated to be 2.4 $MTCO_2e$ per capita per year.

3.8.3 Environmental Impact Analysis

This section discusses potential GHG impacts associated with the proposed project and provides mitigation measures where necessary.

Impact GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Analysis

The proposed project may contribute to climate change impacts through its contribution of GHGs. The proposed project would generate a variety of GHGs during construction, including several defined by AB 32, such as CO_2, CH_4, and N_2O from the exhaust of equipment, construction hauling trips, and worker commuter trips.

Construction Emission Inventory

The proposed project would emit GHG emissions during construction from the construction equipment usage, worker vehicles travel, and hauling trips. Total GHG emissions generated during all construction activities were quantified and are presented in Table 3.8-1. In order to assess the construction emissions, the total emissions generated during construction were amortized based on the life of the development (30 years) and added to the operational emissions.

Table 3.8-1: Construction Greenhouse Gas Emissions

Construction Year	Construction Emissions ($MTCO_2e$/year)
Project Site	
2021 Construction	225
2022 Construction	1,085
2023 Construction	381
Off-site Improvements	
2021 Construction	5
Total Project Construction	
Total Construction Emissions	**1,696**
Construction Emissions Amortized Over 30 Years	**57**

Totals may not appear to sum exactly due to rounding.
Source: CalEEMod Output (see Appendix C)

Operational Emission Inventory

Operational or long-term emissions would occur over the life of the proposed project. Operational GHG emissions by source are shown in Table 3.8-2. As previously indicated, the analysis includes construction emissions amortized over the life of the proposed project. Full buildout of the proposed project is anticipated to occur in 2023. Emissions were assessed for full buildout operations in years 2023, 2030, and 2035. The 2030 scenario was prepared to assess the project's consistency with the SB 32 2030 target and the 2035 scenario was prepared to assess the project's consistency with the City's General Plan buildout targets.

As shown in Table 3.8-2, the proposed project's total GHG annual emissions would not exceed applicable thresholds of significance in any scenario analyzed; the impact is less than significant.

Table 3.8-2: Operational Greenhouse Gas Emissions

Emission Source	Year 2023 Total Emissions ($MTCO_2e$ per year)	Year 2030 Total Emissions ($MTCO_2e$ per year)	Year 2035 Total Emissions ($MTCO_2e$ per year)
Area	6	6	6
Energy	176	170	170
Mobile (Motor Vehicles)	1,106	929	880
Waste	56	56	56
Water	18	17	17
Amortized Construction Emissions	57	57	57
Total Annual Project Emissions	**1,362**	**1,178**	**1,129**
Service Population (Employees + Residents)[1]	**564**	**564**	**564**
Annual Per Service Population Emissions	**2.51**	**2.19**	**2.10**
Applicable Thresholds of Significance ($MTCO_2e$/service population/year)	**4.6**	**2.6[2]**	**2.4[3]**
Exceeds Significance Threshold?	**No**	**No**	**No**

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalent.
Rounded results used to calculate totals.
[1]The proposed project would result in 558 residents and six employees, resulting in a service population of 564.
[2]Adjusted threshold to account for 2017 Scoping Plan Update 40 percent reduction goal by 2030.
[3] Adjusted threshold to account for City's 2035 "fair-share" target
Totals may not appear to sum exactly due to rounding.
Source: CalEEMod Output (see Appendix C).

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Analysis
The BAAQMD's thresholds of significance were established based on meeting the 2020 GHG targets presented in the AB 32 Scoping Plan. Although BAAQMD does not have an adopted threshold for 2030, BAAQMD is currently recommending evaluation of GHG significance based on 2030 GHG targets established in SB 32. Because the proposed project would occur post-2020, the quantitative thresholds were adjusted to determine a "substantial progress" threshold based on the SB 32 2030 GHG reduction goals. Similarly, the City identified a "fair-share" target for its General Plan buildout in 2035 of 2.4 $MTCO_2e$ for its service population. The proposed project would fall below all applicable thresholds which are associated with achieving reduction targets in the State and local climate action plans. As such, the

proposed project would not conflict with any applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions.

Furthermore, the proposed project would comply with CALGreen, which includes requirements to increase recycling, reduce waste, reduce water use, increase bicycle use, and other measures that would reduce GHG emissions. Motor vehicle emissions associated with the proposed project would be reduced through compliance with state regulations on fuel efficiency and fuel carbon content. The regulations include the Pavley fuel efficiency standards that require manufacturers to meet increasing stringent fuel mileage rates for vehicles sold in California and the Low Carbon Fuel Standard that requires reductions in the average carbon content of motor vehicle fuels. Emissions related to electricity consumption by the proposed project would be reduced as the electric utility complies with the Renewable Portfolio Standard, which requires utilities to increase its mix of renewable energy sources to 50 percent by 2030.

Considering all the above factors, the proposed project would not conflict with the City's Draft Climate Action Plan, nor with the State Scoping Plan and the State regulations adopted to reduce GHG emissions; therefore, impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.9 HAZARDS AND HAZARDOUS MATERIALS

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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely-hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

3.9.1 Environmental Setting

Hazardous materials, as defined by the CCR, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed of, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic: Causes human health effects
- Ignitable: Has the ability to burn
- Corrosive: Causes severe burns or damage to materials
- Reactive: Causes explosions or generates toxic gases

Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. California Government Code, Title 22, Sections 66261.20–24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

California Government Code Section 65962.5 requires the California Environmental Protection Agency to compile, maintain, and update specified lists of hazardous material release sites. The required lists of hazardous material release sites are commonly referred to as the "Cortese List," which are contained on internet websites, including the online EnviroStor database from the Department of Toxic Substances Control and the online GeoTracker database from the State Water Resources Control Board. These two databases include hazardous material release sites along with other categories of sites or facilities specific to each agency's jurisdiction. A search of the online databases in January 2021 revealed that the project site is not located on or directly adjacent to any known hazardous cleanup sites (DTSC 2021; SWRCB 2021).

A Phase I Environmental Site Assessment was completed for the proposed project by AEI Consultants (AEI) on May 7, 2020 and is included as Appendix G to this ISMND. This assessment revealed that the project site was historically used for agricultural purposes and that the project site could be affected from the use of agricultural chemicals, such as pesticides, herbicides, and fertilizers (AEI 2020a). Therefore, AEI recommended a Phase II Subsurface Investigation be completed to determine if the project site has been substantially affected by the historical agriculture use. On June 12, 2020, AEI completed a Phase II Limited Agriculture Investigation for the proposed project to evaluate if shallow subsurface soil conditions have been impacted by the former agricultural activities at the project site. The Phase II Limited Agriculture Investigation tested soil samples from the project site for organochlorine pesticides (OCPs), arsenic, and lead. AEI compared the analytical results to the San Francisco Bay RWQCB Environmental Screening Levels (ESLs), and determined that the former agricultural activities at the project site have not impacted the site at concentrations above the residential or construction worker ESLs or background concentrations (AEI 2020b).

There are no public airports within 2 miles of the project site. The nearest public airport is the Nut Tree Airport located about 8.5 miles northeast of the project site. The Travis Air Force Base is also about 2.5 miles east of the project site. The Travis Air Force Base Land Use Compatibility Plan (LUCP) identifies the project site within land use compatibility Zone D (Solano County ALUC 2002).

According to the California Department of Forestry and Fire Protection (CALFIRE), the City is not located in a local or state fire hazard severity zone (CALFIRE 2020).

3.9.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, and online regulatory compliance databases. Additionally, a Phase I Environmental Site Assessment was prepared for the proposed project by AEI on May 7, 2020. AEI also

completed a Phase II Limited Agriculture Investigation on June 12, 2020. The Phase I and Phase II Environmental Site Assessments are provided in Appendix G and Appendix H, respectively.

3.9.3 Environmental Impact Analysis

This section discusses potential impacts related to hazards and hazardous materials associated with the proposed project and provides mitigation measures where necessary.

Impact HAZ-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

AND

Impact HAZ-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Analysis

The proposed project would involve the development of a multi-family apartment complex with 180 units, a 3,900-square-foot community building, and common and private open space areas for residents. Residential uses are not typically associated with the routine transport, use, or disposal of hazardous materials and do not present a reasonably foreseeable release of hazardous materials. Any hazardous materials associated with residential uses would primarily consist of typical household cleaning products and fertilizers. These items would be used in small quantities and in accordance with label instructions, which are based on federal and state health and safety regulations. Therefore, operation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through the release of hazardous materials through reasonably foreseeable upset and accident conditions.

The proposed project would not include any activities associated with the demolition of structures prior to the 1980s and would not pose a hazard regarding asbestos containing materials and lead-based paints. During construction, potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used and transported to and from the project site as needed. Accidental releases of small quantities of hazardous materials or toxic substances could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard; however, contractors would be required to transport, store, and handle hazardous materials and toxic substances related to construction activities in a manner consistent with relevant regulations and guidelines, including California Health and Safety Codes and City ordinances. 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, construction of the proposed project would result in a less than significant impact related to the routine transport, use, disposal of, or accidental release of hazardous materials or toxic substances.

Additionally, although dewatering may be required for the proposed project (see Section 3.7, Geology and Soils), no contaminated groundwater is expected to occur onsite. All groundwater encountered onsite during construction activities would be collected, treated, and either discharged or disposed of properly, in compliance with the San Francisco Bay RWQCB waste discharge requirements. Therefore, there would be a less than significant impact related to contamination from dewatering activities during construction.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Analysis
The project site is about 0.25 mile south of Grange Middle School in the City of Fairfield. The proposed project does not involve the development of a use that would emit hazardous materials, substances, or waste during operation. The use of heavy equipment and activities involving hazardous materials would be limited to the construction phase of the proposed project and would be confined to construction areas and within existing roadways. The use, management, and disposal of hazardous materials during construction of the proposed project 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 discussed, a Phase II Limited Agriculture Investigation was completed for the proposed project by AEI on June 12, 2020 to test soil samples from the project site for OCPs, arsenic, and lead (AEI 2020b). The analysis determined that there were no OCPs present on the project site, and that arsenic and lead levels were below the San Francisco Bay RWQCB's ESLs (AEI 2020b). Therefore, the Phase II Limited Agriculture Investigation determined the former agricultural activities at the project site have not impacted the site at concentrations above the residential or construction worker ESLs or background concentrations (AEI 2020b). 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.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-4 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?

Impact Analysis
The project site is not located on or adjacent to any identified hazardous cleanup sites, pursuant to Government Code Section 65962.5 (SWRCB 2021; DTSC 2021). However, the Phase I Environmental Site Assessment determined that the project site was historically used for agricultural purposes and that the project site could be affected from the use of agricultural chemicals, such as pesticides, herbicides, and fertilizers (AEI 2020a). A Phase II Limited Agriculture Investigation was completed for the proposed project by AEI on June 12, 2020 to test soil samples from the project site for OCPs, arsenic, and lead (AEI 2020b). AEI compared the analytical results to the San Francisco Bay RWQCB's ESLs, and determined that the former agricultural activities at the project site have not impacted the site at concentrations above the residential or construction worker ESLs or background concentrations (AEI 2020b). As such, the proposed project would not be located on a hazardous materials site that would create a significant hazard to the public and the environment, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Impact Analysis
There are no public airports within 2 miles of the project site. The nearest public airport is the Nut Tree Airport located about 8.5 miles northeast of the project site. The project site is about 2.5 miles west of the Travis Air Force Base and is located within the Travis Air Force Base LUCP land use compatibility Zone D (Solano ALUC 2002). According to the Travis Air Force Base LUCP, the land use compatibility Zone D does not require any limits on the number of residential dwelling units or people per ace (Solano ALUC 2002). The only limit within land use compatibility Zone D is that developments more than 200 feet tall require airport land use compatibility review in accordance with Federal Aviation Regulations Part 77 (Solano County ALUC 2002). The proposed structures would be a maximum of 42 feet, 6 inches tall, and therefore would not require review by the Solano County ALUC. As such, the proposed project would not result in a safety hazard for people residing or working in the project area, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HAZ-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Analysis
The project site consists of a currently vacant infill site at the southeast intersection of Railroad Avenue and Blossom Avenue. According to the Solano County Emergency Operations Plan, emergency evacuation routes mainly include the major highways, such as Highway 80, Highway 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. Construction activities would be mostly confined to the project site, but may extend to the centerlines of Railroad Avenue, Blossom Avenue, and Amber Drive to connect utility lines and other offsite improvements resulting in temporary or partial street closures. Access to the project site and the surrounding area would be maintained in accordance with a TCP and an encroachment permit from the City. The TCP 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.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact HAZ-7 Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Impact Analysis
Open space areas and grasslands, particularly those adjacent to urban development, can pose major risks for wildland fires in the City. According to the General Plan EIR, the undeveloped grasslands surrounding the outer edges of the City mainly pose moderate fire risk (Suisun City 2015a). However, there are a few areas with high fire risk, including the south-central portion of the city east of Sunset Avenue and south of State Route (SR) 12 and the western portion, north and northwest of Cordelia Road and south of SR 12 (Suisun City 2015a).

The project site is in the northern portion of the City limits within a suburban residential area. Based on review of Fire Hazard Severity Zone maps developed by CALFIRE, the project site is not within a state responsibility area or a very high fire hazard severity zone (CALFIRE 2020). The U.S. Forest Service has also developed a Wildfire Hazard Potential Map to inform evaluations of wildfire risk and prioritize fuels management across very large landscapes. According to the U.S. Forest Service Wildfire Hazard

Potential Map, the project site's wildfire hazard potential is classified as "very low" (USFS 2020). The proposed project would be required to comply with the CBC and California Fire Code, and all applicable fire safety standards set forth by the City to protect the proposed structures from possible wildland fires. Therefore, the proposed project is not expected to be exposed to risks associated with wildland fires, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.10 HYDROLOGY AND WATER QUALITY

	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 groundwater quality?	☐	☒	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☒	☐	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i) Result in 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 off-site;	☐	☐	☒	☐
	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	☐	☒	☐	☐
	iv) Impede or redirect flood flows	☐	☐	☐	☒
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

3.10.1 Environmental Setting

Watershed and Regional Drainage

The project site is within the Laurel Creek-Frontal Suisun Bay watershed in the San Francisco Bay Drainage Province (FSSD 2019). Laurel Creek and McCoy Creek are the primary surface waters in this watershed and are located about 0.1-mile northwest and 0.7-mile east of the project site, respectively. These drainages flow south and ultimately drain into Suisun Marsh and Suisun Bay. Suisun Bay is a shallow tidal estuary that is located at the confluence of the Sacramento and San Joaquin Rivers, and

forms the Sacramento Delta. Suisun Bay also drains to the Carquinez Strait, which connects to San Pablo Bay and ultimately the San Francisco Bay.

Groundwater

There are no private wells on the project site. Groundwater is not used for domestic or irrigation purposes in the City and is not considered a viable source for domestic water due to tidal inflows that affect water quality (Suisun City 2015a). The City overlies the Suisun-Fairfield Valley groundwater basin. The state has designated the Suisun-Fairfield Valley groundwater basin as a low-priority basin, and therefore is not subject to the requirements of the Sustainable Groundwater Management Act (DWR 2021).

Stormwater

Stormwater generated in the City is discharged into Suisun Marsh (Suisun City 2015a). The City addresses stormwater requirements for development projects through the FSURMP, which is maintained by FSSD. The FSURMP is intended to reduce or eliminate pollutants discharged from the urban environment into storm drains, local creeks, and the Suisun Marsh (FSSD 2021). Development projects in the City must comply with the NPDES permit issued to the FSURMP by the San Francisco Bay RWQCB. The FSURMP requires all projects to incorporate BMPs during construction activities and a SWPPP, including projects that disturb less than 1 acre of land. Additionally, the FSURMP requires all projects to incorporate site design and source control measures during project operation (Suisun City 2015a).

Flooding

Flood hazard zones are identified on official Flood Insurance Rate Maps issued by the Federal Emergency Management Agency (FEMA). Flooding can be earthquake-induced or the result of intense rainfall. Areas within a 100-year floodplain have a 1 percent probability of flooding in a given year. The project site is designated as Zone X, which is defined as areas outside of the 100-year floodplain zone that also have a 0.2-percent probability of flooding in a given year (FEMA 2021).

