AMPORTS Antioch Vehicle Processing Facility Project

Initial Study/ Mitigated Negative Declaration

July 2, 2021

Lead Agency:

City of Antioch
Planning Division
200 H Street
Antioch, CA 94509

Technical Assistance:

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
2017 Clean Air Plan	2017 Clean Air Plan, Spare the Air, Cool the Climate
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADT	Average daily trips
Air Basin	San Francisco Bay Area Air Basin
APD	Antioch Police Department
APN	Assessor's Parcel Number
Applicant	AMPORTS
AQP	Air Quality Plan
ATCM	Air Toxic Control Measures
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
bgs	below ground surface
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCCFPD	Contra Costa County Fire Protection District
CCR	California Code of Regulations
CCTA	Contra Costa Transportation Authority
CCWD	Contra Costa Water District
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geologic Survey

CH_4	methane
CHC	Commercial Harbor Craft
CHRIS	California Historical Resources Information System
City	City of Antioch
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CO-CAT	California Climate Action Team
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
dB	decibel
dB(A)	A-weighted decibels
dB(C)	C-weighted decibels
DDSD	Delta Diablo Sanitation District
DOC	California Department of Conservation
DOF	Department of Finance
DPR	Department of Parks and Recreation
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
ECWMA	East County Water Management Association
EDD	Employment Development Department
EIR	Environmental Impact Report
EFH	Essential Fish Habitat
ESU	Evolutionarily Significant Unit
FC	Federal candidate
FCAA	Federal Clean Air Act
FE	Federally endangered
FEMA	Flood Emergency Management Agency
FESA	Federal Endangered Species Act
FGC	Fish and Game Code
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps

Flood Control District	Contra Costa County Flood Control and Water Conservation District
FMP	Fishery Management Plan
FT	Federally threatened
FTA	Federal Transportation Administration
GHG	greenhouse gases
gpd	gallons per day
GSP	Groundwater Sustainability Plan
HCP	Habitat Conservation Plan
HDPE	High-density polyethylene
HRA	Health Risk Assessment
Hz	Hertz
in/sec	inches per second
IS/MND	Initial Study/Mitigated Negative Declaration
ITE	Institute of Transportation Engineers
LAO	Legislative Analyst's Office
Ldn	day-night sound level
Leq	equivalent sound level
Lmin	minimum sound levels
Lmax	maximum sound levels
Lxx	Percentile-exceeded sound level
MBTA	Migratory Bird Treaty Act
mg/m^3	milligrams per cubic meter
mgd	million gallons per day
MLD	most likely descendant
MLLW	Mean Lower Low Water
MMPA	Marine Mammal Protection Act
MOU	Memorandum of Understanding
MRZ	Mineral Resource Zone
MSA	Magnuson-Stevens Fishery Conservation and Management Act
$MTCO_2e$	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
NCCP	Natural Community Conservation Plan

NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
OPR	Governor's Office of Planning and Research
PCBs	Polychlorinated Biphenyls
PEA	Preliminary Endangerment Assessment
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM_{10}	particulate matter 10 microns in diameter or less
$PM_{2.5}$	particulate matter 2.5 microns in diameter or less
ppb	parts per billion
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	AMPORTS Antioch Vehicle Processing Facility Project
RAW	Removal Action Workplan
RCNM	Roadway Construction Noise Model
ROG	reactive organic gases
RSP	rock slope protection
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SEL	sound exposure level
SIP	State Implementation Plan
SLR	sea level rise
SO_2	Sulfur dioxide
SR	State Route
SSC	species of special concern
ST	State threatened
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

TAC	toxic air contaminants
TCP	traffic control plan
Technical Advisory	*Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*
tpy	tons per year
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
WHRS	Wildlife Habitat Relationships System
WWTP	Wastewater Treatment Plant
°F	Fahrenheit

1.0 INTRODUCTION

AMPORTS (Applicant) is proposing the AMPORTS Antioch Vehicle Processing Facility Project (proposed project) at 2301 Wilbur Avenue in the City of Antioch (City), California. The proposed project involves the construction of an automotive logistics and processing facility on an approximately 38.9-acre vacant site to store and process new automobiles shipped from overseas to be transported to dealerships throughout the San Francisco Bay Area. The project site operated as a containerboard and linerboard production facility from 1956 to 2002. It is mostly paved and developed with a 5,000 square foot metal warehouse building and a security guard station. The project site is also connected to an approximately 770-foot-long wharf located on the southern bank of the San Joaquin River. The main portion of the wharf is approximately 422 feet in length. The proposed project would involve structural upgrades to the existing wharf to accommodate vessels arriving at the site to off-load new automobiles. It would also involve the construction of a new pre-engineered metal building of approximately 25,328 square feet; grading and paving of the site for automobile storage; the demolition and construction of new utility connections; and stormwater improvements.

1.1 PROJECT TITLE

AMPORTS Antioch Vehicle Processing Facility Project

1.2 LEAD AGENCY

City of Antioch
200 H Street
Antioch, CA 94509-1285

1.3 LEAD AGENCY CONTACT

Zoe Merideth, Associate Planner
Phone: (925) 779-6159
Email: zmerideth@antiochca.gov

1.4 PROJECT APPLICANT

AMPORTS
10060 Skinner Lake Drive, Suite 205
Jacksonville, Florida 32246
Contact: Ben Buben, Chief Operating Officer
Phone: (904) 652-2962

1.5 PURPOSE

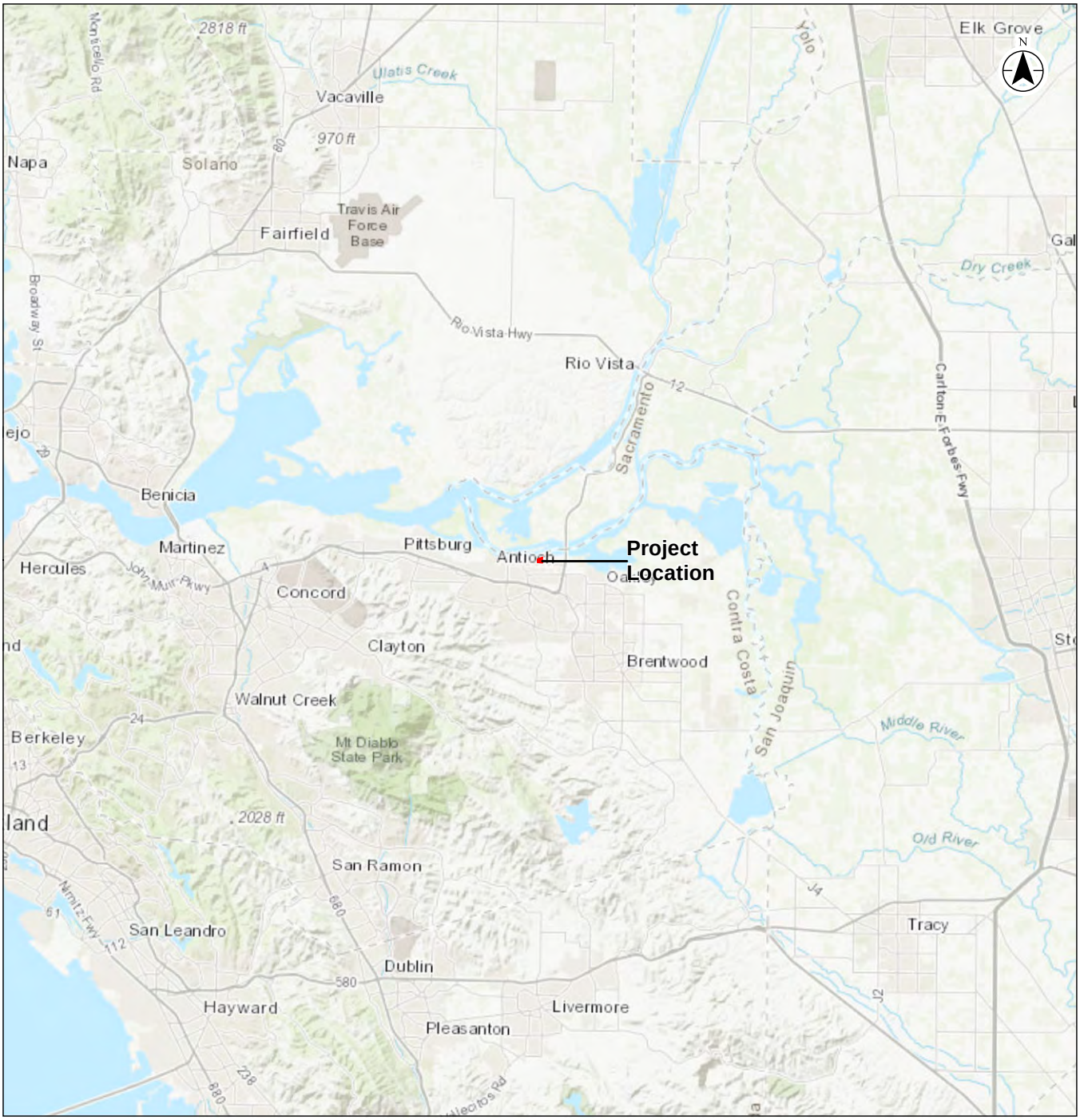
The purpose of the proposed project is to allow for the development of an automotive logistics and processing facility on an approximately 38.9-acre vacant site located in the City of Antioch, California. This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared to evaluate the proposed 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 IS/MND 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.

1.6 PROJECT LOCATION

The proposed project is located at 2301 Wilbur Avenue in the City of Antioch in Contra Costa County, California (Figure 1). The project site consists of two vacant parcels identified as Assessor's Parcel Numbers (APN) 051-020-006 and 051-020-012. It is in the northeast portion of the City, adjacent to the San Joaquin River, and approximately 1.3 miles west of State Route (SR) 160 (Figure 2).

1.7 SITE HISTORY

From 1956 to 2002, the project site operated as a containerboard and linerboard production facility. The facility last operated as the Gaylord Container Corporation West Mill facility from 1986 to 2002. The facility used old, corrugated cardboard and recycled fiber as raw material to produce linerboard. The recycled paperboard/linerboard manufacturing process involved producing a slurried pulp from raw materials and then using a paper machine to press the pulp into sheets.



Notes

1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
2. Base Map: Esri World Topographic Map web mapping service

0 5 10 Miles

1:500,000 (at original document size of 8.5x11)

Stantec

Project Location
Antioch, California

Prepared by TM on 2021-03-16

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
1

Title
Regional Overview

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Project Site

0 200 400 Feet

1:4,800 (at original document size of 8.5x11)

Notes

1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
2. Base Map: Esri World Imagery web mapping service

Stantec

Project Location
Antioch, California

Prepared by TM on 2021-03-16

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
2

Title
Project Site Location

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Once the facility closed in 2002, most of the existing structures and underground pipelines were demolished and removed with regulatory oversight provided by the Department of Toxic Substances Control (DTSC). Site investigation and remediation activities were conducted in accordance with the Voluntary Environmental Oversight Agreement between Gaylord Container Corporation, DTSC, and the California Environmental Protection Agency (CalEPA).

Based on the site investigation and remediation activities, a Preliminary Endangerment Assessment (PEA) was prepared and determined that the past paper mill activities resulted in the contamination of soil with Polychlorinated Biphenyls (PCBs). A Removal Action Workplan (RAW) was prepared based on the recommendations of the PEA to remediate the site and remove onsite sources of PCBs in soil. DTSC approved the RAW on October 14, 2010, and remediation activities occurred between October and November 2010. A Removal Action Implementation Report dated March 2, 2011, was completed to document successful completion of the removal of PCBs. Based upon DTSC's evaluation of the Report, it was determined that the site would not pose a threat to human health or the environment under residential land use. Therefore, DTSC determined that no further action is necessary with respect to investigation and remediation of hazardous substances at the project site. The DTSC certified the site as a voluntary cleanup site on June 29, 2011 (DTSC 2011).

Since completion of the remediation activities, the project site was primarily used for vehicle staging and storage, but it is now currently vacant.

1.8 EXISTING SETTING AND SURROUNDING LAND USES

The 38.9-acre project site consists of two vacant parcels identified as APNs 051-020-006 and 051-020-012. The project site is primarily paved for vehicle parking and is developed with a one-story metal warehouse building of approximately 5,000 square feet. There is also a security guard station located near the main entrance on Wilbur Avenue. The existing warehouse building, and the security guard station would remain on the project site.

The project site also has access to an approximately 770-foot-long wharf, of which the main portion is approximately 422 feet in length and is situated approximately 60 feet from the southern bank of the San Joaquin River. The existing wharf is located on lands managed by the California State Lands Commission. It is currently inoperable and has not serviced vessels since closure of the paper mill in 2002. On December 3, 2008, the California State Lands Commission authorized Lease 1546.1, a General Lease – Industrial Use to Forestar (USA) Real Estate Group, Inc., for the continued use and

maintenance of a non-operational industrial pier and appurtenant facilities. This lease will expire on August 8, 2022. On June 28, 2016, the California State Lands Commission authorized the assignment of the Lease to 2101-2603 Wilbur LLC. On January 4, 2021, Wilbur LLC. and the Applicant submitted a lease application to the California State Lands Commission requesting the issuance of a new 20-year lease to upgrade and operate the existing wharf to support the proposed project.

The southwestern portion of the project site is also bisected by a rail spur. The rail spur is no longer operable and is no longer connected to the main rail line located to the south. The project does not include the use of the rail line.

Pacific Gas and Electric (PG&E) provides gas and electric service to the project site, and the City provides water for fire protection. The project site is not connected to the City's public sewer system. There are several storm drain inlets onsite, which are connected via a piped system to a stormwater detention facility in the northwest portion of the site. The stormwater detention facility is connected to a stormwater outfall pipe that discharges directly into the San Joaquin River.

The project site is in the northeast portion of the City, which predominantly consists of the industrial uses located along the San Joaquin River. The project site is bordered by industrial uses to the east and west; the San Joaquin River to the north; and Wilbur Avenue to the south. Other land uses surrounding the project site include industrial and commercial uses to the south, beyond which consists of single-family residences and agricultural lands.

1.9 LAND USE DESIGNATIONS AND ZONING

General Plan Land Use Designation

According to the City's 2003 General Plan, the project site is in the Eastern Waterfront Employment Focus Area and designated General Industrial, which aligns with the Industrial land use designation. The Eastern Waterfront Employment Focus Area encompasses the industrial areas in the northeastern portion of the City, south of the San Joaquin River and west of SR-160. The primary function of this area is to provide employment opportunities and to assist the City in achieving its goal of a balance between local housing and employment.

The Industrial land use designation is "intended for a range of industrial businesses, including uses, which, for reasons of potential environmental effects are best segregated from other, more sensitive, land uses, such as residential neighborhoods."

Uses permitted include light manufacturing and assembly, general manufacturing and assembly, research and development, operable vehicle storage, personal storage, light and general storage and distribution, building contractor's offices and yards, boating and related activities, and open space (City of Antioch 2003a).

Zoning

The project site is zoned Heavy Industrial (M-2). Based on the Zoning Code, the Heavy Industrial (M-2) zoning district "allows heavy industrial uses which may generate adverse impacts on health or safety. This zone applies primarily to existing heavy industrial uses. The district is consistent with the General and Industrial General Plan Designations. Uses include production of and extraction of metals or chemical products from raw materials, steel works and finishing mills, chemical or fertilizer plants, petroleum and gas refiners, paper mills, lumber mills, asphalt, concrete and hot mix batch plants, power generation plants, glassworks, textile mills, concrete products manufacturing and similar uses." Automobile storage facilities are allowed within the Heavy Industrial (M-2) zoning district with approval of a Use Permit (City of Antioch 2020a).

1.10 POTENTIAL RESPONSIBLE AND TRUSTEE AGENCIES

Under Section 15381 of the CEQA Guidelines, a "Responsible Agency" means a public agency, which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an Environmental Impact Report (EIR) or Negative Declaration. For the purposes of CEQA, the term "Responsible Agency" includes all public agencies other than the Lead Agency, which have discretionary approval power over the project. Section 15386 of the CEQA Guidelines defines a "Trustee Agency" as a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.