3.10.2 Methodology

The evaluation of potential hydrologic and water quality impacts was based on a review of City documents, including the General Plan, General Plan EIR, and 2015 Urban Water Management Plan (UWMP). Mapping tools provided by FEMA and the Department of Water Resources were also reviewed. The information obtained from these sources are summarized to establish existing conditions and to identify potential environmental effects.

3.10.3 Environmental Impact Analysis

This section discusses potential impacts related to hydrology and water quality associated with the proposed project and provides mitigation measures where necessary.

Impact HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Impact Analysis

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. Project construction activities would involve grading and the permanent disturbance of approximately 10 acres.

Construction activities have the potential to generate stormwater runoff and to discharge pollutants, such as fuel, solvents, oil, paints, and trash, into the City's stormwater system. The proposed project would comply with the NPDES General Construction Permit, which requires the preparation of a SWPPP and the incorporation of BMPs to control sedimentation, erosion, and hazardous materials from contacting stormwater, with the intent of keeping all products of erosion from moving off-site into receiving waters. The SWPPP and applicable BMPs have been incorporated into Mitigation Measure HYD-1 to reduce potential water quality impacts to a less than significant level. In addition, the proposed project must comply with the provisions of the City's Grading and Erosion Control Ordinance (Chapter 15.12 of the Suisun City Municipal Code) and implement a site runoff control plan that includes erosion and dust control measures (Suisun City 2020a). As such, with implementation of Mitigation Measure HYD-1 and compliance with the City's Grading and Erosion Control Ordinance, construction impacts to water quality would be less than significant.

Operation

The proposed project would create approximately 249,700 square feet of impervious surface and approximately 166,300 square feet of pervious surface. As discussed, the FSURMP addresses stormwater requirements for development projects and requires development projects that create 10,000 square feet or more of impervious surface to implement post-construction stormwater control BMPs and low-impact development measures to minimize stormwater runoff. The proposed project would comply with the requirements of the FSURMP Stormwater C.3 Guidebook by providing approximately 126,233 square feet of landscaping and the construction of 11 bioretention areas on the project site. The 11 bioretention areas would total approximately 11,550 square feet, for the required treatment area of 6,950 square feet per the C.3 Guidebook. The bioretention areas would retain and treat stormwater prior to entering the stormwater system. Each bioretention area would be connected to either a 12-inch or an 18-inch storm drain line, which would either connect to the existing 30-inch storm drain line in Railroad Avenue or the 21-inch storm drain line in Amber Drive. The stormwater drainage facilities would be designed in accordance with the requirements of the City of Suisun City, including providing stormwater drainage calculation 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. Therefore, with compliance to applicable City regulations and implementation of the post-construction BMPs and low-impact development measures, operational impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM HYD-1: **Prepare and Implement a Stormwater Pollution Prevention Plan.** Coverage shall be obtained for the project under the Construction General Permit (Order No. 2009-009-DWQ, as amended by 2010-0014-DWQ and 20152-006-DWQ). Per the requirements of the State Water Resources Control Board, a Stormwater Pollution Prevention Plan (SWPPP) shall be prepared for the project to reduce the potential for water pollution and sedimentation from project activities. The SWPPP shall address site runoff, assuring that project runoff shall not affect or alter the drainage patterns on the project site. The SWPPP shall comply with the City's Grading and Erosion Control Ordinance, as specified in Chapter 5.12 in the Suisun City Municipal Code, as well as the Waste Discharge Requirements of the San Francisco Bay RWQCB Permit.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact Analysis
The City overlies the Suisun-Fairfield Valley groundwater basin. 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 (DWR 2021). 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). The proposed project would not use groundwater supplies for construction or operation. During the geotechnical investigation, groundwater was not encountered within the soil borings that were explored to a maximum depth of 5 feet bgs (WKA 2020). However, according to the Geotechnical Engineering Report, in 2010, groundwater was encountered at the project site at depths ranging from 8 to 12 feet bgs (WKA 2020). Project excavation activities would be relatively shallow, but may extend to approximately 12 feet bgs to trench utilities. Therefore, groundwater may be encountered during excavation activities, and temporary construction dewatering may be necessary. In the event that groundwater is encountered during construction, common practices employed to facilitate construction include either dewatering the excavation or shoring the sides of the excavation to reduce groundwater inflow.

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 required by Mitigation Measure GEO-2, 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 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, construction of the proposed project would result in a less than significant impact to groundwater recharge with implementation of Mitigation Measure GEO-2.

Operation of the proposed project would result in approximately 257,200 square feet of impervious surface and approximately 166,300 square feet of pervious surface. The pervious surface would include approximately 126,233 square feet of landscaping and 11 bioretention areas on the project site. The 11 bioretention areas would total approximately 11,550 square feet, for the required treatment area of 6,950 square feet per the C.3 Guidebook. The landscaping and bioretention areas would meet the requirements of the FSURMP Stormwater C.3 Guidebook and would allow for local infiltration of stormwater into the groundwater. Because the proposed project would incorporate these design features to direct stormwater flows, and the groundwater basin is not designated in critical condition from overdraft, operation of the proposed project would not substantially impede groundwater recharge; therefore, impacts would be less than significant with mitigation.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure GEO-2 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- **i) Result in 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 off-site;**
- **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;**
- **iv) Impede or redirect flood flows**

Impact Analysis

i) Result in substantial erosion or siltation on- or off-site;

During project construction, ground-disturbing and earth-movement activities could result in erosion-related impacts. The proposed project would implement Mitigation Measure HYD-1 and prepare a SWPPP in accordance with the NPDES General Construction Permit. The SWPPP would include BMPs, which would be implemented during construction activities to reduce the potential of erosion. As required by the FSURMP, the proposed project would also incorporate post-development measures to reduce the potential for stormwater impacts into local drainages. The proposed project would create approximately 143,800 square feet of onsite pervious surface and approximately 22,500 square feet of off-site impervious surface (166,300 square feet total). The pervious surface would include approximately 126,233 square feet of landscaping and 11 bioretention areas. The bioretention areas would total approximately 11,550 square feet, for the required treatment area of 6,950 square feet per the C.3 Guidebook. The landscaping and bioretention areas would collect impervious surface runoff prior to

entering the piped stormwater system and would provide treatment, retention, and/or detention at the project site to reduce the volume of stormwater runoff and erosion impacts. Therefore, with implementation of Mitigation Measure HYD-1, the proposed project would not result in substantial erosion on- or off-site, and impacts would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

The proposed project would develop the vacant project site with a multi-family apartment complex. The development of the proposed project would create approximately 257,200 square feet of impervious surface and approximately 166,300 square feet of pervious surface. As required by the FSURMP Stormwater C.3 Guidebook, the proposed project would include post-construction stormwater control BMPs and low-impact development measures to control stormwater runoff. These features would consist of approximately 126,233 square feet of landscaping and 11 bioretention areas. The 11 bioretention areas would total approximately 11,550 square feet, for the required treatment area of 6,950 square feet per the C.3 Guidebook. Stormwater generated at the project site would be diverted to these pervious areas to control the volume of stormwater and would reduce the potential for flooding on or off-site. 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. Therefore, the proposed project would not result in on- or off-site flooding, and the impact would be less than significant.

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

As described above, construction activities would have the potential to generate stormwater runoff and to discharge pollutants, such as fuel, solvents, oil, paints, and trash, into the City's stormwater system. In addition, the increase in impervious surface resulting from development of the proposed project would alter the type and level of pollutants in stormwater runoff from the project site. During construction activities, the proposed project would conform to the requirements of the NPDES General Construction Permit, which involves the preparation and implementation of a SWPPP. The SWPPP would specify BMPs to implement during construction to prevent, control, and reduce polluted runoff from entering the City's stormwater system and waterways. Implementation of these BMPs would be part of Mitigation Measure HYD-1.

As required by the FSURMP, the proposed project would construct 11 bioretention areas on the project site to minimize the amount of stormwater generated from the project site. 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. Therefore, stormwater generated by the proposed project would not exceed the capacity of existing or planned stormwater drainage systems, and impacts would be less than significant with Mitigation Measure HYD-1 incorporated.

iv) Impede or redirect flood flows

The project site is designated as an area of minimal flood hazard or "Zone X," which means that there is low potential for flooding, and it is not located in a 100-year or 500-year flood zone (FEMA 2021).

Therefore, the project site is not located within a FEMA flood zone and would not impede or redirect flood flows. No impact would occur.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure HYD-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Analysis
The project site is about 8 miles north of Suisun Bay and about 20 miles northeast of San Pablo Bay. Tsunamis typically affect coastlines and areas up to 0.25 mile inland. 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 Suisun 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, no impact would occur related to inundation by seiche, tsunami, or flood flows.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis
The state has designated the Suisun-Fairfield Valley groundwater basin as a low-priority basin, and it is not subject to the requirements of the Sustainable Groundwater Management Act (DWR 2021). Therefore, the proposed project would not conflict with or obstruct implementation of a sustainable groundwater management plan.

The proposed project is required to comply with the policies and objectives of the Basin for the San Francisco Bay RWQCB. As discussed, the proposed project would be required to implement Mitigation Measure HYD-1 and obtain coverage under the NPDES Construction General Permit requiring preparation of a SWPPP. The SWPPP would be implemented during construction and would incorporate BMPs that meet the requirements of the San Francisco Bay RWQCB's Basin Plan to reduce potential impacts to water quality. If construction activities encounter groundwater, the proposed project would implement Mitigation Measure GEO-2 and 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, and impacts would be less than significant with implementation of Mitigation Measures HYD-1 and GEO-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1 and GEO-2 are required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

3.11 LAND USE AND PLANNING

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

3.11.1 Environmental Setting

The 9.09-acre project site is located in the northern portion of the City within a suburban residential area. It is currently vacant and mostly covered in non-native grasses and fenced along the eastern and southern boundaries from the adjacent single-family residences. Other land uses surrounding the project site include a self-storage facility, multi-family residences, an auto-body shop, and commercial development. The UPRR is about 75 feet north of the project site and runs parallel to Railroad Avenue. Beyond the train tracks, land uses mostly consist of single-family residential developments located within the City of Fairfield.

The project site is designated Medium-Density Residential by the General Plan and zoned Medium-Density Residential (RM) (Suisun City 2015a). The Medium-Density Residential land use designation is intended to provide for attached and detached single-family residences of all types, including small-lot and zero-lot line homes, 'pull-apart' style and attached townhomes, clustered homes around a courtyard, "six-pack" lots, and other designs. It also provides for garden apartments, rowhouses, townhomes, condominium projects in different configurations, and other types of single- and multi-family housing, second accessory units, public services and facilities, live-work units, home occupations, and other compatible uses (Suisun City 2015a). The Medium-Density Residential (RM) zoning district is consistent with the Medium-Density Residential land use designation in the General Plan. Multi-family apartments are permitted in the Medium-Density Residential zoning district with approval of a CUP.

3.11.2 Methodology

The evaluation of potential land use impacts was based on a review of applicable land use documents, including the General Plan, General Plan EIR, and Suisun City Municipal Code.

3.11.3 Environmental Impact Analysis

This section discusses potential impacts related to land use and planning associated with the proposed project and provides mitigation measures where necessary.

Impact LU-1 Physically divide an established community?

Impact Analysis

The proposed project would be located on a 9.09-acre infill site in a suburban residential area. The project site is currently vacant and bordered by Railroad Avenue to the north, single-family residences to the south and east, and Blossom Avenue to the west. The proposed project would develop the site with a multi-family apartment complex with 180 units, a 3,900-square-foot community building, and common and private open space areas for residents. The proposed project would also include utility improvements, covered and uncovered surface parking, private driveways, frontage improvements, and landscaping. Due to the infill nature of the project site, the proposed project would not divide an existing community. The proposed project would be accommodated by existing roadways and would not require construction of new roadways that would preclude access to the surrounding area. The proposed project would be consistent with the surrounding residential development and with the Medium-Density Residential land use designation. As such, the proposed project would not physically divide an established community, and no impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

Impact LU-2 Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Analysis

General Plan and Zoning Consistency

The project site is designated Medium-Density Residential by the General Plan and zoned Medium-Density Residential (RM) (Suisun City 2015a). The Medium-Density Residential land use designation is intended to provide for attached and detached single-family residences of all types, including garden-style apartments and multi-family housing. The proposed project involves the development of a garden-style apartment complex with 180 multi-family units, and therefore would be consistent with the Medium-Density Residential land use designation.

The proposed project would be subject to the development standards for the Medium-Density Residential (RM) zoning district. The Medium-Density Residential (RM) zoning district is applicable to parcels development in the 10.1 to 20 dwelling units per gross acre range. The proposed project would be consistent with the development range for the Medium-Density Residential (RM) zoning district and result in the development of 19.8 dwelling units per acre. Residential dwelling types in the Medium-Density Residential zoning district may include single-family detached dwellings on small lots, two-family dwellings (duplexes or duets), townhomes (attached and detached), or condominiums (Suisun City 2020a). Multi-family apartments are permitted in the Medium-Density Residential zoning district with a

CUP; therefore, the proposed project would require the approval of a CUP. As shown in Table 3.11-1, the proposed project has been designed in accordance with the applicable development standards for the Medium-Density Residential (RM) zoning district, as defined in Section 18.31 of the City's Zoning Code.

Table 3.11-1: Development Standards

Development Standards	Medium-Density (RM) Zoning District	Proposed Project	Consistent
Front Setback (West)	10 – 20 feet	24 feet, 8 inches	Yes
Side Setback (North) Side Setback (South)	0 – 5 feet 0 – 5 feet	22 feet 11 feet[1]	Yes
Rear Setback (East)	5 feet	25 feet	Yes
Maximum Lot Coverage	80%	20%	Yes

Notes:

[1] Represents setback distance to the proposed community building, which would be a shorter distance compared to the setback distance of the proposed apartment buildings.

Source: Suisun City 2020a

The maximum building height for the Medium-Density Residential zoning district is 35 feet. However, Section 18.38.040 of the Suisun City Municipal Code allows any building to exceed the height limit established for the zoning district (maximum of two additional stories) provided that the setbacks are increased proportionally. Based on the increased setbacks provided by the proposed project, the maximum building height allowed would be 55 feet pursuant to the requirements in Section 18.38.040 of the Suisun City Municipal Code. The proposed buildings would be three-stories tall with a maximum building height of 42 feet, 6 inches. Therefore, the proposed project would be consistent with the maximum building height requirements allowed under Section 18.38.040 of the Suisun City Municipal Code.

Other project design features would include the placement of 6-foot hedges and screening trees along the eastern and southern boundaries of the project site, construction of an 8-foot-tall masonry sound wall along the northern boundary to attenuate noise generated from the railroad and adjacent roadways, and installation of a 6-foot-tall open visibility wrought iron style barrier along the western boundary. These site perimeter features would be constructed in accordance with Section 18.34, Fences and Walls, of the Suisun City Municipal Code. Additionally, the proposed project would comply with the City's Development Guidelines for Architecture and Site Planning and would be subject to site plan and architecture review in accordance with Chapter 18.76 of the Suisun City Municipal Code. Therefore, with the approval of a CUP, the proposed project would not conflict with the General Plan or Zoning Code.

Travis Air Force Base Compatibility

The Travis Air Force Base is located approximately 2.5 miles east of the project site. The project site is within the Travis Air Force Base LUCP land use compatibility Zone D (Solano County ALUC 2002). Limitations on the height of structures are the only compatibility factors within this zone. Accordingly, any proposed development more than 200 feet tall would require airport land use compatibility review and Federal Aviation Administration review per Federal Aviation Regulation Part 77 (Solano County ALUC 2002). The proposed project would be approximately 42 feet, 6 inches tall and would not require review from the Solano County ALUC. Therefore, the proposed project would be compatible with the Travis Air Force Base Area of Influence, and the impact would be less than significant.

Overall, the proposed project would not conflict with the General Plan, Zoning Code, or the Travis Air Force Base LUCP, and this impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.12 MINERAL RESOURCES

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 a value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.12.1 Environmental Setting

The California Geological Survey classifies lands into Aggregate and Mineral Resource Zones (MRZ) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface and Mining Reclamation Act of 1977. These MRZs identify whether known or inferred significant mineral resources are present in an area. Local governments are required to incorporate identified MRZs delineated by the state into their general plans. The General Plan identifies all lands within the City's Sphere of Influence as MRZ-1; therefore, the City does not contain any mineral resources (Suisun City 2015c). Peterson Pit, a sand and gravel mine, is the only mine within the City's Sphere of Influence and is located about 7 miles east of the project site.