A memorandum of understanding (MOU) between the City and the California State Lands Commission was issued on February 24, 2021. The MOU is a confidential agreement between the City and the California State Lands Commission that identifies the roles and responsibilities of the City and the California State Lands Commission leading up to the adoption or certification of the final CEQA document. The MOU identifies the City as 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. The California State Lands Commission is the Responsible and Trustee Agency. The California State Lands Commission would have discretionary approval for

project activities that will require California State Lands Commission approval or will affect resources entrusted to the California State Lands Commission.

The following are anticipated responsible and trustee agencies who will have approvals over the project:

- California State Lands Commission
- California Department of Fish and Wildlife
- Central Valley Regional Water Quality Control Board
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service

1.11 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 IS/MND. 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 IS/MND and project approval.

The public review period will commence on July 2, 2021, and end on August 2, 2021, pursuant to CEQA Guidelines Section 15105. If you wish to send written comments

(including via e-mail), they must be received by 5 p.m. on August 2, 2021. Written comments should be addressed to:

Zoe Merideth, Associate Planner
Phone: (925) 779-6159
Email: zmerideth@antiochca.gov

The IS/MND and supporting documents are available for review at the City of Antioch, Community Development Department, located at 200 H Street Antioch, CA 94509, Monday through Friday during normal business hours by pre-scheduled appointment only, and online at: https://www.antiochca.gov/community-development-department/planning-division/environmental-documents/

1.12 REQUIRED PERMITS AND APPROVALS

For the proposed project to be implemented, a series of actions and approvals would be required from multiple agencies. Anticipated project approvals/actions would include, but are not limited to, the following:

- Use Permit: City of Antioch
- Design Review: City of Antioch
- California State Lands Commission Lease Agreement
- Clean Water Act Section 404 Permit
- Clean Water Act Section 401 Permit
- Rivers and Harbors Act Section 10 Permit
- California Department of Fish and Wildlife Lake and Streambed Alteration Agreement

Other ministerial approvals such as building permits, grading permits, and encroachment permits are also anticipated. Additionally, all work related to improvements and project grading would be subject to the City of Antioch Municipal Code, including the Zoning Code, Building Code, and Fire Code.

1.13 DOCUMENT ORGANIZATION

This IS/MND 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 describes the purpose and need for the proposed project, identifies project objectives, and provides a detailed description of the project.

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 for each topic 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. If impacts are determined to be potentially significant after incorporation of applicable mitigation measures, an EIR would be required.

Section 4.0: References. This section lists the references used in preparing this IS/MND.

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

2.0 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

AMPORTS is an automotive service industry import/export business. The company has been in the industry for over 60 years and has locations throughout the United States and Mexico. The proposed project would involve the construction of an automotive logistics and processing facility on an approximately 38.9-acre vacant site in the City of Antioch. The purpose of the proposed facility is to store, and process new automobiles shipped from overseas which would then be transported to dealerships within the San Francisco Bay Area. The proposed project would involve structural upgrades to the existing wharf located on the southern bank of the San Joaquin River and the construction of a pre-engineered metal vehicle processing building of approximately 25,328 square feet. The proposed project would also involve grading and paving of the site for automobile storage; the demolition and construction of new utility connections; and stormwater improvements.

2.1.1 Land Improvements

Vehicle Processing Building

The proposed project would construct a pre-engineered metal vehicle processing building of approximately 25,328 square feet. The pre-engineered vehicle processing building would be one-story tall with a maximum height of 24 feet and 3 inches. The building would include an open bay for six vehicle processing lanes, as well as administration offices, a conference room, restrooms, a break room, and storage areas. Each vehicle processing bay would be secured with a metal coiling door. The building would consist of gray color exterior wall panels, white color roof panels and doors, and blue accent color gutters and trim. The proposed site plan for the vehicle processing building is provided in Figure 3.

Vehicle Parking Area Improvements

The proposed project would involve grading and paving 20 acres of the site for the storage of approximately 3,000 to 4,000 automobiles. Employee parking would be located next to the building and along the truck away fence line, just south of the building. The employee parking area would consist of 55 standard parking spaces and three accessible parking spaces. The proposed project would also provide 10 truck

lanes in the southern portion of the site. Each truck lane would be approximately 14 feet wide and 110 feet long.

Perimeter Fencing

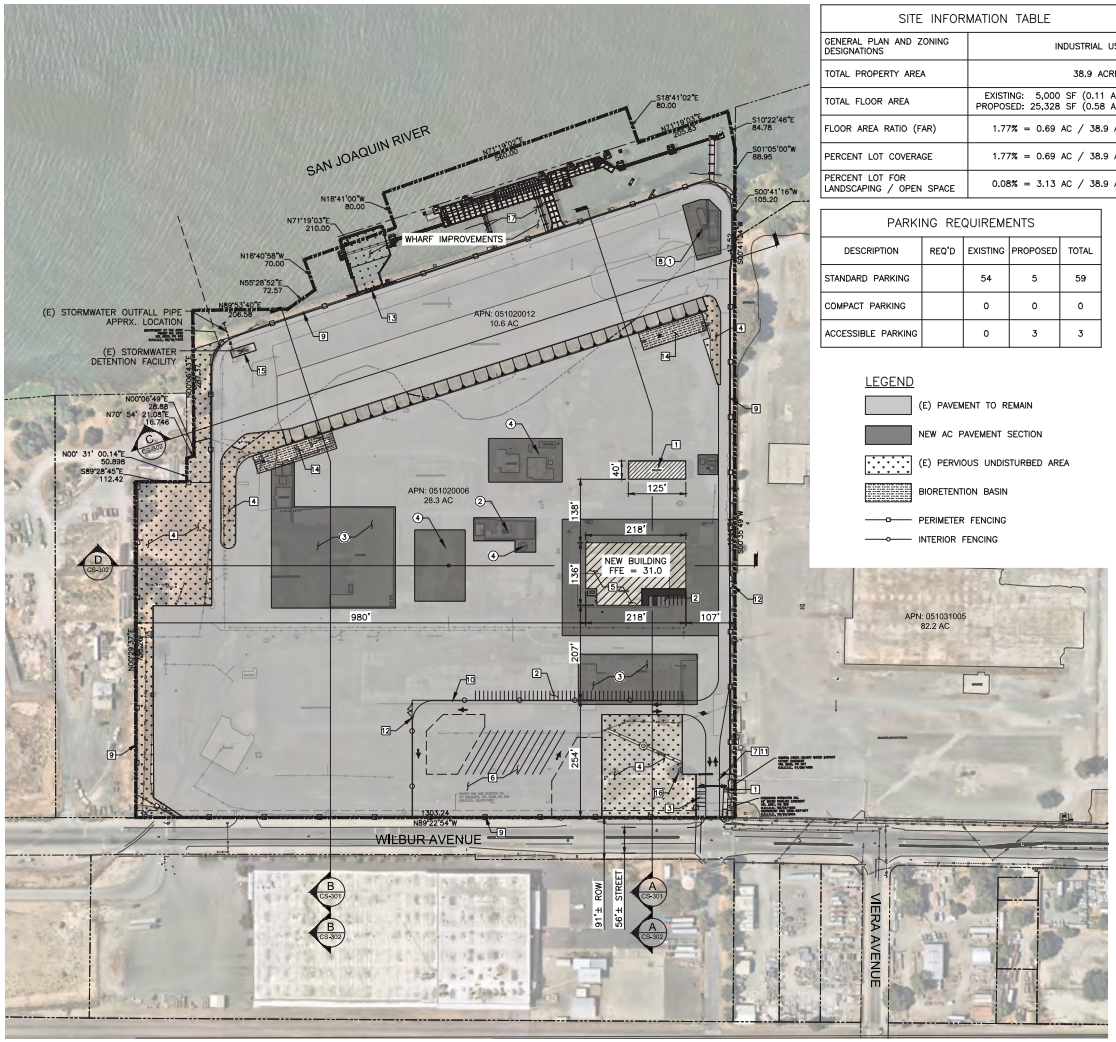
The proposed project would construct a new 6-foot-tall interior chain-link fence around the truck parking area in the southeastern portion of the project site. A new 8-foot-tall chain-link fence with black vinyl slats for screening would be constructed around the site perimeter and along Wilbur Street. The Applicant is also requesting approval to extend the site perimeter fence by 12 inches to allow for the addition of three stands of barbed wire along the top of the fence.