3.12.2 Methodology

The following analysis is based on a review of the General Plan and the DOC's Minerals Land Classification Map.

3.12.3 Environmental Impact Analysis

This section discusses potential impacts on mineral resources associated with the proposed project and provides mitigation measures where necessary.

Impact MIN-1 Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

Impact Analysis
The project site is currently vacant and within a suburban residential area. As discussed in the General Plan, there are no known mineral resources within the City's Sphere of Influence, which includes the project site. No mineral extraction activities exist on or near the site, and mineral extraction is not included as part of the proposed project. Furthermore, the project site is zoned Medium-Density Residential, which does not allow mineral extraction uses. The proposed project would not result in the loss of availability of a known mineral resource, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact MIN-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Impact Analysis
The project site has not been delineated as a locally important mineral resource recovery site by the General Plan, General Plan EIR, or any specific plan or other land use plan (Suisun City 2015c). Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

3.13 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
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?	☐	☐	☒	☐

3.13.1 Environmental Setting

Noise Fundamentals and Terminology

Noise is generally defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an existing sound level.

Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dB(A) and referred to as A-weighted decibels. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Table 3.13-1 summarizes typical A-weighted sound levels for different common noise sources.

Table 3.13-1: Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dB(A))	Common Indoor Activities
	-110-	Rock band
Jet flyover at 1,000 Feet		
	-100-	
Gas lawnmower at 3 Feet		
	-90-	
Diesel truck at 50 Feet at 50 MPH		Food blender at 3 Feet
Noisy urban area, daytime	-80-	Garbage Disposal at 3 Feet
Gas lawnmower, 100 Feet		
Commercial area	-70-	Vacuum Cleaner at 10 Feet
Heavy traffic at 300 Feet		Normal Speech at 3 Feet
	-60-	
Quiet urban daytime		Large business office
	-50-	Dishwasher in next room
Quiet urban nighttime		
Quiet suburban nighttime	-40-	Theater, large conference room (Background)
	-30-	
Quiet rural nighttime		Library
	-20-	Bedroom at night, concert hall (Background)
	-10-	
		Broadcast/recording studio
	-0-	

Source: Caltrans 2013

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (L_{eq}), the minimum and maximum sound levels (L_{min} and L_{max}, respectively), percentile-exceeded sound levels (such as L_{10}, L_{20}), the day-night sound level (L_{dn}), and the community noise equivalent level (CNEL). L_{dn} and CNEL values often differ by less than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment. Table 3.13-2 defines sound measurements and other terminology used in this ISMND.

Table 3.13-2: Definition of Sound Measurements

Sound Measurements	Sample Heading
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dB(A))	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Sound Measurements	Sample Heading
C-Weighted Decibel (dB(C))	The sound pressure level in decibels as measured using the C-weighting filter network. The C-weighting is very close to an unweighted or flat response. C-weighting is only used in special cases when low-frequency noise is of particular importance. A comparison of measured A- and C-weighted level gives an indication of low frequency content.
Maximum Sound Level (L_{max})	The maximum sound level measured during the measurement period.
Minimum Sound Level (L_{min})	The minimum sound level measured during the measurement period.
Equivalent Sound Level (L_{eq})	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (L_{xx})	The sound level exceeded xx % of a specific time period. L_{10} is the sound level exceeded 10% of the time. L_{90} is the sound level exceeded 90% of the time. L_{90} is often considered to be representative of the background noise level in a given area.
Day-Night Level (L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches per second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: Federal Highway 2006

With respect to how humans perceive and react to changes in noise levels, a 1 dB(A) increase is imperceptible, a 3 dB(A) increase is barely perceptible, a 5 dB(A) increase is clearly noticeable, and a 10 dB(A) increase is subjectively perceived as approximately twice as loud (Egan 2007). These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broadband noise and to changes in levels of a given noise source. These statistical indicators are thought to be most applicable to noise levels in the range of 50 to 70 dB(A), as this is the usual range of voice and interior noise levels. Numbers of agencies and municipalities have developed or adopted noise level standards, consistent with these and other similar studies to help prevent annoyance and to protect against the degradation of the existing noise environment.

For a point source such as a stationary compressor or construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can

affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a slightly greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one source produces a sound pressure level of 70 dB(A), two identical sources would combine to produce 73 dB(A). The cumulative sound level of any number of sources can be determined using decibel addition.

Vibration Standards

Construction Vibration

Vibration is like noise such that noise involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocity (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of in/sec PPV.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.13-3 notes the general threshold at which human annoyance could occur is 0.1 in/sec PPV for continuous/frequent sources. Table 3.13-4 indicates the threshold for damage to typical residential and commercial structures ranges from 0.3 to 0.5 in/sec PPV.

Table 3.13-3: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Barely perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Severe	2.0	0.40

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second
PPV = peak particle velocity
Source: Caltrans 2020

Table 3.13-4: Guideline Vibration Damage Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.30	0.12
Historic and some old buildings	0.50	0.20
Older residential structure	0.70	0.30
New residential structures	1.2	0.50
Modern industrial/commercial buildings	2.0	0.50

Notes: Transient sources again create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second
PPV = peak particle velocity
Source: Caltrans 2020

Operation of heavy construction equipment, particularly pile driving and other impact devices such as pavement breakers, create seismic waves that radiate along the surface of the ground and downward into the earth. These surface waves can be felt as ground vibration. Vibration from the operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance would result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes would decrease with increasing distance. Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. Table 3.13-5 summarizes typical reference vibration levels generated by select construction equipment.

Table 3.13-5: Reference Vibration Source Levels for Construction Equipment

Equipment	PPVref at 25 Feet
Vibratory roller	0.210
Large bulldozer	0.089

Equipment	PPVref at 25 Feet
Loaded trucks	0.076
Small bulldozer	0.003

Notes:
PPVref = reference peak particle velocity
Source: FTA 2018

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation can be used to estimate the vibration level at a given distance for typical soil conditions (FTA 2018). "PPVref" is the reference PPV from Table 3.13-5, and "Distance" is the distance between the source and the receptor:

PPV = PPVref x (25/Distance)^1.5

Railroad Vibration

According to the Federal Transit Administration Noise and Vibration Impact Assessment Guidelines (FTA-VA-90-06), groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

Train wheels rolling on rails create vibration energy that is transmitted through the track support system into the ground, creating vibration waves that propagate through the various soil and rock strata to the foundations of nearby buildings. The vibration propagates from the foundation throughout the remainder of the building structure. The maximum vibration amplitudes of the floors and walls of a building often would be at the resonance frequencies of various components of the building. Table 3.13-6 shows the FTA vibration impact criteria for a single event.

Table 3.13-6: FTA Groundborne Vibration Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB 1inch/sec, RMS)		
	Frequent Events	Occasional Events	Infrequent Events
Category 1 – Buildings where vibration would interfere with interior operations	65	65	65
Category 2 – Residences and buildings where people normally sleep	72	75	80
Category 3 – Institutional land uses with primarily daytime use	75	78	83

Notes:
[1]"Frequent Events" is defined as more than 70 vibration events of the same source per day.
[2]"Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.
[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. For equipment that is more sensitive, a Detailed Vibration Analysis must be performed.
Source: Appendix I

Noise Regulatory Framework

Federal, state, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. These include aircraft, locomotives, and trucks. No federal noise standards are directly applicable to the proposed project. The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. Local general plans identify general principles intended to guide and influence development plans.

State Regulations

California Building Code

Part 2, Title 24 of the CBC establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under Section 1207.11 "Exterior Sound Transmission Control," interior noise levels attributable to exterior noise sources cannot exceed 45 L_{dn} in any habitable room. Where such residences are located in an environment where exterior noise is 60 L_{dn} or greater, an acoustical analysis is required to ensure interior levels do not exceed the 45 L_{dn} interior standard. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the building must also specify a ventilation or air conditioning system to provide a habitable interior environment.

California Green Building Standards (CALGreen)

CALGreen, Section 5.507 "Environmental Comfort," would apply to occupied areas of the one-story community building. CALGreen states the following:

- *"5.507.4.1 Exterior noise transmission. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite*

Sound Transmission Class (STC) rating of at least 50 or a composite Outdoor/Indoor Transmission Class (OITC) rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. *Within the 65 CNEL noise contour of an airport.*

Exceptions:

1. *L_{dn} or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone plan.*
2. *L_{dn} or CNEL for other airports and heliports for which a land use plan that has not been developed shall be determined by the local general plan noise element.*
3. *Within the 65 CNEL or L_{dn} noise contour of a freeway or expressway, railroad, industrial source, or fixed-guideway notice source as determined by the Noise Element of the General Plan.*

- *5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB hourly equivalent sound level (Leq-1-hr) during any hour of operation shall have building, addition, or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).*
- *5.507.4.2 Performance method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an Leq-1-hr of 50 dBA in occupied areas during any hours of operations.*
- *5.507.4.2.1 Site features. Exterior features, such as sound walls or earth berms, may be used as appropriate to the building addition or alteration project to mitigate sound migration to the interior.*
- *5.507.4.2.2 Documentation of compliance. An acoustical analysis documenting compliance of interior sound levels shall be prepared by personnel approved by the architect or engineer of record.*
- *5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40."*

Local Regulations

Suisun City General Plan

The "Noise and Vibration" section of Chapter 9 "Public Health and Safety" in the General Plan identifies policies and maximum allowable noise limits for transportation and non-transportation sources. As shown in Table 9-1 of the General Plan (copied verbatim below), the maximum allowable noise exposure from transportation noise sources is 60 dB(A) L_{dn} at the exterior of residential land uses and 45 dB(A) L_{dn} within interior spaces for residential buildings.

Table 9-1: Maximum Allowable Noise Exposure from Transportation Noise Sources at Noise-Sensitive Land Uses

Land Use	Outdoor Activity area (dB(A) L_{dn})	Interior Spaces	
		dB(A) L_{dn}	dB(A) L_{eq}
Residential	60	45	--
Residential (in Downtown Waterfront Specific Plan Area or other Mixed-Use Designations)	70	45	--
Transient Lodging	60	45	--
Hospitals, Nursing Homes	60	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60	--	40
Office Buildings	--	--	45
School, Libraries, Museums	60	--	45
Playgrounds, Neighborhoods	70	--	--

Notes:

Noise-sensitive land uses include schools, hospitals, rest homes, long-term care, mental care facilities, residences, and other similar land uses. Outdoor activity areas are considered to be the portion of a noise-sensitive property where outdoor activities would normally be expected (i.e., patios of residences and outdoor instructional areas of schools). Outdoor activity areas for the purposes of this element do not include gathering spaces alongside transportation corridors or associated public rights-of-way. Where development projects or roadway improvement projects could potentially create noise impacts, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. Such analysis shall be the financial responsibility of the applicant and be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics. Mitigation strategies shall include site planning and design over other types of mitigation.

Program PHS-1.1 addresses exposure to noise-sensitive land uses located in areas with existing noise from mobile, stationary, or agricultural sources. Development projects that are affected by non-transportation related noise shall be mitigated to achieve acceptable levels specified in Table 9-2 of the General Plan copied verbatim below), as measured at outdoor activity area of existing and planned noise-sensitive land uses:

Table 9-2: Noise Level Performance Standards for New Projects Affected By, or Including, Non-Transportation Noise Sources		
Noise Level Descriptor	**Daytime (7 a.m. – 10 p.m.)**	**Nighttime (10 p.m. – 7 a.m.)**
Hourly L_{eq}	60 dB(A)	45 dB(A)
L_{max}	75 dB(A)	65 dB(A)

Notes:

Each of the noise levels specified shall be lowered by 5 dB(A) for simple tone noises, noises consisting primarily of speech, or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established conjunction with industrial or commercial uses (e.g., caretaker dwellings).

If existing ambient noise levels exceed the levels listed in Table 9-2 as measured at outdoor activity areas of noise-sensitive land uses, then the following applies:

- Where existing exterior noise levels are between 60 and 65 dB(A) at outdoor activity areas of noise-sensitive uses, an increase of 3 dB(A) or greater [over the ambient level] is considered significant and requires mitigation to achieve acceptable levels.

- Where existing exterior noise levels are greater than 65 dB(A) at outdoor activity areas of noise-sensitive uses, an increase of 1.5 dB(A) [over the ambient level] is considered significant and requires mitigation to achieve acceptable levels.

- Where it is not possible to reduce noise in outdoor activity areas to 60 dB(A) or less using practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB(A) may be allowed, provided that feasible exterior noise level reduction measures have been implemented.

Program PHS-1.2 “Review and Conditioning of Noise-Generating New Uses” focuses on noise levels generated from non-transportation noise sources on new developments and the impact on the neighboring community. The maximum noise level resulting from new sources when added to the existing ambient noise shall not exceed the standards in Table 9-3 of the General Plan (copied verbatim below), as measured at outdoor activity areas of any affected noise-sensitive land use as follows:

Table 9-3: Noise Level Performance Standards for Non-Transportation Noise Sources		
Cumulative Duration of a Noise Event[1] (Minutes)	**Maximum Exterior Noise Level Standards**	
	Daytime[3,5]	**Nighttime[4,5]**
30-60	50	45
15-30	55	50
5-15	60	55
1-5	65	60
0-1	65	60

Notes:

[1] Cumulative duration refers to time within any one-hour period.

[2] Noise level standards measured in dB(A)

[3] Daytime = hours between 7:00 a.m. and 10:00 p.m.

[4] Nighttime = hours between 10:00 p.m. and 7:00 a.m.

[5] Each of the noise level standards specified may be reduced by 5 dB(A) for tonal noise (i.e., a signal which has a particular and unusual pitch) or for noises consisting primarily of speech for recurring impulsive noises (i.e., sounds of short duration, usually less than one second with an abrupt onset and rapid decay such as the discharge of firearms).

Exceptions to the noise levels listed in Table 9-3 include the following:

- If the ambient noise level exceeds the standard in Table 9-3, the standard becomes the ambient level plus 5 dB(A).
- Reduce the applicable standards in Table 9-3 by 5 dB if they exceed the ambient level by 10 or more decibels.

Other policies and programs listed in the General Plan include the following:

- *Policy PHS-1.5: It is the City's policy to allow outdoor transportation noise levels for residential uses in mixed-use land use designations, including the Downtown Waterfront Specific Plan Area, of up to 70 dB(A) L_{dn} and this level of noise exposure will not be considered a significant impact for the purposes of CEQA review.*
- *Policy PHS-1.8: Soundwalls are prohibited as a method for reducing noise exposure that could be addressed through other means, such as site design, setbacks, earthen berms, or a combination of these techniques.*
- *Policy PHS-1.9: New developments shall implement feasible noise mitigation to reduce construction noise and vibration impacts. Projects that incorporate feasible mitigation will not be considered by the City to have significant impacts for the purposes of CEQA review.*
- *Program PHS-1.5 "Construction Noise and Vibration Reduction Measures"*

  The City will require new developments proposing construction adjacent to existing noise-sensitive uses or close enough to noise-sensitive uses that relevant performance standards could be exceeded to incorporate feasible mitigation to reduce construction noise exposure. This may include additional limits on the days and times of day when construction can occur, re-routing construction equipment away from adjacent noise-sensitive uses, locating noisy construction equipment away from noise-sensitive uses, shrouding or shielding impact tools, use of intake and exhaust mufflers and engine shrouds, construction of acoustic barriers (e.g.

plywood, sound attenuation blankets), pre-drilling holes for placement of piles or non-impact pile driving where piles would be needed, and other feasible technologies or reduction measures necessary to achieve the City's relevant performance standards.

- *Policy PHS-2.1: New developments that propose vibration-sensitive uses within 100 feet of a railroad or heavy industrial facility shall analyze and mitigate potential vibration impact, as feasible.*

- *Policy PHS-2.2: New developments that would generate substantial long-term vibration shall provide analysis and mitigation, as feasible, to achieve velocity levels, as experienced at habitable structures of vibration-sensitive land uses, of less than 78 vibration decibels.*

Suisun City Noise Ordinance and Municipal Code

On June 16, 2020, the City Council adopted a noise ordinance (Ordinance No. 771). The ordinance provides definitions, noise regulations, specific prohibitions, and exemptions related to noise-generating activities. Additionally, the noise ordinance added subsection "S" to Section 8.12.080 of Chapter 8.12 of the Suisun City Code related to noise regulations. The noise ordinance also amends the "Construction Work Hours" section of Title 15 as follows:

Section 15.04.075 "Construction Work Hours" in the Suisun City Municipal Code states the following:

It shall be the responsibility of anyone engaging in construction or demolition work to restrict the hours of work activity on the site as follows:

A. No construction equipment shall be operated, nor any outdoor construction, non-residential projects 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 Friday, and 8:00 a.m. to 8:00 p.m., on Saturday and Sunday.

B. Construction work hours on residential projects shall be from 7:00 a.m. to 8:00 p.m.

C. A request for an exception to the permitted construction hours and days may be granted by the chief building inspector for emergency work, to offset project delays due to inclement weather, for 24-hour construction projects, or other similar occurrences.

D. City projects determined by the director of public works to be emergencies shall be exempt from these provisions.

E. For construction work hours for earthwork, trenching, concrete, or paving see Section 15.12.320.

F. Interior work which would not create noise or disturbance noticeable to a reasonable person of normal sensitivity in the surrounding neighborhood shall not be subject to these restrictions.

The Suisun City Municipal Code also includes Section 15.12.320 "Dust Control Measures", Paragraph B which states the following related to construction noise:

B. For the purposes of construction machinery for earthwork, trenching, concrete or paving, the hours of work activity on the site shall be restricted as follows:

1. *Work is allowed between the hours of seven a.m. to six p.m. Monday through Friday.*
2. *Work is allowed between the hours of nine a.m. to five p.m. on Saturdays.*
3. *Work is totally prohibited on Sundays and holidays with the exception that water trucks for the purposes of dust control may operate from nine a.m. to five p.m. on said Sundays and holidays if needed.*

Identification of Sensitive Receptors and Existing Ambient Noise Levels

Sensitive Receptors

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are considered to be more sensitive to noise intrusion than commercial or industrial activities. Ambient noise levels can also affect the perceived desirability or livability of a development.

The project site is located in the northern portion of the city within a suburban residential area. The project site is bordered by Railroad Avenue to the north, single-family residences to the south and east, and Blossom Avenue to the west. UPRR is about 75 feet north of the project site and runs parallel to Railroad Avenue.

Ambient Noise Levels

The existing noise environment in a project area is characterized by the area's general level of development, due to the high correlation between the level of development and ambient noise levels. Areas that are not urbanized are relatively quiet, while areas that are more urbanized are noisier as a result of roadway traffic, industrial activities, railroad operations, and aircraft operations.

The main source of noise at the project site would be traffic on Railroad Avenue and the UPRR. Ambient noise levels at the project site were measured and reported in the Railroad and Traffic Noise Assessment prepared by Bollard Acoustical Consultants (BAC) on November 16, 2020. To quantify ambient traffic and railroad noise levels at the project site, BAC conducted noise level measurements on July 20, 2020 and July 22, 2020. The noise survey covered a total of 16 daytime hours during which BAC staff was present to observe railroad passages at the site. The noise measurement results indicate that hourly average noise levels at the approximate setback distance of the nearest proposed apartment building ranged from 58 to 69 dB(A) L_{eq} with an average of 63 dB(A) L_{eq}. Measured maximum noise levels ranged from 74 to 97 dB(A) L_{max} with an average of 87 dB(A) L_{max}. Measured maximum noise levels were generally caused by railroad warning horn usage and exceedingly loud vehicle passbys.

3.13.2 Methodology

In accordance with the requirements of CEQA, the noise analysis evaluates the project's noise sources to determine the impact of the proposed project on the existing ambient noise environment. The measurements presented in the Railroad and Traffic Noise Assessment prepared by BAC on November 16, 2020 were used to provide baseline noise conditions at nearby sensitive receptors and within the project site vicinity (Appendix I). For the purpose of this analysis, potentially sensitive receptors were determined by reviewing current aerial photography.

Operational Noise and Vibration

Impacts from future project-related traffic and railways were analyzed in the Railroad and Traffic Noise Assessment prepared by BAC on November 16,2020, and the results are summarized herein.

Noise from the proposed project's mechanical and heating, ventilation, and air conditioning systems would operate regularly and are therefore required to comply with the maximum noise limits listed in Table 9-3 of the General Plan (refer to regulatory discussion above).

The primary source of vibration at the project site is associated with railroad activity on the UPRR tracks located about 75 feet to the north. According to the Suisun General Plan Policy PHS-2.1, new developments that propose vibration-sensitive uses within 100 feet of a railroad or heavy industrial facility are required to analyze and mitigate potential vibration impact, as feasible. The nearest proposed apartment building façade would be about 140 feet from the railroad tracks. As such, a railroad vibration analysis is technically not required for this project. Nonetheless, to ensure that railroad vibration levels are acceptable at the project site, BAC conducted vibration monitoring during railroad passbys at the project site. The measurements were conducted by BAC at the northwest corner of the project site on July 20, 2020 and July 22,2020 (Figure 1, Appendix I) and concluded that during train passbys, maximum vibration levels ranged from 60 to 69 vibration decibels (VdB), with a computed average vibration level of 63 VdB (Appendix I). General Plan Policy PHS-2.1 indicates that vibration levels below 70 Vdb would be acceptable for habitable structures. Additionally, the FTA vibration impact criteria (Table 3.13-6) indicates that vibration levels for occasional events below 75 Vdb would be acceptable for residences and buildings where people normally sleep (FTA 2018). Therefore, the maximum vibration levels measured at the project site are satisfactory relative to both the FTA and City standards.

Construction Noise and Vibration

The Federal Highway Administration Roadway Construction Noise Model (RCNM) was used to determine noise generated from construction activities. The RCNM is used as the Federal Highway Administration's national standard for predicting noise generated from construction activities. The RCNM analysis includes the calculation of noise levels (L_{max} and L_{eq}) at incremental distances for a variety of construction equipment. The spreadsheet inputs include acoustical use factors, L_{max} values, and L_{eq} values at various distances, depending on the ambient noise measurement location. Construction noise levels were calculated for each phase of construction based on the equipment list provided by the applicant, and are provided herein.

Vibration from construction equipment is analyzed at the surrounding buildings and compared to the applicable California Department of Transportation building damage criteria to determine whether construction activities would generate vibration at levels that could result in building damage.

USEPA Guidelines

U.S. Environmental Protection Agency has established guidelines (USEPA 1973) for assessing the impact of an increase in noise levels. These guidelines have been used as an industry standard to determine the potential impact of noise increases on communities. Most people can tolerate a small increase in background noise (up to about 5 dB[A]) without complaint, especially if the increase is gradual over a period of years (such as from gradually increasing traffic volumes). Increases greater than 5 dB(A) may cause complaints and interference with sleep. Increases above 10 dB(A) (heard as a doubling of

judged loudness) are likely to cause complaints and should be considered a serious increase. Table 3.13-7 defines each of the traditional impact descriptions, their quantitative range, and the qualitative human response to changes in noise levels.

Table 3.13-7: USEPA Impact Guidelines

Increase over Existing or Baseline Sound Levels	Impact Per USEPA Region Guidelines	Qualitative Human Perception of Difference in Sound Levels
0 dB to 5 dB	Minimum Impact	Imperceivable or Slight Difference
6 dB to 10 dB	Significant Impact	Significant Noticeable Difference – Complaints Possible
Over 10 dB	Serious Impact	Loudness Changes by a Factor of Two or Greater. Clearly Audible Difference – Complaints Likely

Notes:
dB = decibel

3.13.3 Environmental Impact Analysis

This section discusses potential impacts related to noise associated with the proposed project and provides mitigation measures where necessary.

Impact NOI-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis

Exterior Traffic and Railroad Noise Level Impacts

The impacts relating to future traffic and future railroad activity were analyzed in the Railroad and Traffic Noise Assessment prepared by BAC on November 16, 2020 (Appendix I). In the report, BAC used the Federal Highway Administration Highway Traffic Noise Prediction Model with future traffic forecasts contained in the General Plan EIR. The traffic noise prediction model also included a -5 dB(A) offset to traffic and railroad noise on the first floor of all project buildings to account for shielding from the construction of a planned 8-foot-tall sound wall along Railroad Avenue. The resulting predicted future traffic noise levels at the project's residential buildings and common outdoor area are listed in Table 3.13-8:

Table 3.13-8: Predicted Future Traffic Noise Environment at the Project Site

Location	Distance (feet)[1]	Ground Level L_{dn}, dB(A)[2]	Upper Floors L_{dn}, dB(A)[3]
Building 1	170	54	62
Building 2	75	63	71
Building 3	100	61	69
Building 4	70	63	71

Location	Distance (feet)[1]	Ground Level L_{dn}, dB(A)[2]	Upper Floors L_{dn}, dB(A)[3]
Building 5	70	63	71
Building 6	220	51	56
Common Outdoor Area	380	47	n/a

Notes:

[1] Distance from the indicated area to the centerline of Railroad Avenue

[2] Traffic noise levels at ground floor locations include a -5dB offset to account for the noise reduction of the proposed 8-foot-tall property line barrier. Additional offsets were applied at the façade of building 1 (-3 dB) and at the outdoor pool area (-5 dB) to account for shielding of those areas by intervening structures.

[3] Predicted traffic noise levels at upper floor locations does not include offsets for shielding by the proposed property line noise barrier and include an additional offset of +3 dB for reduced ground attenuation at upper floor locations.

dB = decibel

dB(A) = A-weighted decibel

L_{dn} = day-night sound level

Source: BAC 2020

BAC's noise measurement results and file data for numbers of typical UPRR operations on the railroad tracks located about 75 feet north of the project site were used to assess railroad noise exposure at the proposed residences within the development. Specifically, future railroad activity adjacent to the project site would consist of approximately 32 daily Amtrak operations (including capitol corridor trains), and 15 heavy freight train operations per day, for a total of approximately 47 daily train passbys. The Amtrak passbys typically occur during daytime hours, with the freight trains randomly distributed throughout a 24-hour period. Table 3.13-9 shows the analyzed railroad noise exposure at the apartment facades and common outdoor activity areas of the project:

Table 3.13-9: Predicted Future Railroad Noise Environment at the Project Site

Location	Distance (feet)[1]	Ground Level L_{dn}, dB(A)[2]	Upper Floors L_{dn}, dB(A)[3]
Building 1	240	57	65
Building 2	150	63	71
Building 3	175	62	70
Building 4	140	64	72
Building 5	140	64	72
Building 6	290	54	62
Common Outdoor Area	490	45	n/a

Notes:

[1] Distance from the indicated area to the centerline of Railroad Avenue

[2] Railroad noise levels at ground floor locations include a -5 dB offset to account for the noise reduction of the proposed 8-foot-tall property line barrier. Additional offsets were applied at the façade of building 1 (-3 dB), the façade of building 6 (-5 dB), and at the outdoor pool area (-10 dB) to account for shielding of those areas by intervening structures.

[3] Predicted railroad noise levels at upper floor locations do not include offsets for shielding by the proposed property line noise barrier.

dB = decibel

dB(A) = A-weighted decibel

L_{dn} = day-night sound level

Source: BAC 2020

Table 3.13-10 shows the analyzed combined traffic and railroad noise exposure for all buildings and common outdoor area on the project site:

Table 3.13-10: Predicted Combined Future Traffic and Railroad Noise Environment at the Project Site

Location	Ground Level L_{dn}, dB(A)[2]	Upper Floors L_{dn}, dB(A)[3]
Building 1	59	67
Building 2	66	74
Building 3	65	73
Building 4	66	74
Building 5	66	74
Building 6	56	63
Common Outdoor Area	49	n/a

Notes:
dB(A) = A-weighted decibel
L_{dn} = day-night sound level
Source: BAC 2020

As indicated in Table 3.13-10, the predicted combined future traffic and railroad noise exposure at the proposed common outdoor activity area (pool) is 49 dB(A) L_{dn}. This level satisfies the Suisun City 60 dB(A) L_{dn} exterior noise level standard. As a result, no additional consideration of exterior traffic and railroad noise mitigation measures would be warranted for the exterior areas of the proposed project.

Table 3.13-10 also shows future combined traffic and railroad noise levels at the ground-floor residential building facades are predicted to range from 56 to 66 dB(A) L_{dn}. Therefore, a building façade noise reduction of 21 dB(A) or less would be required to ensure satisfaction with the City's 45 dB(A) L_{dn} interior noise standard. Because the proposed first-floor construction would result in 25 dB(A) of building façade noise attenuation, future combined traffic and railroad noise levels within the first-floor rooms of this development would be satisfactory relative to the City's interior noise standard without the need for additional noise mitigation measures.

At upper-floor facades nearest to Railroad Avenue and the UPRR tracks, Table 3.13-10 indicates that future combined traffic and railroad noise levels would range from 63 to 74 dB(A) L_{dn}. Therefore, a minimum upper-floor building façade noise level reduction of 29 dB(A) would be sufficient to ensure satisfaction with the Suisun City 45 dB(A) L_{dn} interior noise level standard at the closest proposed buildings to the traffic and railroad noise sources. Because the noise level reduction achieved by the developer-proposed window upgrades at those closest buildings would be 30 to 32 dB(A), interior noise levels at all upper-floor rooms would be satisfactory relative to the City's interior noise standard without the need for additional noise mitigation measures.

Therefore, the impact of traffic and railroad noise to the project would be less than significant.

Project Fixed-Source Noise

Typical residential building construction would commonly involve new rooftop mechanical equipment such as condensing units and exhaust fans. This equipment would generate noise that would radiate to

neighboring properties. The noise from this equipment would be required to comply with the maximum noise level limits listed in Table 9-3 in the General Plan. The proposed project would comply with the requirements of the General Plan with the implementation of Mitigation Measure NOI-1, which would incorporate design measures for the mechanical equipment, such as shielding and/or appropriate attenuators, to reduce noise levels that may affect nearby properties. With the implementation of Mitigation Measure NOI-1, the impact of fixed-source noise to the neighboring properties would be less than significant.

Short-Term Construction Noise Impacts

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. This increased traffic would consist of vehicles, medium trucks, and heavy trucks. Depending on the construction phase, the number of temporary construction workers would range from about 75 to 85 workers per day, with an average of about 40 workers per day. It is anticipated that the construction workforce would be available from nearby areas.

Construction workers would access the project site from Railroad Avenue and Blossom Avenue and would not travel onto the residential side streets. Therefore, the impact of construction traffic noise to the neighboring noise-sensitive receptors would be less than significant.

The second type of short-term noise impact is related to noise generated during construction. Construction activities would include site preparation, grading, building construction, paving, and architectural coating. Each construction stage has its own mix of equipment, and consequently, its own noise characteristics. These various construction operations would change the character of the noise generated at the project site and therefore the exterior noise level as construction progresses. The loudest phases of construction include site preparation, building construction, and grading phases as the noisiest construction equipment is earth-moving and grading equipment.

The construction of the entire project would be conducted in five sequential stages, and each stage would use different pieces of construction equipment. The main noise-producing equipment for each construction stage is shown in Table 3.13-11.

Table 3.13-11: Construction Stage Equipment

Construction Stage	Construction Equipment	
Site Preparation	• Rubber-Tired Dozers (3) • Front-End Loader	• Tractor (2) • Backhoe
Grading	• Excavator • Grader • Tractor	• Rubber-Tired Dozer • Front-End Loader • Backhoe
Building Construction	• Crane • Generator • Front-End Loader • Welder	• Forklifts (3) • Tractor • Backhoe

Construction Stage	Construction Equipment
Paving	• Pavers (2) • Paving Equipment (2) • Rollers (2)
Architectural Coating	• Air Compressor

Table 3.13-12 lists types of construction equipment and the maximum and average operational noise level as measured at 20 feet from the operating equipment. The 20-foot distance represents the approximate distance between the project site and the closest single-family homes to the south and east of the project site.