Lighting

The proposed project would provide exterior lighting throughout the project site to illuminate the automobile parking areas and wharf structure. The parking lot lighting would consist of 27 pole lighting fixtures approximately 50 feet in height and 38 wall mounted lights ranging from 10 to 30 feet in height. The wall mounted lights would be placed over vehicle and pedestrian areas. Lighting provided near the wharf would be amber color for waterfront use. All exterior lighting would be shielded in accordance with Section 9-5.1715 of the Antioch Municipal Code.

2.1.2 Wharf Improvements

The proposed project would upgrade the existing wharf structure to accommodate vessels that would be delivering new automobiles to the project site from overseas. Upgrades to the wharf structure would include the demolition of treated timber structures such as wooden piles and planking, concrete repair, installation of new steel and concrete piles, concrete deck installation, new walkways, installation of new breasting and mooring dolphins, and construction of a stern ramp to roll-on/roll-off new automobiles. These proposed improvements would primarily occur within the wharf's existing footprint, except for the new stern ramp that would be constructed from the wharf to the shoreline to support loading and unloading operations.



SITE INFORMATION TABLE	
GENERAL PLAN AND ZONING DESIGNATIONS	INDUSTRIAL USE
TOTAL PROPERTY AREA	38.9 ACRES
TOTAL FLOOR AREA	EXISTING: 5,000 SF (0.11 AC) PROPOSED: 25,328 SF (0.58 AC)
FLOOR AREA RATIO (FAR)	1.77% = 0.69 AC / 38.9 AC
PERCENT LOT COVERAGE	1.77% = 0.69 AC / 38.9 AC
PERCENT LOT FOR LANDSCAPING / OPEN SPACE	0.08% = 3.13 AC / 38.9 AC

PARKING REQUIREMENTS

DESCRIPTION	REQ'D	EXISTING	PROPOSED	TOTAL
STANDARD PARKING		54	5	59
COMPACT PARKING		0	0	0
ACCESSIBLE PARKING		0	3	3

LEGEND

- (E) PAVEMENT TO REMAIN
- NEW AC PAVEMENT SECTION
- (E) PERVIOUS UNDISTURBED AREA
- BIORETENTION BASIN
- PERIMETER FENCING
- INTERIOR FENCING

GENERAL NOTES

A. SEE G-001 FOR PROJECT VICINITY AND LOCATION MAPS.

B. TRAFFIC SIGNING AND STRIPING PLAN NOT INCLUDED IN THIS PLAN SET. ON SITE SIGNING AND STRIPING IS NOT PROPOSED AT THIS TIME.

C. SIGN PLAN NOT INCLUDED IN THIS PLAN SET. NO NEW SIGNS ARE PROPOSED ON THE SITE.

D. LANDSCAPE PLAN NOT INCLUDED IN THIS PLAN SET. NO NEW NEW LANDSCAPING IS PROPOSED ON THE SITE.

E. GENERAL PAVEMENT REHABILITATION WILL BE PERFORMED FOR EXISTING PAVEMENT (REMOVING WEEDS, MINOR OVERLAY, SEAL COAT ETC.) ON AN AS NEEDED BASIS AND IS NOT SPECIFICALLY CALLED OUT IN THIS PLAN.

F. THE PROJECT AREA IS WITHIN FEMA ZONE X. REFERENCE FIRMETTE MAP NUMBER 06013C0144G.

DEMOLITION KEY NOTES

1. REMOVE EXISTING PUMPS, ELECTRICAL, PIPING ETC.
2. REMOVE ABOVE-GROUND UTILITIES AND CAP 2' BELOW GRADE.
3. REMOVE EXISTING LOADING DOCK AND ASSOCIATED FACILITIES.
4. REMOVE EXISTING PAVEMENT, CONCRETE PADS ETC.

SITE KEY NOTES

1. EXISTING BUILDING TO REMAIN.
2. PROPOSED PARKING. 3 ADA STALLS AND 5 STANDARD STALLS NEXT TO THE BUILDING AND ~50 ADDITIONAL STANDARD STALLS FOR EMPLOYEE PARKING SOUTH OF THE BUILDING.
3. REUSE EXISTING PARKING STALLS NEAR MAIN GATE (4 STANDARD STALLS).
4. MAINTAIN AND HYDROSEED EXISTING UNDISTURBED PERVIOUS AREA.
5. NEW OFFICE AND VEHICLE PROCESSING FACILITY, SEE SHEET A-101.
6. TRUCKAWAY AREA, 10 LANES (14'x110').
7. CANTILEVERED SLIDING GATE.
8. FUTURE STEVEDORE TRAILER WITH RESTROOM LOCATION.
9. PERIMETER FENCING (4,870 LF), 8' HIGH CHAIN LINK WITH BLACK VINYL SLATS FOR SCREENING AND 12" BARBED WIRE EXTENSION CONSISTING OF 3 STRANDS OF BARBED WIRE.
10. INTERIOR FENCING (850 LF), 6' HIGH CHAIN LINK.
11. ENTRANCE GATE ARMS AND TIRE SPIKES (PASSIVE INBOUND, POWERED OUTBOUND).
12. DOUBLE SWING GATE, 30' WIDE
13. TWIC GATE 30' WIDE.
14. BIORETENTION AREA.
15. SERVICE EXISTING STORMWATER DETENTION FACILITY.
16. EXISTING TREE TO REMAIN.
17. WHARF IMPROVEMENTS INCLUDE CONVERSION AND UPGRADE OF EXISTING WHARF TO SUPPORT ROLL-ON / ROLL-OFF (RORO) OPERATIONS. SEE WHARF IMPROVEMENT PLANS.

PRELIMINARY SCOPING PLANS
NOT FOR CONSTRUCTION

SCALE 1" = 100' (0, 100, 200, 300 FEET)

Source: TranSystems, January 2021

Project Location
Antioch, California

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
3

Title
Proposed Vehicle Processing Building Site Plan

Stantec

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The proposed wharf structure would be approximately 31,240 square feet. The elevation above the mean low water level would range from approximately 11 feet at the original dolphins to approximately 15 feet at the original wharf, with the new stern ramp deck being 12 feet above mean low water at the north (offshore end) sloping back to approximately 10.8 feet at the shoreline. The elevation of the wharf has been designed to account for sea-level rise associated with climate change over a 50-year time frame through 2070. The overall length of the wharf structure would increase by approximately 19 feet due to the installation of mooring dolphin 5.

There is an existing, isolated pier located to the east of the main wharf structure which would remain in place to allow operations and maintenance access from the easternmost mooring dolphins. There are also two existing pipeways/timber walkways and an existing concrete ramp that connect the existing wharf facilities to the shoreline, which would remain in place to allow wharf access from the landside. These pipes have been open to the environment and are empty. They were previously used by the paper mill for the pulp conveyance and would be left abandoned in place.

Details pertaining to the proposed wharf improvements are further described below and summarized in Tables 2.1-1 and 2.1-2. Figures 4 through 7 shows an overview of the wharf and the components that would be demolished and constructed by the proposed project.