Table 3.13-12: Summary of Federal Highway Administration Roadway Construction Noise Model

Construction Equipment Source	Distance to Nearest Sensitive Receptor	Estimated Sound Level at Receptor		
		L_{max}, dB(A)	Acoustical Use Factor (%)	L_{eq}, dB(A)
Backhoe	20 feet	85.5	40	81.5
Roller	20 feet	88.0	20	81.0
Crane	20 feet	88.5	16	80.6
Compressor (air)	20 feet	85.6	40	81.6
Rubber-Tired Dozer	20 feet	89.6	40	85.6
Front End Loader	20 feet	87.1	40	83.1
Generator	20 feet	88.6	50	85.6
Grader	20 feet	93.0	40	89.0
Paver	20 feet	85.2	50	82.2
Welder / Torch	20 feet	82.0	40	78.0
Tractor	20 feet	92.0	40	88.0
Excavator	20 feet	88.7	40	84.7
Forklift[1]	20 feet	87.1	40	83.1

Notes:
dB(A) = A-weighted decibel
L_{eq} = equivalent sound level
L_{max} = maximum sound level
Source: Stantec 2021a, Federal Highway Administration RCNM, v1.1, 2008
[1] The RCNM program does not have sound levels for a forklift. Therefore, the noise levels from a front-end loader were used in the analysis to simulate the forklift.

A worst-case condition for construction activity would assume that all noise-generating equipment was operating at the same time and at the same distance away from the closest noise-sensitive receptor. Using this assumption, the RCNM program calculated the following combined L_{eq} and L_{max} noise levels from each phase and stage of construction as shown in Table 3.13-13.

Table 3.13-13: Calculated Noise Level from Each Construction Stage

Construction Stage	Distance to Closest Noise Sensitive Receptor	Calculated L_{eq}, dB(A)	Calculated L_{max}, dB(A)
Site Preparation	20 feet	94.3	98.3
Grading	20 feet	93.8	97.9
Building Construction	20 feet	93.3	97.5
Paving	20 feet	89.6	94.1
Architectural Coating	20 feet	81.6	85.6

Notes:
dB(A) = A-weighted decibel
L_{eq} = equivalent sound level
L_{max} = maximum sound level

Although construction noise levels could exceed the limits set in Table 9-3 of the General Plan, increases in noise levels from construction activity would be temporary and would be reduced with implementation of Mitigation Measure NOI-2. The implementation of Mitigation Measure NOI-2 would restrict construction hours as defined by the City's Noise Ordinance and Section 15.12.320 in the Suisun City Municipal Code. Project construction noise would also be subject to the mitigation measures listed in Policy PHS-1.9 and Program PHS-1.5 in the General Plan:

- *Policy PHS-1.9: New developments shall implement feasible noise mitigation to reduce construction noise and vibration impacts. Projects that incorporate feasible mitigation will not be considered by the City to have significant impacts for the purposes of California Environmental Quality Act review.*

- *Program PHS-1.5 "Construction Noise and Vibration Reduction Measures"*

  The City will require new developments proposing construction adjacent to existing noise-sensitive uses or close enough to noise-sensitive uses that relevant performance standards could be exceeded to incorporate feasible mitigation to reduce construction noise exposure. This may include additional limits on the days and times of day when construction can occur, re-routing construction equipment away from adjacent noise-sensitive uses, locating noisy construction equipment away from noise-sensitive uses, shrouding or shielding impact tools, use of intake and exhaust mufflers and engine shrouds, construction of acoustic barriers (e.g. plywood, sound attenuation blankets), pre-drilling holes for placement of piles or non-impact pile driving where piles would be needed, and other feasible technologies or reduction measures necessary to achieve the City's relevant performance standards.

Noise associated with construction activities would be short-term and intermittent. Furthermore, the proposed project would implement the requirements of the City's Noise Ordinance, Section 15.12.320 of the Suisun City Municipal Code, and General Plan policies as Mitigation Measure NOI-2. Therefore, impacts from construction noise would be less than significant with implementation of Mitigation Measure NOI-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM NOI-1: **Project Fixed-Source Noise.** The noise from all mechanical equipment associated with the project shall comply with the maximum noise level limits listed in Table 9-3 in the General Plan.

MM-NOI-2: **Short-Term Construction Noise and Vibration.** Follow all construction hours restrictions as defined by the City's Noise Ordinance and Section 15.12.320 in the Suisun City Municipal Code, and implement all feasible construction noise mitigation measures as defined by Policy PHS-1.9 and Program PHS-1.5 in the General Plan, such as, additional limits on the days and times of day when construction can occur, re-routing construction equipment away from adjacent noise-sensitive uses, locating noisy construction equipment away from noise-sensitive uses, shrouding or shielding impact tools, use of intake and exhaust mufflers and engine shrouds, construction of acoustic barriers (e.g. plywood, sound attenuation blankets), pre-drilling holes for placement of piles or non-impact pile driving where piles would be needed, and other feasible technologies or reduction measures necessary to achieve the City's relevant performance standards.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact NOI-2 Generation of excessive groundborne vibration or groundborne noise levels?

Impact Analysis

Construction Vibration

During construction of the proposed project, equipment such as rollers, bulldozers, and trucks may be used as close as 20 feet from the nearest sensitive single-family residences along the southern and eastern boundaries of the project site. As shown in Table 3.13-14, construction equipment would generate vibration levels between 0.0042 PPV and 0.2935 PPV at a distance of 20 feet. The groundborne vibration levels for a large bulldozer, loaded truck, and roller could be at or above the FTA vibration threshold at which human annoyance could occur at 0.10 PPV. All vibration levels would, however, be below the threshold for potential building damage as defined in Table 3.13-14.

Table 3.13-14: Vibration Source Levels for Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 Feet	Peak Particle Velocity at 50 Feet	Peak Particle Velocity at 20 Feet	Threshold at which Human Annoyance Could Occur	Potential for Proposed Project to Exceed Threshold
Vibratory roller	0.210	0.074	0.2935	0.10	Yes
Large bulldozer	0.089	0.031	0.1244	0.10	Yes
Loaded trucks	0.076	0.027	0.1062	0.10	Yes
Small bulldozer	0.003	0.001	0.0042	0.10	None

Source: FTA 2018

Although vibration levels from construction could exceed the threshold at which human annoyance could occur, construction activities would be temporary and would be reduced with implementation of Mitigation Measure NOI-2. Therefore, impacts from construction vibration would be less than significant with mitigation incorporated.

Railroad Vibration

The primary source of vibration at the project site is associated with railroad activity on the UPRR tracks about 75 feet to the north. According to the General Plan Policy PHS-2.1, new developments that propose vibration-sensitive uses within 100 feet of a railroad or heavy industrial facility are required to analyze and mitigate potential vibration impact, as feasible. The nearest proposed apartment building façade would be about 140 feet from the railroad tracks (Appendix I). Based on this distance the proposed project would not meet the requirement for a railroad vibration analysis pursuant to General Plan Policy PHS-2.1. However, to ensure that railroad vibration levels are acceptable at the project site, BAC conducted vibration monitoring during railroad passbys at the project site. Railroad passbys adjacent to the project site consist approximately 32 daily Amtrak trains and 15 heavy freight trails per day, for a total of approximately 47 daily train passbys (Appendix I). The Amtrak passbys typically occur during daytime hours, with the freight trains randomly distributed throughout the 24-hour period.

The railroad vibration measurement results indicated that, during train passbys, maximum vibration levels ranged from 60 to 69 vibration decibels (VdB), with a computed average vibration level of 63 VdB (Appendix I). General Plan Policy PHS-2.1 indicates that vibration levels below 70 Vdb would be acceptable for habitable structures. The FTA vibration impact criteria also indicates that vibration levels for occasional events below 75 Vdb would be acceptable for residences and buildings where people normally sleep (FTA 2018). Therefore, the maximum vibration levels measured at the project site are satisfactory relative to both the FTA and City standards. Impacts related to vibration from the UPRR would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure NOI-2 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

Impact NOI-3	**For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

Impact Analysis
The project site is about 2.5 miles west of the Travis Air Force Base and within the Travis Air Force Base LUCP. Exhibit 9-2 in the General Plan shows the CNEL airport noise contours from Travis Air Force Base. The project site lies well outside the 60 to 65 CNEL contour for the base (Suisun City 2015a). Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels. Impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.14 POPULATION AND HOUSING

	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)?	☐	☐	☒	☐
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

Suisun City is the fourth largest city in Solano County. According to the California Department of Finance, the City had a population of 28,962 in 2010. As of January 1, 2020, the City's population has increased by 0.5 percent to 29,111 (California Department of Finance 2020). The Association of Bay Area Governments (ABAG) provides forecasting of population, housing, jobs, and income for the nine counties in the San Francisco Bay Area, which includes Suisun City. It is estimated that by the year 2040 the City's population would increase to 31,670. Additionally, ABAG estimates that there would be a total of 2,860 jobs by 2040 (ABAG 2017).

According to the General Plan EIR, the City could accommodate a total population of approximately 32,400, 11,300 dwelling units, 10,900 local jobs, and 5.8 million square feet of non-residential development by 2035. New development under the 2035 General Plan could add approximately 200 lower-density dwelling units, 500 medium-density dwelling units, and 1,100 higher-density dwelling units (Suisun City 2015c).

The project site is in the northern portion of the City within a suburban residential area. It is currently vacant and mostly covered in non-native grasses and fenced along the east and south sides from the adjacent residences. There are no existing onsite residences or residential dwelling units. Land uses surrounding the project site include single-family and multi-family residences, a self-storage facility, and other commercial development. The project site is zoned Medium-Density Residential (RM), which allows development of multi-family apartments with approval of a CUP.

3.14.2 Methodology

The following evaluation of potential population, housing, and employment impacts associated with the proposed project was based on data obtained from the California Department of Finance, ABAG population projections, and applicable planning documents from the City.

3.14.3 Environmental Impact Analysis

This section discusses potential impacts related to population and housing associated with the proposed project and provides mitigation measures where necessary.

Impact POP-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Analysis

This analysis assesses the proposed project's potential to induce substantial population growth. There are two types of population growth: direct and indirect. Direct population growth can occur from the development of new residential units. Indirect population growth can occur from the creation of new employment opportunities or the removal of a barrier to growth (e.g., the extension of urban infrastructure to an undeveloped area). The proposed project would not significantly induce direct or indirect population growth, as explained below.

Direct Population Growth

The proposed project would result in the development of a multi-family apartment complex with 180 units, a community building of approximately 3,900 square feet, and approximately 22,930 square feet of common open space. The General Plan estimates an average of 3.1 persons per household (Suisun City 2015a). Based on the General Plan estimate of 3.1 persons per household, the projected population of the proposed project would be 558 residents if fully occupied. However, the proposed project would include a combination of one-, two-, and three-bedroom units. Due to the mix of the unit types, the proposed project would likely result in less than 558 residents, and therefore this number represents a conservative approach.

Based on the City's current population of 29,111, the addition of 558 new residents from the proposed project would increase the population to 29,669. The addition of the proposed project would result in a 2-percent increase in the current population. As discussed, the General Plan EIR estimated that the City could accommodate a total population of 32,400 by 2035 (Suisun City 2015c). The addition of the proposed project would represent 17 percent of the 32,400-total population, and would be within the total population projections anticipated under the 2035 General Plan. The proposed project would also be consistent with the Medium-Density Residential (RM) zoning district with the approval of a CUP, and therefore would not result in a substantial increase in unplanned population growth. Due to the infill nature of the project site, the proposed project would also not create new roads or extend utilities beyond those required for the proposed project. Therefore, implementation of the proposed project would not directly induce substantial unplanned population growth in the area, and the impact would be less than significant.

Indirect Population Growth

The proposed project does not include any commercial space; therefore, it would not increase the number of employees or jobs associated with a commercial use. However, it is anticipated that up to six staff members would work at the multi-family apartment complex to provide onsite management and operations support. It is expected that the six new staff members would come from the local work force in the area and would not result in the relocation of a substantial number of people to the area. Additionally,

the six new jobs would be consistent with the General Plan EIR's projected employment growth of 10,900 local jobs by 2035. Therefore, the proposed project would not indirectly induce substantial unplanned population growth, and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis
The project site is currently vacant and does not contain any residential dwellings or residences onsite. Therefore, the proposed project would not result in the displacement of people or housing that would necessitate the construction of replacement housing elsewhere. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

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3.15 PUBLIC SERVICES

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?	☐	☐	☒	☐

3.15.1 Environmental Setting

Fire Protection

The Suisun City Fire Department (SCFD) provides fire and emergency medical services within the City. The SCFD is an All-hazard/All-risk Fire Department and is an advance life support (ALS) (Paramedic) level department, supported by Medic Ambulance for medical transport services (SCFD 2021a). The SCFD operates one fire station located at 621 Pintail Drive, about 0.7 mile southeast of the project site. The SCFD is a combination agency staffed with both full-time and volunteer fire personnel. In 2015, the SCFD had one Fire Chief and two Captains, and the remainder of the SCFD's members were volunteers, including one Deputy Chief, three Battalion Chiefs, nine Captains, four Engineers, three Driver/Operators, 15 Firefighters, and six Recruits (Suisun City 2015a). The General Plan's fire emergency response time goal is that SCFD responds to 90 percent of all calls within 5 minutes (Suisun City 2015a). In 2020, the SCFD received 3,073 calls total, including 2,150 rescue and emergency service calls, 1,220 service calls, and 166 fire calls (SCFD 2021b).

Police Protection

The Suisun City Police Department (SCPD) provides law enforcement services to the City. The police station is located at 701 Civic Center Boulevard, about 2 miles southwest of the project site. Additionally, the Constable Anson Burdick Center, located at 1101 Charleston Street, is a Police Department Substation within the Peterson Ranch Subdivision and located about 1.5 miles east of the project site. According to the SCPD's website, the SCPD currently has 32 employees (SCPD 2021). In 2019, SCPD received 62,604 dispatch calls (SCPD 2019).

Schools

Suisun City elementary, middle school, and high school students are served by one school district, Fairfield-Suisun Unified School District (FSUSD). The FSUSD has19 elementary schools, 5 middle schools, and 3 high schools. As of October 2020, the FSUSD had approximately 20,703 enrolled students (FSUSD 2021a).

The project site is within the school service boundaries for Tolenas Elementary School, Grange Middle School, and Fairfield High School (FSUSD 2021b). Although the project site is within the service boundaries for these schools, students at the project site may decide to go other schools within the FSUSD. The Tolenas Elementary School, located 0.8 mile east of the project site in the City, currently has about 399 students enrolled (Public School Review 2021a). Grange Middle School is located about 0.25 mile north of the project site in the City of Fairfield and currently has 907 students enrolled (Public School Review 2021b). Fairfield High School is located about 1.5-mile northwest of the project site and currently has 1,504 students enrolled (Public School Review 2021c).

The standard student generation rates used by FSUSD for new development projects is provided in Table 3.15-1. The proposed project would involve the development of multi-family units; therefore, the SFUSD calculated the student generation rates for new multi-family development. The multi-family student generation rate was based on multi-family development that has occurred within the City over the past 10 years (FSUSD 2021c).

Table 3.15-1: Student Generation Rates

Grade Level	FSUSD Standard Generation Rate	Multi-Family Generation Rate
K-6	0.2396	0.3375
7-8	0.1156	0.15
9-12	0.1536	0.175
Total	**0.5088**	**0.6625**

Source: FSUSD 2021c

Parks

Parkland in the City mostly consists of neighborhood parks and community parks. According to the General Plan, the City contains 48.0 acres of community parks and 47.7 acres of neighborhood parks for a total of 95.7 acres of active parks. The City uses the Quimby Act standard of 3 to 5 acres of community and neighborhood parks for every 1,000 residents living in the city to guide parkland development (Suisun City 2015a). According to the General Plan, the City's parkland ratio in 2015 was approximately 3.4 acres of parks per 1,000 City residents. Based on the City's population in 2020 of 29,119 residents (California Department of Finance 2020) and 95.7 acres of active parkland (Suisun City 2015a), the City currently has 3.2 acres of parkland per 1,000 residents, meeting and exceeding the Quimby Act parkland requirements of 3 to 5 acres of parkland per 1,000 residents. Additionally, the City is meeting and exceeding the National Recreation Association standard of 2.5 acres per 1,000 residents.

There are also several other recreation facilities in the City, including 25.2 acres of regional and local trails, two community centers, and 4.1 acres of waterfront plazas (Suisun City 2015a). The nearest parks

to the project site are Carl E. Hall Park and Heritage Park located about 0.75 mile and 0.85 mile to the south, respectively.

Other Facilities

The Suisun City Library is a branch of the Solano County Library system and is located at 601 Pintail Drive, approximately 0.75 mile southeast of the project site. The library was built adjacent to Suisun Elementary School and serves as both a public and a school library. The library offers a study room, community meeting room, and a 15-seat computer center (Suisun City 2015a).

3.15.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, and Suisun City Municipal Code.

3.15.3 Environmental Impact Analysis

This section discusses potential impacts on public services associated with the proposed project and provides mitigation measures where necessary.

Impact PUB-1	**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?**

Impact Analysis

Fire Protection

The project site is currently vacant and within the service boundaries of the SCFD. The SCFD only operates one fire station located at 621 Pintail Drive, about 0.7 mile southeast of the project site. The proposed project would result in the development of a multi-family apartment complex with 180 units. Development of the proposed project would result in 558 new residents and 6 staff members, which could incrementally increase demand for fire protection services. The SCFD reviewed the project site plans for emergency access on December 18, 2020. SCFD's comments related to site access and the width of the project driveways have been incorporated into the current project site plans and were reviewed by SCFD to ensure adequate emergency access is provided to the project site.

Although the proposed project may increase the need for fire protection services, this concern does not relate to the CEQA standard of significance, which is whether implementation of a project would require the construction of a new fire station or the expansion of an existing fire station. Though the proposed project is not anticipated to directly result in the construction of a new fire station or the alteration of an existing fire station, the City has plans to consider sites and seek funding for the construction of two fire

stations to replace the existing station, and would serve existing and new developments accommodated under the 2035 General Plan. The need for additional fire protection is not a "significant effect on the environment" under CEQA Section 15382. The proposed project would be subject to Section 3.16, Fees for New Construction, of the Suisun City 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 General Plan including land acquisition and construction of public buildings and other facilities. Fees generated from the proposed project would contribute to funding for facilities and services related to SCFD and would result in a less than significant impact to fire protection services.

The proposed project would also comply with the California Fire Code and would include site-specific design features such as ensuring adequate emergency access to the project site and requiring structures to be built with approved building materials. As shown in Figure 2.1-5, the proposed project would construct two 26-foot-wide emergency access driveways on the north and south sides of the project site at Railroad Avenue and Amber Drive, respectively. The two emergency access points would be constructed in accordance with SCFD's access requirements for fire apparatus. If not in use, the emergency access driveways would either be gated or secured with removable bollards. As required by Section 18.42.050 of the Suisun City Municipal Code, the City and SCFD would review all final site plans to ensure that the proposed project would provide adequate access for emergency vehicles. Additionally, SCFD would review the final site plans and provide recommendations to reduce fire risk as required by General Plan Policy CFS-2.6. Therefore, the proposed project would have a less than significant impact on fire protection.

Police Protection

The SCPD would provide law enforcement services to the project site. The SCPD is located at 701 Civic Center Boulevard, about 2 miles southwest of the project site. The proposed project would result in the development of a multi-family apartment complex with 180 units, resulting in 558 new residents and 6 staff members., The SCPD received the project site plan for review on December 16, 2020 and no response has been received to date. As required by General Plan Policy CFS-2.5, SCPD would review the final site plan to ensure the proposed project provides adequate access and community surveillance (Suisun City 2014a).

The development of the proposed project would incrementally increase demand for police protection services to the project site. However, the increased demand for police services does not relate to the CEQA standard of significance, which is whether implementation of a project would require the construction of a new police station or the expansion of an existing police station. As stated in the General Plan, SCPD currently has no plans to upgrade or reconstruct the police station or the Burdick Center in the future, and the proposed project is not anticipated to result in the need for a new police station or alteration of an existing police station. The need for additional police service is not a "significant effect on the environment" under CEQA Section 15382. The proposed project would be subject to Section 3.16, Fees for New Construction, of the Suisun City 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 General Plan including land acquisition and construction of public buildings and other facilities. Payment of the fee would offset the cost of police service demands associated with the proposed project. Therefore, the proposed project would have a less than significant impact on police protection.

Schools

The project site would be served by FSUSD. The proposed project would involve the development of 180 multi-family units. As discussed in Section 2.0, Project Description, the General Plan estimates an average of 3.1 persons per household (Suisun City 2015a). Based on the General Plan estimate of 3.1 persons per household, the projected population of the proposed project would be 558 residents if fully occupied. However, due to the mix of unit types, the proposed project would likely result in less than 558 residents; and therefore, this number represents a conservative approach.

Based on the standard student generation rates provided by the FSUSD for new development projects, it is estimated that the proposed project would generate about 92 students (Table 3.15-2). However, the proposed project would involve the development of multi-family units and based on FSUSD's multi-family student generation rate it is estimated that the proposed project would generate 120 students.

Table 3.15-2: Proposed Project Student Generation

Grade Level	FSUSD Standard Student Generation		Multi-Family Student Generation	
	Standard Student Generation Rate	Number of Students	Multi-Family Student Generation Rate	Number of Students
K-6	0.2396	43	0.3375	61
7-8	0.1156	21	0.15	27
9-12	0.1536	28	0.175	32
Total	**92**		**120**	

Source: FSUSD 2021c

The proposed project is anticipated to generate 28 more students as compared to the FSUSD standard student generation rate, and would increase the FSUSD current student population of 20,703 by 0.6 percent. The FSUSD 2015 School Facility Needs Analysis and Justification Report indicates that many schools are at or near capacity (FSUSD 2015). Under SB 50 and as further required by Chapter 15.16, School Facilities Fee and Dedication, of the Suisun City Municipal Code, the proposed project would be required to pay school impact fees as a condition of approval to ensure that adequate school and related facilities would be available. As such, with payment of the required school impact fees, the proposed project would not result in the need for the construction or expansion of schools, and the impact would be less than significant.

Parks

Based on the City's current population of 29,119 residents (California Department of Finance 2020) and 95.7 acres of active parkland (Suisun City 2015a), the City currently has 3.2 acres of parkland per 1,000 residents. The City uses the Quimby Act standard of 3 to 5 acres of community and neighborhood parks for every 1,000 residents living in the city to guide parkland development. As such, the City is currently meeting the Quimby Act park ratio standard. The proposed project would add approximately 558 new residents, which have been accounted for in the General Plan EIR expected population of 32,400 by 2035 at full-build-out. The proposed project would increase the City's population to 29,669 residents. Based off this population and the City's existing 95.7 acres of active parkland, the City would have 3.2 acres of parkland per 1,000 residents and would continue to meet its park standard of 3 to 5 acres per 1,000 residents.

The proposed project would also construct a 3,900-square-foot community building and onsite common and private open space areas for residents. The common open space areas would consist of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area, totaling approximately 22,930 square feet. Private open space would consist of either a balcony area or ground patio for each apartment unit ranging from approximately 54 to 70 square feet. Additionally, the proposed project would be subject to Chapter 3.20, Park Improvement Program, of the Suisun City Municipal Code and would pay park improvement program fees to contribute toward current and future needs for park facilities. Therefore, impacts on parks would be less than significant.

Other Public Facilities

The Suisun City Library is the only public library within the City, located about 0.75 mile southeast of the project site. The proposed project would develop a multi-family apartment complex with 180 units, which could generate up to 558 new residents. The addition of 558 new residents may increase the use of public library facilities. However, the proposed project would be subject to Section 3.16, Fees for New Construction, of the Suisun City 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 General Plan including land acquisition and construction of public buildings and other facilities. Payment of the fee would offset the cost of other public facility demands associated with the proposed project. Therefore, the proposed project would not result in the construction or expansion of other public facilities, and the impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.16 RECREATION

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Would the project 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?	☐	☐	☒	☐
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

3.16.1 Environmental Setting

The City's Recreation and Community Services Department maintains community and neighborhood parks that are of different sizes throughout the community. The City contains 48.0 acres of community parks and 47.7 acres of neighborhood parks for a total of 95.7 acres of active parks. The City uses the Quimby Act standard of 3 to 5 acres of community and neighborhood parks for every 1,000 residents living in the city to guide parkland development (Suisun City 2015a). According to the General Plan, the City's parkland ratio in 2015 was approximately 3.4 acres of parks per 1,000 City residents. Based on the City's population in 2020 of 29,119 residents (California Department of Finance 2020) and 95.7 acres of active parkland (Suisun City 2015a), the City currently has 3.2 acres of parkland per 1,000 residents, meeting and exceeding the Quimby Act parkland requirements of 3 to 5 acres of parkland per 1,000 residents. Additionally, the City is meeting and exceeding the National Recreation Association standard of 2.5 acres per 1,000 residents.

There are also several other recreation facilities in the City, including 25.2 acres of regional and local trails, two community centers, and 4.1 acres of waterfront plazas (Suisun City 2015a). The nearest parks to the project site are Carl E. Hall Park and Heritage Park located about 0.75 mile and 0.85 mile to the south, respectively.

3.16.2 Methodology

The following analysis is based on a review of the General Plan, General Plan EIR, and Suisun City Municipal Code.

3.16.3 Environmental Impact Analysis

This section discusses potential impacts to recreation associated with the proposed project and provides mitigation measures where necessary.

Impact REC-1 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?

Impact Analysis

Based on the City's current population of 29,119 residents (California Department of Finance 2020) and 95.7 acres of active parkland (Suisun City 2015a), the City currently has 3.2 acres of parkland per 1,000 residents. The City uses the Quimby Act standard of 3 to 5 acres of community and neighborhood parks for every 1,000 residents living in the city to guide parkland development. As such, the City is currently meeting the Quimby Act park ratio standard. The proposed project would add approximately 558 new residents, which have been accounted for in the General Plan EIR expected population of 32,400 by 2035 at full-build-out. The proposed project would increase the City's population to 29,669 residents. Based off this population and the City's existing 95.7 acres of active parkland, the City would have 3.2 acres of parkland per 1,000 residents and continue to meet its park standard of 3 to 5 acres per 1,000 residents.

The proposed project would also construct a 3,900-square-foot community building, and onsite common and private open space areas for residents. The common open space areas would consist of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area, totaling approximately 22,930 square feet. Private open space would consist of either a balcony area or ground patio for each apartment unit ranging from approximately 54 to 70 square feet. Additionally, per Chapter 3.20, Park Improvement Program, of the Suisun City Municipal Code, the applicant would be required to pay park improvement program fees to contribute toward current and future needs for park facilities. Therefore, impacts on parks would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

Impact REC-2 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Analysis

The proposed project involves the development of a multi-family apartment complex with 180 units, a 3,900-square-foot community building, and common and private open space areas for residents. The common open space areas would consist of internal walkways and sitting areas, a pool and spa, barbeque and picnic areas, a dog park, and a tot-lot play area, totaling approximately 22,930 square feet. Private open space would consist of either a balcony area or ground patio for each apartment unit ranging from approximately 54 to 70 square feet. Additionally, the proposed project would provide an off-site concrete path (sidewalk) along the frontage of Railroad Avenue within the City's right-of-way. The concrete path would be 10-feet wide and connect to the sidewalk along the eastern side of Blossom Avenue. The City would maintain the concrete path once constructed. 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 ISMND. 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 proposed project's inclusion of onsite open space. The applicant would be required to pay the park improvement program fees in accordance with Chapter 3.20, Park Improvement Program, of the Suisun City Municipal Code to contribute toward current and future needs for park facilities. Therefore, impacts associated with adverse environmental impacts of recreational facilities would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.17 TRANSPORTATION

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.17.1 Environmental Setting

The following describes the existing conditions for the major transportation facilities in the vicinity of the project site, including the roadway network, bicycle and pedestrian facilities, and transit service. Additionally, Stantec prepared a VMT Impact Analysis Memorandum for the proposed project on January 29, 2021 (Stantec 2021b). The results of the VMT Impact Analysis Memorandum are summarized herein and provided in Appendix J.

Existing Roadway Network

The project site is located in the northern portion of the City at the southeast intersection of Blossom Avenue and Railroad Avenue. Blossom Avenue would provide primary access to the project site via a new 32-foot-wide two-way driveway. Additionally, the project site would construct two 26-foot-wide emergency access driveways on the north and south sides of the project site at Railroad Avenue and Amber Drive, respectively. The surrounding street network is discussed below.

Railroad Avenue is classified as a two-lane arterial that generally extends east to west. Collector streets provide for traffic movement between arterial and minor streets, and movement within and between neighborhoods and major activity centers (Suisun City 2015a).

Blossom Avenue is classified as a local street that extends north to south. Local streets provide for localized traffic movements within residential areas and access to abutting property (Suisun City 2015a).

SR-12 is classified as a four-lane expressway and provides regional access to the City. It extends east to west and is about 1 mile south of the project site.

Bicycle and Pedestrian Facilities

As discussed in the General Plan, pedestrians are served by sidewalks on most, but not all, of the arterials, collectors, and local streets in the City (Suisun City 2015a). Accordingly, there is a sidewalk on the east side of Blossom Avenue, but there are no sidewalks on either side of Railroad Avenue. There are

no designated existing bicycle facilities near the project site, but there is a future Class II bicycle facility proposed on Railroad Avenue (Suisun City 2015a).

Transit Services

Fairfield and Suisun Transit provides public, fixed-route services through eight local and two intercity commuter routes. Local transit routes provide services to the cities of Fairfield and Suisun City and are operated Monday through Saturday. Route 2 and Route 6 provide service in the vicinity of the project site with service intervals at 30 minutes and 45 minutes, respectively. The Solano Transportation Authority also manages the Solano Express, which provides express intercity bus service throughout Solano County. The City of Fairfield operates the individual routes, including the Green Line that operates between Suisun City/Fairfield and the El Cerrito del Norte Bay Area Rapid Transit station. The nearest bus transit stop is the Route 6 bus stop located at the intersection of Travis Boulevard and Sunset Avenue, about 0.3 mile west of the project site.

The UPRR is about 75 feet north of the project site and parallels Railroad Avenue. The railroad extends east to west through the City and serves both major freight and Amtrak trains.

3.17.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan and General Plan EIR. Additionally, the analysis is based on the VMT Impact Analysis Memorandum prepared for the proposed project by Stantec on January 29, 2021 (Appendix J). The VMT impact analysis completed for the proposed project complies with the updated CEQA Guidelines that incorporate the requirements of SB 743.

As discussed in the VMT Impact Analysis Memorandum (Appendix J), the Suisun City VMT program is still being developed, but VMT thresholds of significance have been adopted. Therefore, in the interim, the City has determined that they will apply the recommended screening methodology set forth in the Governor's Office of Planning and Research's (OPR) *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory* (Technical Advisory) guidance and the City's adopted VMT thresholds of significance (Resolution No. 2020-122; Suisun City 2020b).

The City's VMT thresholds specify new significance thresholds that constitute a significant transportation impact and that are consistent with OPR's Technical Advisory recommendation. For projects that do not qualify for any of the screening criteria presented in OPR's Technical Advisory, Suisun City will apply the following thresholds of significance when analyzing the VMT transportation impacts of residential land use projects under CEQA:

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

If a significant impact is identified based on the significance thresholds, mitigation to reduce VMT would be necessary.

The proposed project consists of a residential land use; therefore, it is evaluated based on home-based (HB) VMT per capita and a threshold of significance of 15 percent lower than the City-wide average HB VMT per capita. The City provides guidance that the City of Fairfield Travel Demand Model (City of Fairfield 2020) is to be used to conduct VMT analysis, consistent with OPR's recommendation to use a travel demand model for VMT calculations. The model's VMT estimates are key in setting baseline values that are used for the VMT thresholds. As stated in the Suisun City SB 743 Implementation Draft Memorandum (Suisun City 2020c), the base year thresholds rely on a "rolling baseline," where the base year baseline metric value should be reconsidered on a project-by-project basis. Therefore, the baseline residential VMT estimate for Suisun City and corresponding VMT threshold of significance is derived using the latest version of the Fairfield Travel Demand Model.

3.17.3 Environmental Impact Analysis

This section discusses potential impacts to transportation associated with the proposed project and provides mitigation measures where necessary.