Table 2.1-1: Summary of New and Removed In-Water Piles

Structure Type	Piles Removed	New Piles	Removed In-Water Volume (yd^3)	Added In-Water Volume (yd^3)	Removed In-Water Surface Area (ft^2)	Added In-Water Surface Area (ft^2)
Breasting Dolphins [Remove 16 - 12” creosote piles, ea, BD 1-4, Replace with 1-72” pile ea, BD 1-5]	64	5	71	191	50	141
Decking and Framing [Remove 12” and 15” creosote piles]	56	--	79	--	65	--

Structure Type	Piles Removed	New Piles	Removed In-Water Volume (yd^3)	Added In-Water Volume (yd^3)	Removed In-Water Surface Area (ft^2)	Added In-Water Surface Area (ft^2)
East Pier Pile Clusters [Remove 12" creosote piles]	8	--	7	--	6	--
Stern Ramp and Fender System [13" HDPE piles]	--	22	--	29	--	20
Stern Ramp and Walkway [24" concrete piles]	--	50	--	127	--	155
Mooring Dolphin (MD-5) [72" steel pile]	--	1	--	22	--	28
Total	**128**	**78**	**157**	**369**	**121**	**344**
Net Change	**-50**		**+212**		**+223**	

Table 2.1-2: Summary of New and Removed Over-Water Structures

Structure Type	Solid/Grated Cover	Removed Over-Water Surface Area (ft^2)	Added Over-Water Surface Area (ft^2)
Breasting Dolphins	Solid Cover	601	833
Existing Wharf Decking and Framing	Solid Cover	590	--
Stern Ramp and Fender System	Solid Cover	--	10,168
Mooring Dolphin (MD-5)	Solid Cover	--	250

Structure Type	Solid/Grated Cover	Removed Over-Water Surface Area (ft^2)	Added Over-Water Surface Area (ft^2)
Stairs, Walkways	Removed Solid Cover and Replaced with New Grated Cover	1,441	667
	Total	**2,632**	**11, 918**
	Summary	**9, 286 ft^2 Total Net New Over-Water Cover (including 667 ft^2 of Grated Cover)**	

Creosote Treated Fender Piles

The proposed project would demolish eight existing creosote piles located north of the pier. Additionally, approximately 26 to 30 existing creosote treated fender piles ranging from 12 to 15 inches in diameter would be removed and replaced with high-density polyethylene (HDPE) fender piles approximately 13 inches in diameter. Some associated creosote treated blocking between the piles at the approximate deck elevation would also be replaced with HDPE lumber.

A barge would be used to remove the timber creosote pilings by using one or a combination of the following methods:

- **Vertical Pulling:** Involves gripping the pile with a chain, cable or collar and pulling up vertically with a cable or hydraulic crane. Vertical pulling is the preferred method of removal and would be attempted before other methods are employed.
- **Vibratory Extraction:** Vibratory extraction involves attaching a vibratory hammer to the pile and pulling vertically with a crane or excavator, as described above.
- **Horizontal Snapping and Breaking:** This method does not completely remove the pile, and would be employed only if complete removal was infeasible or if the piles break during the removal process due to deterioration. It typically involves pushing or pulling the pile laterally to break the pile off near the mudline. Snapping typically breaks the pile at the weakest point near the mudline which is typically 1 to 3 feet below the mudline, but this technique can leave part of the pile above mudline particularly if the pile is highly degraded, which increases the likelihood of a navigation or safety hazard. Snapping may result in more sunken or floating broken debris than pulling or cutting particularly for degraded piles. In

the event a pile breaks during removal, a clamshell and/or chain would be used to grip the remaining broken piece and complete the removal process.

The removed pilings and/or piling remnants would be loaded onto a barge and removed from the project site. Similar to the removal of the existing piles, installation of the new piles would require a vibratory hammer to sink the steel piles to the extent possible before installation is completed with an impact hammer. The vibratory hammer would also be used to install the HDPE fender piles. An impact hammer would be used to drive concrete piles required for construction, and to complete the installation of new steel piles after the vibratory hammer has driven piles to refusal.

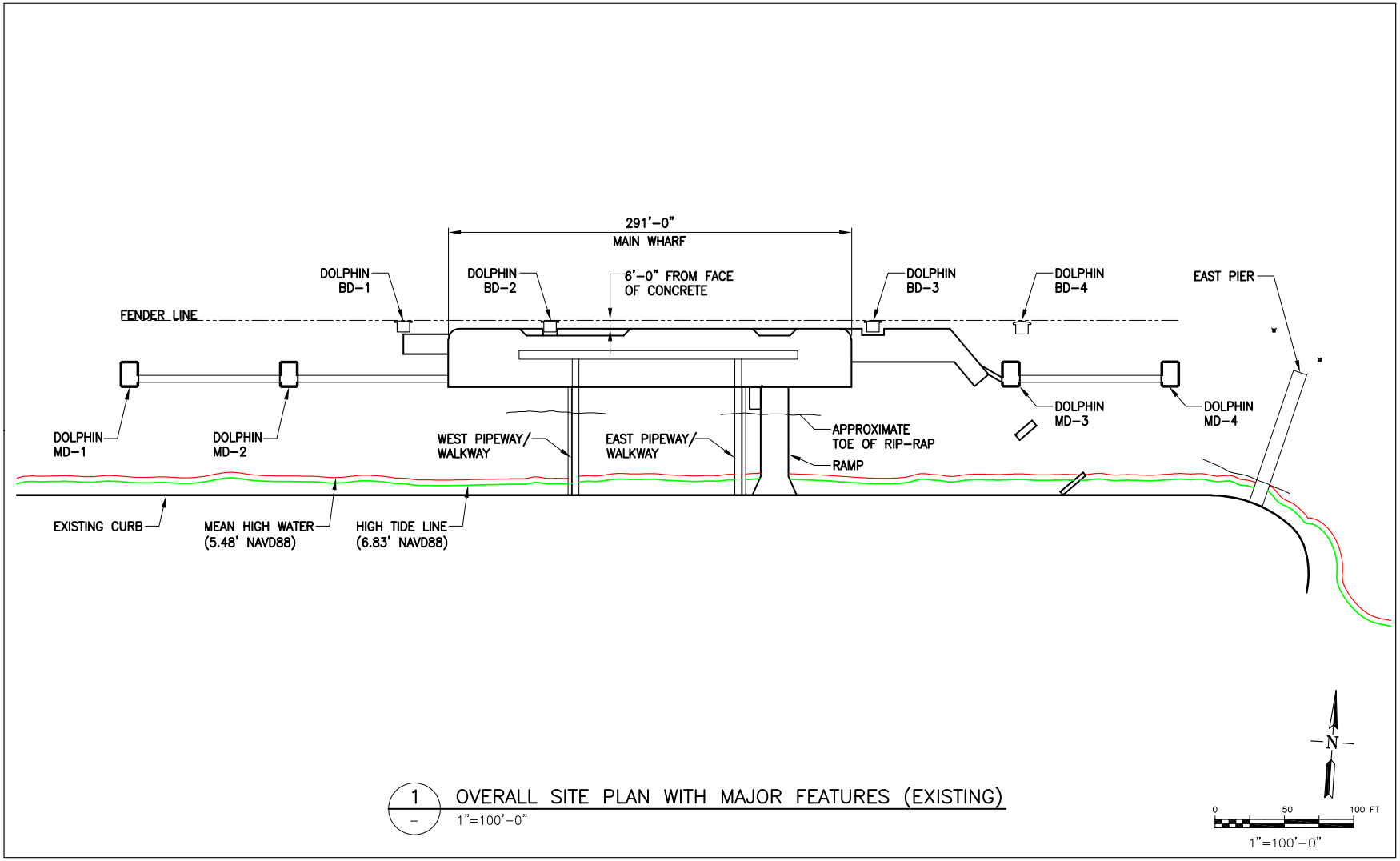
Mooring and Breasting Dolphins

There are four existing mooring dolphins (MD-1 through MD-4) and four existing breasting dolphins (BD-1 through BD-4). The four existing mooring dolphins totaling approximately 1,200 square feet would remain in place. The proposed project would also construct a new mooring dolphin (MD-5), consisting of one new 72-inch steel pile with new mooring hardware. The new mooring dolphin would be approximately 197 square feet and constructed to accommodate larger vessels.

All four existing breasting dolphins have structurally failed and would be replaced. The proposed project would also construct one new breasting dolphin (BD-5) of approximately 197 square feet to accommodate berthing vessels along the face of the wharf. The new breasting dolphins would each consist of a 72-inch steel pile and outfitted with an energy-absorbing fender. New breasting dolphin caps would be precast concrete on land and then placed on top of the steel piles in water. No creosote treated timber would be used in the construction of the new wharf features.