Impact TRANS-1 Conflict with program, plan, ordinance or policy addressing the circulation system, including transit roadway, bicycle and pedestrian facilities?

Impact Analysis

The proposed project would generate traffic during construction through the transport of workers, equipment, and materials to and from the project site. It is anticipated that project construction would take approximately 18 months to complete, starting in September 2021 and ending in May 2023. Depending on the construction phase, the number of temporary construction workers would range from about 75 to 85 workers per day with an average of about 40 workers per day. Construction workers would access the project site from Railroad Avenue and Blossom Avenue. All construction equipment and materials would be stored onsite. Project construction and grading activities are generally anticipated to occur within the project site. However, construction activities may extend to the centerlines of Railroad Avenue, Blossom Avenue, and Amber Drive to connect utility lines and other offsite improvements. Any offsite improvements that would require construction traffic, lane closures, or street staging would require an approved TCP and an encroachment permit from the City. Since construction traffic would be temporary and would be spread across the duration of construction, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Therefore, the project construction activities would be less than significant.

Operation of the proposed project would not modify the existing roadway network or interfere with the existing pedestrian, bicycle, or transit facilities. As discussed, there is a sidewalk on the east side of Blossom Avenue, but there are no sidewalks on either side of Railroad Avenue. There are also no designated bicycle facilities near the project site, but there is a future Class II bicycle facility proposed on Railroad Avenue (Suisun City 2015a). The nearest bus transit stop is located at the Route 6 bus stop located at the intersection of Travis Boulevard and Sunset Avenue, about 0.3 mile west of the project site. Development of the proposed project would facilitate pedestrian movement through the project site by constructing internal pedestrian walkways for residents and an off-site concrete path along the frontage of Railroad Avenue. The proposed offsite concrete path would connect to the existing sidewalk along the eastern side of Blossom Avenue and would fill in gaps in the existing sidewalk system. The proposed project would also comply with Section 18.42.070 of the Suisun City Municipal Code and would provide up to 25 bicycle parking spaces. The bicycle parking spaces would be provided throughout the project

site either at five separate common area locations or at each residential structure within the covered "breezeways" at the discretion of the applicant. Therefore, operation of the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. This impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRANS-2 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision(b)?

Impact Analysis
CEQA Guidelines Section15064.3(b) indicates that land use projects would have a significant impact if the project resulted in VMT exceeding an applicable threshold of significance. The OPR Technical Advisory, published in December 2018, recommends methodologies for quantifying VMT, significance thresholds for identifying a transportation impact, and screening criteria to quickly identify if a project can be presumed to have a less than significant impact without conducting a full VMT analysis. Lead agencies are to adopt local guidelines appropriate for their jurisdiction.

As discussed, the VMT analysis (Appendix J) was conducted for the proposed project using guidance outlined in the OPR's Technical Advisory and the City's adopted thresholds of significance. Based on OPR's Technical Advisory screening criteria, the proposed project would not meet any of the screening criteria and a VMT analysis is required. The VMT data was obtained from the City of Fairfield Travel Demand Model and used for analysis of the proposed project. The VMT analysis was based on HB VMT per capita and a threshold of significance of 15 percent lower than the Citywide average HB VMT per capita. As shown in Table 3.17-1, the Citywide average baseline residential VMT rate is 27.9 HB VMT per capita. A 15 percent reduction was applied to the average baseline and results in a significance threshold of 23.7 HB VMT per capita.

Table 3.17-1: VMT Analysis Summary

Description	Residential HB VMT per Capita
Project	
Zonal Home-Based VMT per Capita (2020)	25.1 VMT per capita
% VMT reduction due to Project Components	6.9%
Project VMT	23.4
Threshold	
Suisun City Average Baseline Home-Based VMT per Capita (2020)	27.9 VMT per capita
Threshold of Significance (15% reduction from baseline)	23.7 VMT per capita
Difference (Project minus Threshold of Significance)	-0.3 VMT per capita
Is Project above or below Threshold of Significance	**Below Threshold of Significance**

Description	Residential HB VMT per Capita
Significant Transportation Impact	**No**

Notes:
VMT = vehicle miles traveled
Source: City of Fairfield Travel Demand Model

The project site is located in traffic analysis zone (TAZ) 513, which includes residential land uses similar to the proposed project. Since the project's land uses are comparable to the land use in TAZ 513, the proposed project can be expected to exhibit trip generation and trip length characteristics similar to the other residential land uses in the TAZ. The VMT analysis refined the HB VMT per capita for TAZ 513 based on specific project characteristics. Additionally, the VMT analysis evaluated certain project characteristics that would result in VMT reductions. These specific project characteristics include increased density and improvements to the pedestrian connectivity by constructing an onsite pedestrian network. The VMT analysis utilized quantification methodologies from California Air Pollution Control Officers Association to estimate the VMT reduction from these project characteristics, and determined that the two project characteristics combined would result in a VMT reduction of 6.9 percent (Appendix J).

As shown in Table 3.17-1, the zonal VMT is 25.1 VMT per capita. When VMT reductions from project characteristics are applied, the project VMT is 23.4 VMT per capita, which is below the Citywide average of 23.7 VMT per capita. Therefore, the proposed project would result in a less than significant impact on VMT.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRANS-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Analysis
During construction, the proposed project would use heavy construction equipment on local roadways and arterials. The use of roadways by heavy construction equipment can increase the risk to drivers, cyclists, and pedestrians in the project area. Construction activities would generally be anticipated to occur within the project site; however, work may extend to the centerlines of Railroad Avenue, Blossom Avenue, and Amber Drive to connect utility lines and other offsite improvements. Any offsite improvements that would require construction traffic, lane closures, or street staging would require an approved TCP and an encroachment permit from the City. Therefore, project construction would not create a transportation hazard, and the impact would be less than significant.

Operation of the proposed project would not require new circulation improvements, changes to the existing roadway network, or the development of an incompatible use. The proposed project would develop a multi-family apartment complex with 180 units. The project site is zoned Medium Density

Residential, which permits multi-family apartments with the approval of a CUP. Access to the project site would primarily be via a new 32-foot-wide two-way driveway on Blossom Avenue. Additionally, the proposed project would construct two 26-foot-wide emergency access driveways on the north and south sides of the project site at Railroad Avenue and Amber Drive, respectively. The two emergency access points would only be used for emergency ingress and egress from the project site. If not in use, the emergency access driveways would either be gated or secured with removable bollards. The two emergence access points would be constructed in accordance with SCFD's access requirements for fire apparatus. As required by Section 18.42.050 of the Suisun City Municipal Code, the City and SCFD would review all final site plans to ensure that all project driveways would provide clear sight lines, adequate access for emergency vehicles, and pedestrian safety features. Therefore, operation of the proposed project would not substantially increase hazards due to a design feature, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact TRANS-4 Result in inadequate emergency access?

Impact Analysis
During the construction phase, temporary and/or partial street closures may be needed. However, access to the project site and the surrounding area would be maintained in accordance with a TCP. The TCP would identify all detours and appropriate traffic controls and would ensure that adequate circulation and emergency access would be provided during the construction phase.

Operation of the proposed project would not result in the permanent modification to any existing roadways, and therefore would not physically interfere with any existing emergency routes. As shown in Figure 2.1-5, the proposed project would construct two 26-foot-wide emergency access driveways on the north and south sides of the project site at Railroad Avenue and Amber Drive, respectively. The two emergency access points would be constructed in accordance with SCFD's access requirements for fire apparatus. If not in use, the emergency access driveways would either be gated or secured with removable bollards. As required by Section 18.42.050 of the Suisun City Municipal Code, the City and SCFD would review all final site plans to ensure that the proposed project would provide adequate access for emergency vehicles. As such, the proposed project would not result in inadequate emergency access, and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.18 TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined by Public Resources Code section 21047 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.18.1 Environmental Setting

This section describes potential tribal cultural resources in the project site and evaluates potential impacts to these resources from the construction and operation of the proposed project. Under CEQA, local tribes and tribal representatives are the authority for identifying tribal cultural resources.

AB 52

AB 52 mandates consideration of Native American culture as part of the CEQA process. The goal of AB 52 is to promote involvement of California Native American tribes in the decision-making process when it comes to identifying resources of importance to their cultures and developing mitigation for impacts to these resources. To reach this goal, AB 52 establishes a formal role for tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential tribal cultural resources in the project site, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a tribal cultural resource may have a significant effect on the environment.

Ethnographic Context

Prior to the arrival of Euro-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Kroeber (1925, 1936), and others, recognized the uniqueness of California's indigenous groups and classified them as belonging to the California culture area. Kroeber (1925) 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 (Moratto 1984:171). 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 (Rosenthal et al. 2007). The Central area (as defined by Kroeber 1925) encompasses the current project site and includes the Patwin.

Ethnographically, the project site lies within 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 Northern, of the upper Sacramento, lower Pit, and the upper Trinity drainages (Johnson 1978). The Hill Patwin territory includes the lower hills of the eastern Coast Range mountain slope (Long, Indian, Bear, Capay, Cortina, and Napa Valleys). The Hill Patwin also occupied the lower Napa River Valley and the hills north of Benicia. The River Patwin had villages along the Sacramento River above its confluence with the Feather River. The grassy plains between the eastern hills and the Sacramento River were largely unsettled, used mainly as a foraging ground by both River and Hill groups (Johnson 1978). Patwin pre-contact population numbers are not precise, but Kroeber (1932) estimates 12,500 for the Wintu, Nomlaki, and Patwin groups. These numbers reflect groups prior to the 1833 malaria epidemic.

Individual and extended families "owned" hunting and gathering grounds, and resources could not be used without permission. Residence and marriage was generally matrilocal, but unrestricted. Politically, the Patwin were divided into "tribelets" that were made up of a primary village and a series of outlying hamlets and were presided over by a more-or-less hereditary chief. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The chief had unrestricted power and presided over economic and ceremonial decisions (Johnson 1978).

Subsistence activities centered around hunting and fishing of deer, Tule elk, antelope, bear, ducks, geese, quail, turtles, fish, and other small animals. Hunting of deer often took the form of communal drives, with the actual killing of the deer performed by individuals or groups. Decoys were used for attracting game such as deer and ducks. Nets and holding pens were used for fishing, which was also an important part of normal subsistence activities. Types of fish included sturgeon, salmon, perch, chub, sucker, hardhead, pike, trout, steelhead, and mussels. Although acorns were the staple of the Patwin diet, they also harvested sunflower, alfilaria, clover, bunchgrass, wild oak, and yellow flower, which was parched or dried and then pounded into a meal. Buckeye, pine nuts, juniper berries, manzanita berries, blackberries, wild grapes, Brodiaea bulbs, and Tule roots were also collected. Each village had its own locations for these food sources, and the village chief was in charge of assigning particular families to each collecting area. Game was prepared by roasting, baking, or drying the meat. Tobacco was collected along the river and inhaled, but not cultivated. Salt was scraped off rocks (in the Cortina region) or by burning a grass found on the plains (Johnson 1978).

Patwin houses were built in the form of a dome, using tree branches for the framing, that was then covered with thatch and earth. House floors were typically dug out, and the walls were built up as a mound, with the entrance to the building made through the roof (Powers 1976). As described by Kroeber (1925) and Johnson (1978), the closest village location was Moso, located on the north bank of Cache Creek around the town of Capay. No positive cultural material has been located or observed to support this claim.

One of the most distinctive aspects of the Patwin culture was the cult system, found throughout northern Central California. The main feature of the cult was the occurrence of one or more secret societies whose membership was by strict initiation, each with its own series of dances and rituals (Johnson 1978). Patwin culture is most distinctive in that it possessed three secret societies: the ghost, Hesi, and Kuksu. Membership included mostly males, beginning around the ages of eight to 16, but on limited occasions, included high-status women (Johnson 1978). Everyday Patwin life centered on the rituals performed within the secret societies. Details involving the ceremonies varied, but most had sacred dances requiring careful preparation, costume, and music. These dances could last several days. Detailed summaries are provided by Kroeber (1932) and Loeb (1933).

The earliest historical accounts of the project site 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 (Johnson 1978).

3.18.2 Methodology

To identify tribal cultural resources, ECORP prepared a cultural resources inventory report (Appendix E) and Suisun City completed AB 52 Consultations. Available literature obtained through a record search performed at the NWIC of CHRIS was consulted for background information, ethnographical information, and to identify any previously recorded archaeological tribal resources in the project site. An ECORP archaeologist performed a pedestrian survey of the project site to identify any potential archaeological cultural resources present in the project site that had not been recorded during previous studies.

ECORP also contacted the NAHC on April 22, 2020, to request a search of the Sacred Lands File for tribal cultural resources in the project site. A search of the NAHC Sacred Lands File was completed on April 27, 2020, and there was no indication of the presence of Native American cultural resources in the project site (Appendix E).

AB 52 Consultation Results

Under AB 52, the City is responsible for conducting AB 52 tribal outreach by sending a letter to tribes that have previously expressed an interest in participation by written request. Pursuant to the statute, tribes are required to respond in writing within 30 days. The NAHC included a list of three individuals and tribes affiliated with the area: Cortina Rancheria, United Auburn Indian Community of the Auburn Rancheria, and the Yocha Dehe Wintun Nation. The NAHC recommended contacting those tribes for additional information about any known tribal resources. The City sent letters and a map of the project site to the tribal representatives on February 8, 2020. The City received one response from the United Auburn Indian Community of the Auburn Rancheria indicating that the project location falls outside of their

consultation area and would not be commenting on the proposed project. No response from the other tribal representatives have been received to date.

3.18.3 Environmental Impact Analysis

This section discusses potential impacts on tribal cultural resources associated with the proposed project and provides mitigation measures where necessary.

Impact TRIB-1 **Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to California Native American tribe, and that is:**

a) 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

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis
No known tribal cultural resources were identified at the project site or within 0.5 mile of the project site during the archival records search and literature review performed as part of the cultural resources inventory. A field survey of the project site did not identify any archaeological tribal resources at the project site and noted that the project site has been previously disturbed. As discussed above, a search of the NAHC Sacred Lands File was completed on April 27, 2020, and there was no indication of the presence of Native American cultural resources in the project site.

However, subsurface construction activities associated with the proposed project could potentially damage or destroy previously undiscovered unique tribal cultural resources. The proposed project would incorporate Mitigation Measure CUL-1, which requires implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface unique tribal cultural resources and human remains. With implementation of Mitigation Measure CUL-1, potential impacts would be reduced to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure CUL-1 is required.

Level of Significance After Mitigation
Less Than Significant Impact with Mitigation.

3.19 UTILITIES AND SERVICE SYSTEMS

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?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during	☐	☐	☒	☐
c) normal, dry and multiple dry years?				
d) Result in a determination by the waste water 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?	☐	☐	☒	☐
e) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise	☐	☐	☒	☐
f) impair the attainment of solid waste reduction goals?				
g) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Environmental Setting

Water Supply

The City provides potable water for all properties located within its boundaries. The SSWA manages water supply and distribution within Suisun City. The SSWA receives water supplies from the U.S. Bureau of Reclamation's Solano Project and the California Department of Water Resource's State Water Project (SWP), both of which are wholesaled by the Solano County Water Agency (SCWA) and the Solano Irrigation District (SID). The SSWA obtains most of its water supply from Lake Berryessa, which 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 and then gets delivered to the service area after treatment. The City does not use groundwater for municipal supply and there are no plans to resume service from a well owned by the City that was used until 2001 (SSWA 2016).

The SSWA's 2015 UWMP calculates past, current, and projected water uses and water supply through 2040. The UWMP calculated that the demand for potable and raw water in 2015 was 1,058 million gallons (MG) per year. The UWMP projects that 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 project site is within the boundary of the SID and the SSWA but is currently not served potable water. To provide potable water to the project site, the proposed project would involve the construction of an 8-inch water main. The 8-inch water main would connect to the existing 8-inch water main in Amber Drive, which ultimately connects to an existing 12-inch water main in Blossom Avenue and the 12-inch water main in Railroad Avenue. All water distribution improvements for the proposed project would be constructed and designed in accordance with the latest Suisun-Solano Water Authority design standards as well as with Title 13, Chapter 13.04, Water, of the Suisun City Municipal Code.