Decking and Framing

The proposed project would demolish approximately 2,199 square feet of the existing concrete and timber decking and framing along the northern and western portions of the wharf. The portion of the western walkway from the existing wharf to mooring dolphin 2 (MD-2) would also be demolished and replaced with a new grated decking walkway (approximately 483 square feet).



1 – OVERALL SITE PLAN WITH MAJOR FEATURES (EXISTING)
1"=100'–0"

Source: COWI, April 2021

Stantec

Project Location
Antioch, California

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
4

Title
Existing Wharf Components

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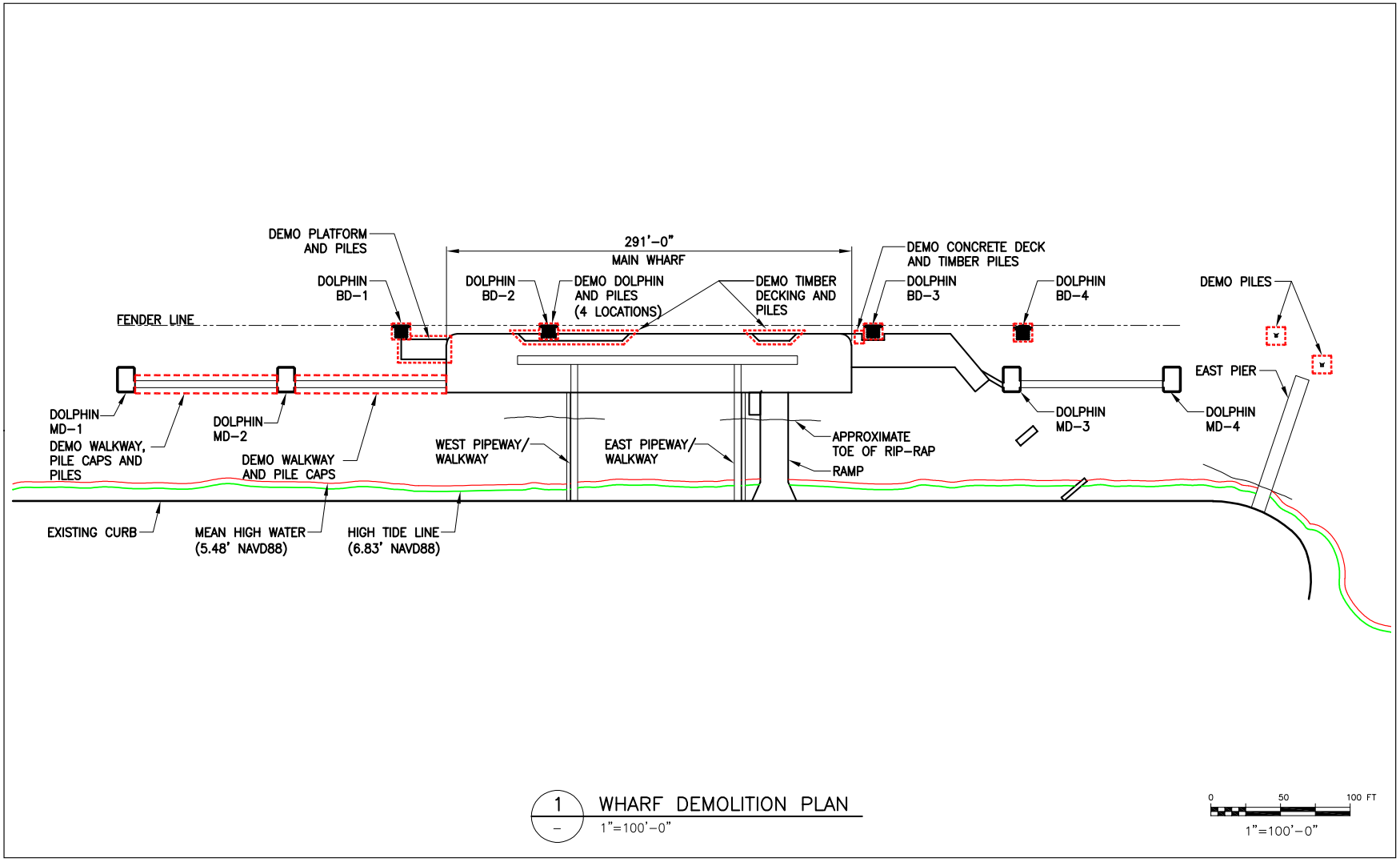

1 – WHARF DEMOLITION PLAN
1"=100'-0"

0 50 100 FT
1"=100'-0"

Source: COWI, April 2021

Stantec

Project Location
Antioch, California

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
5

Title
Proposed Wharf Features to be Demolished

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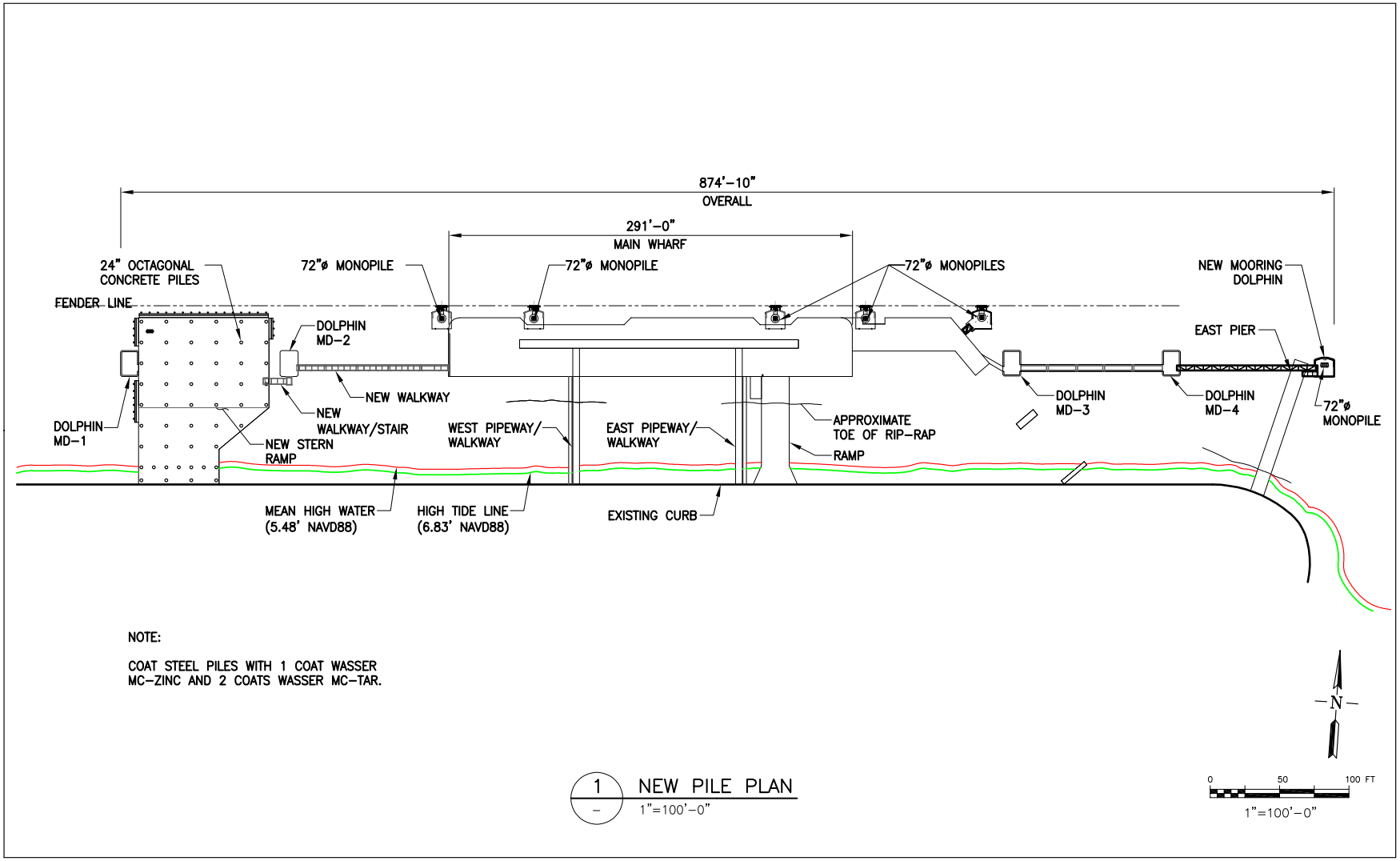

1 – NEW PILE PLAN
1"=100'–0"

Source: COWI, April 2021

Project Location
Antioch, California

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
6

Title
Proposed New Pile Plan

Stantec

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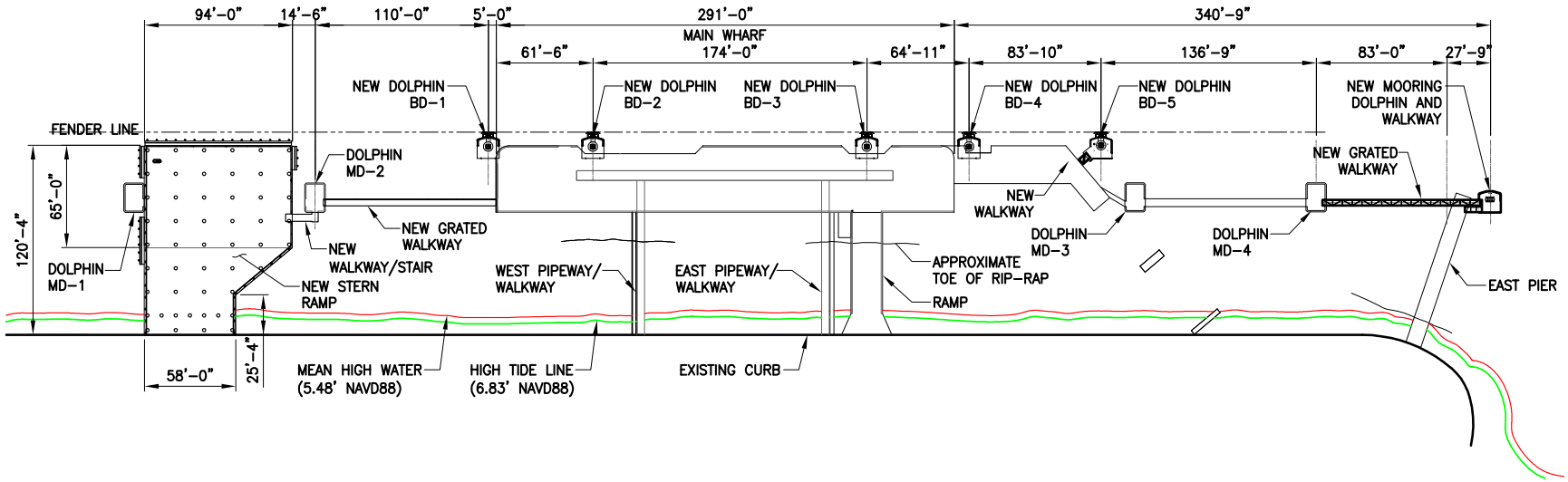

1 / – OVERALL SITE PLAN WITH NEW FEATURES

1"=100'–0"

Source: COWI, April 2021

Project Location
Antioch, California

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
7

Title
Proposed Wharf Components

Stantec

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Grated Walkways

The proposed project would construct new grated steel and aluminum walkways to provide pedestrian access along the wharf facility totaling 200 feet in length. The new grated steel walkway would be constructed between the existing wharf and breasting dolphin 5 (BD-5), and the new aluminum grated walkway would be constructed from mooring dolphin 4 (MD-4) to mooring dolphin 5 (MD-5). A smaller, separate grated deck steel walkway would also be constructed provide access between mooring dolphin 5 (MD-5) and the existing east pier.

Stern Ramp Deck and Fender System

The proposed project would demolish the existing walkway between mooring dolphin 1 (MD-1) and mooring dolphin 2 (MD-2) to install a new stern ramp deck. The new stern ramp would consist of a 10,213 square foot concrete slab supported by 50 new octagonal concrete piles 24 inches in diameter. The stern ramp would border the northern, western, and eastern faces by a fender pile system consisting of 22 new 13-inch diameter HDPE piles. The concrete deck slab for the stern ramp would be cast-in-place after the concrete piles are installed. The stern ramp would be connected to mooring dolphin 2 (MD-2) by a new grated tread steel staircase.

2.1.3 Utility Improvements

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 connect to existing infrastructure in the vicinity of the site.

Water

The project site does not currently receive potable water but is served by an existing water main for fire protection. The proposed project would rehabilitate and reuse the existing fire water loop and hydrants on site to serve the wharf structure, vehicle processing building and vehicle staging areas. The proposed project would also construct a new potable water main to serve the vehicle processing building. The fire water main and potable water main would connect to the existing 12-inch water main in Wilbur Avenue. All water distribution improvements would be constructed in accordance with the current version of the City's Construction Details.

It is estimated that the new vehicle processing building would demand approximately 500 gallons per day (gpd) of water.

Wastewater

The project site is currently not connected to the City's public sewer system. The City would condition the proposed project to construct a new 15-inch sewer main to serve the project. Should the sewer run the length of the frontage, the new sewer main would be a maximum length of approximately 0.3-mile (1,584 feet) and connect to the existing 15-inch sewer main located within Wilbur Avenue, east of Viera Avenue. The new 15-inch sewer main within Wilbur Avenue would be used by the proposed project to connect a new onsite sanitary sewer lateral of approximately 600 linear feet and a sanitary sewer manhole to serve the new vehicle processing building. All sewer distribution improvements would be constructed and designed in accordance with the current version of the City's Construction Details.

It is estimated wastewater generated by the proposed vehicle processing building would be about 500 gpd. This estimate is based off industry standard unit wastewater flows for office buildings and similar type construction. The 5,000 square feet office building would be the primary wastewater contributor. A conservative industry standard unit flow of 0.1 gpd/gross square feet was used.

Stormwater Treatment

There are several existing storm drain inlets onsite that are connected via a piped storm drain system. Stormwater generally flows northwest to an onsite stormwater detention facility, which is connected to a stormwater outfall pipe that discharges into the San Joaquin River. The proposed project would construct a new storm drain line and stormwater inlet in the central portion of the project site to tie into the existing onsite storm drain system. All other existing onsite stormwater infrastructure would be maintained.

The project site contains approximately 31.3 acres (1,363,920 square feet) of impervious paved surface and approximately 7.6 acres of pervious surface. The proposed project would not add new impervious surface to the site and would add to the existing pervious surface area. The proposed project would be subject to the requirements of the Contra Costa County C.3 Stormwater Standards in Chapter 6-9, Stormwater Management and Discharge Control, of the Antioch Municipal Code. In accordance with these requirements, the proposed project would be required to provide

drainage management for approximately 6.5 acres (282,125 square feet) of the project site. Therefore, the proposed project would construct two new bioretention areas in the eastern and western portions of the project site totaling approximately 12,200 square feet. The two new bioretention areas would manage stormwater drainage for approximately 6.83 acres of the site and would exceed the City requirements.

Electricity, Natural Gas, and Telecommunications

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 along Wilbur Avenue. Additionally, the proposed project would construct a new gas service line of approximately 800 linear feet to tie into the existing gas line within Wilbur Avenue. The proposed vehicle processing building would include energy conservation features to meet the state's Title 24 Energy Efficiency standards.

2.1.4 Access and Circulation

All vessels, barges, and tugboats would arrive to the project site via the San Joaquin River and would dock at the wharf to unload the new automobiles. As shown on Figure 8, the new automobiles would exit the vessel via the proposed roll-on/roll-off ramp located on the western end of the wharf structure. Stevedores would then drive the new automobiles from the proposed roll-on/roll-off ramp to the shoreline to stage them throughout the project site prior to and after processing. The new automobiles would be brought to the proposed vehicle processing building for inspection and accessorizing. Once the new automobiles are ready to be distributed to the off-site dealerships, they would be brought to the truck away area located in the southeastern portion of the project site to load onto the trucks.