Wastewater Collection/Treatment

The FSSD oversees wastewater collection and treatment, water recycling, and stormwater management services for the City. The FSSD's collection system includes 13 pump stations and a 70-mile network of 12-to-48-inch diameter sewer pipes that collect and transport sanitary waste to the wastewater treatment plant located in the City of Fairfield at 1010 Chadbourne Road. The FSSD's wastewater treatment plant has a dry weather capacity of 23.7 million gallons per day (mgd) and an average daily flow of 12.2 mg (FSSD 2015).

The project site is currently vacant and would require sewer service from FSSD. The proposed project would likely involve the construction of a 6-inch sewer lateral for each building, which would connect to an 8-inch sanitary sewer line within the project site. The 8-inch sanitary sewer line would then connect to the existing 8-inch sanitary sewer line in Blossom Avenue.

Stormwater Management

Municipalities are required to proactively control and regulate pollution from their municipal storm sewer systems to mitigate the potential detrimental impacts of urban runoff. There are two main drainage systems flowing through Suisun City, McCoy Creek and Laurel Creek. All of the stormwater from the City flows into the Suisun Marsh. The City owns four stormwater pump stations that are operated and maintained by the FSSD (Suisun City 2019). The City addresses stormwater requirements for development projects through the FSURMP, which is maintained by the FSSD. The FSURMP is intended to reduce or eliminate pollutants discharged from the urban environment into storm drains, local creeks, and the Suisun Marsh (FSSD 2021).

Solid Waste

The Solano Garbage Company (SGC) is the current franchise that provides weekly solid waste collection and disposal services to residents and businesses in the City. Solid waste is delivered to Potrero Hills Landfill. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Potrero Hills Landfill has a maximum permitted throughput of 4,330 tons per day and has a total maximum permitted capacity of 83.1 million CY. It currently has a remaining capacity of 13.9 million CY and is anticipated to cease operation by 2048. (CalRecycle 2019a).

SGC provides bi-weekly curbside recycling and green waste services for residents of Suisun City. SGC delivers all materials collected from curbside recycling to the Integrated Resource Recovery Facility, a recyclables processing facility that is operated by the West County Resource Recovery, Inc (Suisun City 2015a).

Electric Power, Natural Gas, and Telecommunications

PG&E provides electricity and natural gas to the City. Most of the energy that PG&E provides the City is renewable, and the remaining energy sources are coal and gas. The General Plan does not anticipate any difficulty for PG&E to maintain service at full build-out. SBC Global provides local telephone services to the City, while cable television is provided through Comcast. Both providers have the ability to maintain these services to meet the needs of City residents and businesses in the future (Suisun City 2015c).

3.19.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, and the 2015 UWMP. The following impact discussions consider the impacts of the proposed project related to utilities and service systems in the City.

3.19.3 Environmental Impact Analysis

This section discusses potential impacts related to utilities and service systems associated with the proposed project and provides mitigation measures where necessary.

Impact UTIL-1	**Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Impact Analysis

Water Treatment

The project site is within the boundary of the SID and the SSWA but is currently not served potable water. To provide potable water to the project site, the proposed project would involve the construction of an 8-inch water main. The 8-inch water main would connect to the existing 8-inch water main in Amber Drive, which ultimately connects to an existing 12-inch water main in Blossom Avenue and the 12-inch water main in Railroad Avenue. All water distribution improvements for the proposed project would be constructed and designed in accordance with the latest Suisun-Solano Water Authority design standards as well as with Title 13, Chapter 13.04, Water, of the Suisun City Municipal Code. It is estimated that the proposed project would require approximately 150 gpd per dwelling unit, totaling approximately 27,150 gpd or 9,909,750 gpy (Russell Shaw, Personal Communication, February 11, 2021). As discussed, the SSWA 2015 UWMP determined that there would be sufficient water supply available to adequately offset future water demands projected for the City. The SSWA also provided a will serve letter for the proposed project on August 26, 2020, which determined that the proposed project is consistent with the General Plan land use designation and SSWA's 2021 Water System Design Review. As such, SSWA determined that there would be sufficient potable water supply to serve the proposed project (Appendix A). The

proposed project would not result in the relocation or construction of new or expanded water facilities; therefore, impacts associated with the construction of water facilities would be less than significant.

Wastewater

The project site is currently vacant and would receive sewer service from the FSSD. The proposed project would involve the construction of a 6-inch sewer lateral for each building which would connect to an 8-inch sewer line within the project site. The 8-inch sanitary sewer line would then connect to the existing 8-inch sanitary sewer line in Blossom Avenue. All sewer distribution improvements of the proposed project would be constructed and designed in accordance with the City's Design and Construction Standards.

The FSSD wastewater treatment plant currently has a total permitted capacity of 23.7 mgd and has an average daily flow of 12.2 mgd (FSSD 2019). The proposed project would generate approximately 27,150 gpd of wastewater, which would represent a less than 1 percent increase in the average daily flow of 12.2 mgd at the FSSD wastewater treatment plant. Additionally, the FSSD provided a will serve letter for the proposed project on August 19, 2020confirming that there would be adequate capacity to serve the proposed project's sewer connections and that sewer capacity fees would be required to secure entitlements (Appendix B). 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.

Stormwater Drainage

The proposed project would result in approximately 257,200 square feet of impervious surface and approximately 66,300 square feet of pervious surface. As required by the FSURMP, the proposed project would implement post-construction stormwater control BMPs and low-impact development measures to minimize stormwater runoff. These features would consist of approximately 126,233 square feet of landscaping and 11 bioretention areas. The 11 bioretention areas would total approximately 11,550 square feet, for the required treatment area of 6,950 square feet per the C.3 Guidebook. The bioretention areas would retain and treat stormwater prior to entering the stormwater system. Each bioretention area would connect to either a 12-inch or an 18-inch storm drain line, which would either connect to the existing 30-inch storm drain line in Railroad Avenue or the 21-inch storm drain line in Amber Drive. The stormwater drainage facilities would be designed in accordance with the requirements of the City of Suisun City, including providing stormwater drainage calculation 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. Therefore, impacts associated with the construction of stormwater facilities would be less than significant.

Electric Power and Natural Gas

Pacific Gas and Electric Company is the electric and natural gas provider for the City. The proposed project would connect to the existing overhead utilities and natural gas line along Railroad Avenue. The electric and natural gas improvements for the proposed project would occur in accordance with PG&E standards. As such, impacts related to the construction of electric and natural gas facilities would be less than significant.

Telecommunications

The proposed project would connect to existing telecommunication facilities in the vicinity of the project site. Any additional connections that are deemed necessary during final site design would be placed within utility easements. No expanded capacity would be required for telecommunication facilities that could potentially cause a significant environmental impact and impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact Analysis
It is estimated that the proposed project would require approximately 150 gpd per dwelling unit, totaling approximately 27,150 gpd or 9,909,750 gpy. According to the 2015 UWMP, during a normal year, the City has the availability to meet water use demands through 2040 from water supply available from the Solano Project. During dry and multiple dry years, the City is also able to meet water supply demands by using three sources of water. These three sources consist of the SCWA's contract with Suisun City for Solano Project water, the SCWA's contract with Suisun City for SWP water, and SCWA's contract with SID for Solano Project water (SSWA 2016). The SSWA provided a will serve letter for the proposed project on August 26, 2020, which determined that the proposed project is consistent with the General Plan land use designation and SSWA's 2021 Water System Design Review. Therefore, SSWA determined that there would be sufficient potable water to serve the proposed project (Appendix A). The proposed project would be served by existing and projected future water supplies during normal, single dry years, and multiple dry years, and the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-3 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?

Impact Analysis
The project site is currently vacant and would receive sewer service from the FSSD. The proposed project would involve the construction of a 6-inch sewer lateral for each building which would connect to an 8-

inch sewer line within the project site. The 8-inch sanitary sewer line would then connect to the existing 8-inch sanitary sewer line in Blossom Avenue. The FSSD wastewater treatment plant currently has a total permitted capacity of 23.7 mgd and has an average daily dry weather flow of 12.2 mgd (FSSD 2015). The proposed project would generate approximately 27,150 gpd of wastewater, which would represent a less than 1 percent increase in the 12.2 mgd average daily flow at the FSSD wastewater treatment plant. FSSD provided a will serve letter for the proposed project on August 19, 2020 and determined that there would be adequate capacity to serve the proposed project's sewer connections and that sewer capacity fees would be required to secure entitlements (Appendix B). Therefore, the FSSD wastewater treatment plant would have sufficient capacity to serve the proposed project's estimated wastewater demand and existing commitments. Impacts related to wastewater treatment facilities would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-4 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Impact Analysis
Solid waste from the project site would be collected and deposited at the Potrero Hills Landfill approximately 3.5 miles southeast of the project site. The Potrero Hills Landfill is approximately 525 acres in size, and its total capacity is 83.1 million CY. Currently, the landfill is listed as having a remaining capacity of approximately 13.9 million CY and is expected to operate until 2048 (CalRecycle 2019a).

The proposed project would result in approximately 558 residents, and operation of the proposed project is expected to employ up to six full-time employees. Using the waste generation factor for residential use of 2.3 pounds per resident per day (CalRecycle 2019b), the residents of the proposed project would be expected to generate a total of 1,283 pounds of waste per day, or 233 tons of waste per year. In addition to the residential component, it is anticipated that up to six staff would work at the project site on a given day during operation. Using the waste disposal generation estimate for employee uses of 19.4 pounds per employee per day (CalReycle 2019b), the employees would generate 116 pounds per day, or 21 tons per year, as shown in Table 3.19-1.

Table 3.19-1: Estimated Solid Waste Generation

Project Component		Generation Rate	Pounds per Day	Tons per Day	Tons per Year
Staff	6	19.4 (lbs/person/day)	116	0.058	21
Residents	558	2.3 (lbs/person/day)	1,283	0.64	233
Total	-	-	**1,399**	**0.698**	**254**

Notes:
lbs/person/day = pounds per person per day
Source: CalRecycle 2019b

Based on the California Department of Resources Recycling and Recovery (CalRecycle) usage factors, total waste generated for the proposed project is anticipated to be 1,399 pounds per day or 254 tons per year. The Potrero Hills Landfill currently has a remaining capacity of approximately 13.9 million CY (CalRecycle 2019a). Based on the Potrero Hills Landfill permitted intake of 4,330 tons per day, waste generated by the proposed project would represent less than 1 percent of the landfill's daily capacity. The proposed project would also include recycling and green waste services as required by state and local objectives to reduce solid waste. Therefore, the proposed project contribution to solid waste facilities would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact UTIL-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Analysis
The proposed project would be served by curbside solid waste and recycling services, which are standard services for residential uses in the City. The project proposes development of residential uses, which would not involve the production and/or disposal of any acutely toxic or otherwise hazardous materials. The proposed project would comply with all State and local waste diversion requirements, including Section 8.10, Recyclable Materials, of the Suisun City Municipal Code. As such, impacts would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

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3.20 WILDFIRE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

3.20.1 Environmental Setting

According to the General Plan EIR, the areas with moderate fire risk mainly include the undeveloped grasslands surrounding the outer edges of the City. Additionally, there are a few areas in the city with high fire risk, such as the south-central portion, east of Sunset Avenue and south of SR 12; and the western portion, north and northwest of Cordelia Road and south of SR 12 (Suisun City 2015a).

The project site is in the northern portion of the City, which has been developed with a mix of residential and commercial uses. Based on review of Fire Hazard Severity Zone maps developed by CALFIRE, the project site is not within a state responsibility area or a very high fire hazard severity zone (CALFIRE 2020). The U.S. Forest Service has also developed a Wildfire Hazard Potential Map to inform evaluations of wildfire risk and prioritize fuels management across very large landscapes. The U.S. Forest Service Wildfire Hazard Potential Map classifies the potential for wildfire to occur at the project site as “very low” (USFS 2020).

3.20.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, General Plan EIR, CALFIRE’s Fire Hazard Severity Zone Map, and the U.S. Forest Service Wildfire Hazard Potential Map.

3.20.3 Environmental Impact Analysis

This section discusses potential wildfire impacts on the proposed project and provides mitigation measures where necessary.

Impact WF-1 Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact Analysis
The project site is not in a state responsibility area or a very high fire hazard severity zone (CALFIRE 2020). According to the Solano County Emergency Operations Plan, emergency evacuation routes mainly include the major highways, such as Highway 80, Highway 505, and SR 12. However, evacuation routes are based on the type of event (Solano County 2017). The proposed project would not result in the permanent modification to any of the surrounding roadways that would impair the Solano County Emergency Operations Plan. The construction activities for the proposed project may extend to the centerlines of Railroad Avenue, Blossom Avenue, and Amber Drive to connect utility lines and other offsite improvements resulting in temporary or partial street closure. However, access to the project site and the surrounding area would be maintained in accordance with a TCP. The TCP 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.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact WF-2 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?

Impact Analysis
The project site is not in a state responsibility area or a very high fire hazard severity zone (CALFIRE 2020). The project site and the surrounding area are relatively flat, and in an area with very low potential for a wildfire to occur (USFS 2020). As such, development of the proposed project would not exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

Impact WF-3	**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?**

Impact Analysis
The project site is not in a state responsibility area or a very high fire hazard severity zone (CALFIRE 2020). The project site is in an urban area and surrounded by existing development including buildings, roadways, and associated infrastructure. The proposed project would develop a multi-family apartment complex with 180 units, a community building of approximately 3,900 square feet, and approximately 22,930 square feet of common open space. The proposed project would also include the construction of private driveways and installation of utilities. The private driveway on Blossom Avenue would be 32 feet wide, but the two emergency access driveways on the north and south sides of the project site would be 26 feet wide in accordance with SCFD's access requirements for fire apparatus. All utilities would be undergrounded and would connect to existing infrastructure in the vicinity of the project site. Construction of the proposed project would be required to comply with all applicable building and safety codes, including the CBC and California Fire Code, and all applicable fire safety standards set forth by the City to protect the proposed structures from possible wildfires. Therefore, the proposed project would not require the installation or maintenance of associated infrastructure that would exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

Impact WF-4	**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?**

Impact Analysis
The project site is not in a state responsibility area or a very high fire hazard severity zone (CALFIRE 2020). As discussed in Section 3.7, Geology and Soils, the project site and surrounding area is relatively flat and not in an area subject to landslides or flooding. As such, the proposed project would not 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 would occur.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation

No Impact.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to 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, 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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the impacts of past projects, the impacts of other current projects, and the effects of probable future Projects)?	☐	☒	☐	☐
c) Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?	☐	☒	☐	☐

MFS-1 Does the project have the potential to 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, 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?

Impact Analysis

As evaluated in this ISMND, the proposed project would not 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; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, and CUL-1 have been included herein to reduce the significance of potential impacts to special-status species and habitats, and inadvertent discovery of cultural and tribal cultural resources to a less than significant level.

MFS-2 Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the effects of past projects, the impacts of other current projects, and the impacts of probable future projects)?

Impact Analysis

The 2015 General Plan EIR evaluated the cumulative effects associated with growth and development in the City. The proposed project would not result in any new cumulative impacts not previously identified in the General Plan EIR. All cumulative impacts resulting from the proposed project related to air quality, geology and soils, hydrology and water quality, and noise would be mitigated with implementation of Mitigation Measures AIR-1, AIR-2, GEO-1, GEO-2, GEO-3, HYD-1, NOI-1, and NOI-2. Projects completed in the past have also implemented mitigation, as necessary. Future projects would similarly be required to mitigate potential impacts. Accordingly, the proposed project would not otherwise combine with impacts of related development to add considerably to any cumulative impacts in the region, and impacts would be considered less than significant with mitigation.

MFS-3 Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?

Impact Analysis

The proposed project would not directly or indirectly cause substantial adverse effects on human beings. Air quality, greenhouse gases, hazardous materials, and noise would have the only potential effects through which the proposed project could have a substantial effect on human beings. However, all potential effects of the proposed project related to air quality, greenhouse gases, hazardous materials, and noise are identified as less than significant or less than significant with the implementation of mitigation. The impact analysis included in this ISMND indicates that for all other resource areas, the proposed project would either have no impact, no significant impact, or—for impacts that would not affect human beings—less than significant impact with mitigation incorporated.

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