All trucks would arrive to the project site via SR-160 and westbound Wilbur Avenue as required by the City's designated truck routes (City of Antioch 2021). The trucks would enter and exit the facility using the 30-foot-wide gated entrance on the eastern end of the project site on Wilbur Avenue. The proposed project would provide pavement markings throughout the project site to direct all trucks to the truck parking area. The project site does not provide public access from the landside or wharfside. Access to the project site would be restricted to authorized personnel only. Signage would be placed on wharfside to restrict recreational uses from accessing the project site.

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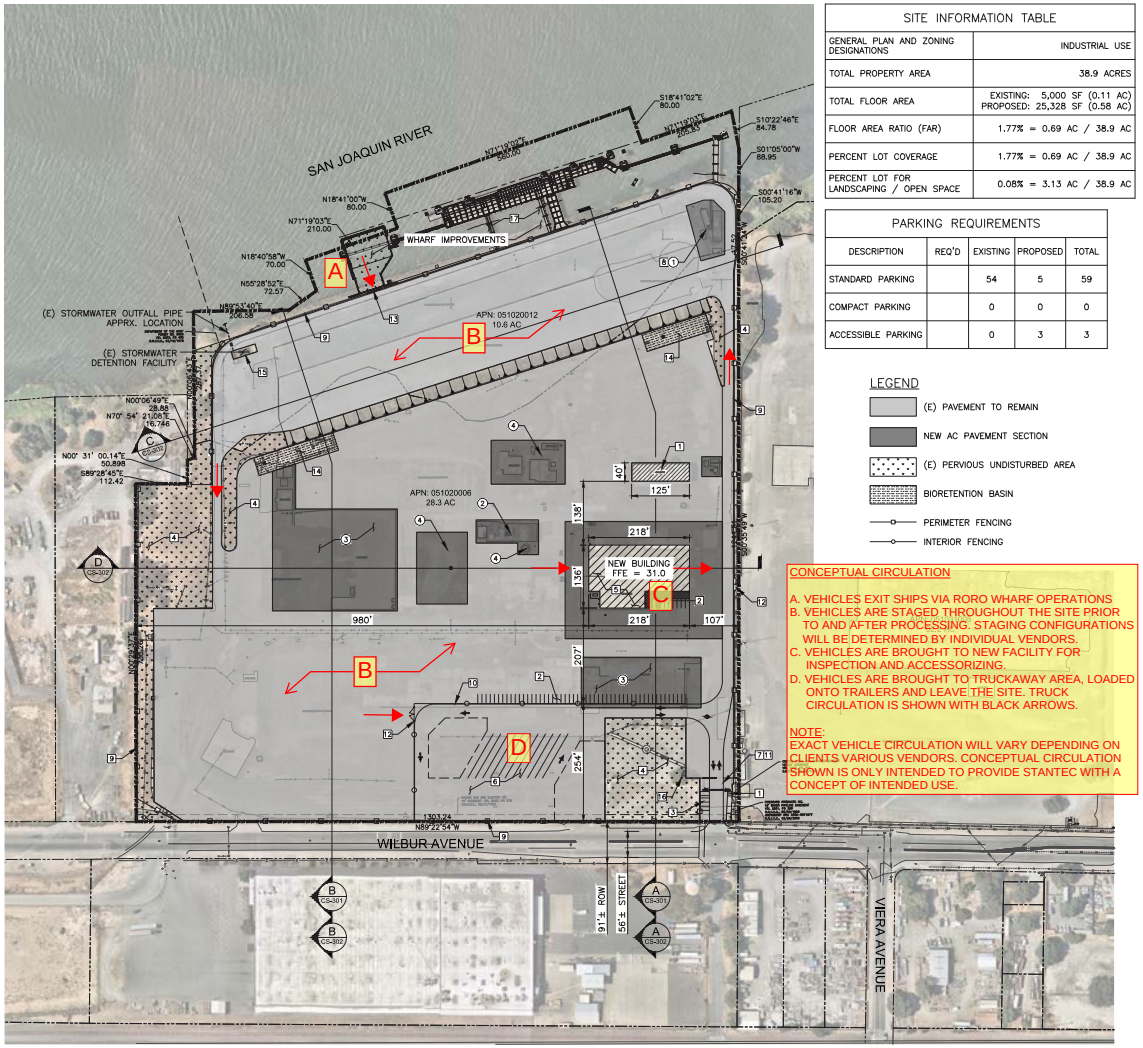

SITE INFORMATION TABLE	
GENERAL PLAN AND ZONING DESIGNATIONS	INDUSTRIAL USE
TOTAL PROPERTY AREA	38.9 ACRES
TOTAL FLOOR AREA	EXISTING: 5,000 SF (0.11 AC) PROPOSED: 25,328 SF (0.58 AC)
FLOOR AREA RATIO (FAR)	1.77% = 0.69 AC / 38.9 AC
PERCENT LOT COVERAGE	1.77% = 0.69 AC / 38.9 AC
PERCENT LOT FOR LANDSCAPING / OPEN SPACE	0.08% = 3.13 AC / 38.9 AC

PARKING REQUIREMENTS				
DESCRIPTION	REQ'D	EXISTING	PROPOSED	TOTAL
STANDARD PARKING		54	5	59
COMPACT PARKING		0	0	0
ACCESSIBLE PARKING		0	3	3

LEGEND

- (E) PAVEMENT TO REMAIN
- NEW AC PAVEMENT SECTION
- (E) PERVIOUS UNDISTURBED AREA
- BIORETENTION BASIN
- PERIMETER FENCING
- INTERIOR FENCING

Source: COWI, April 2021

Project Location
Antioch, California

Client/Project
City of Antioch
Amports Antioch Vehicle Processing Facility Project

Figure No.
8

Title
Conceptual Site Circulation Plan

Stantec

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It should be noted that the overall circulation of the project site is conceptual and would be finalized once a vendor for the site is determined.

The southwestern portion of the project site is also bisected by a rail spur. The rail spur is inactive and is no longer connected to the main BNSF rail line located to the south. The proposed project would not use the inactive rail spur or provide rail car access to the site. The rail spur would be paved over for worker safety.

2.1.5 Facility Operation

The proposed project would likely have an average of 30 daily employees onsite. However, on days when vessels would arrive to the project site it is estimated there would be 35 temporary stevedores present onsite to unload the automobiles. As such, it is estimated the proposed project would generate up to 65 peak employees on days when vessels would arrive to the site. It is anticipated that the proposed facility would operate Monday through Friday from 7:00 AM to 4:00 PM. The vehicle processing employees and temporary stevedores would typically be onsite from 7:00 AM to 3:30 PM. Additionally, the trucks would typically arrive to the project site Monday through Friday from 8:00 AM to 4:00 PM to transport the automobiles off-site. The proposed facility is not anticipated to operate during weekends; however, it is possible that a vessel could arrive on a Saturday or Sunday due to tidal influences or shipping schedules.

It is anticipated that up to 25 vessels would arrive per year to off-load automobiles at the project site. Each vessel would off-load approximately 1,200 to 1,500 automobiles, resulting in approximately 30,000 automobiles off-loaded per year. Two tugboats per ocean going vessel will be used to help guide the vessels to dock. Process time to off-load and stage the automobiles is estimated to take 4 to 6.5 hours. Depending on the arrival time of the vessel and tidal conditions, the vessel may dock overnight at the facility before departing the following day.

Once the automobiles are off-loaded and staged onsite, trucks would transport the automobiles off-site to dealerships in the San Francisco Bay Area. The trucks would have capacity to hold 9 to 10 automobiles. It is anticipated that 10 to 12 trucks would arrive at the project site per day to transport the automobiles, which would result in approximately 3,000 to 3,800 truck per year.

2.2 PROJECT CONSTRUCTION

2.2.1 Construction Schedule

As shown in Tables 2.2-1 and 2.2-2, construction of the proposed land and wharf improvements would occur concurrently starting in September 2021 and ending in September 2022. Construction of the proposed land improvements is anticipated to take approximately 10 months starting in December 2021 and ending in September 2022. The proposed wharf improvements are anticipated to take approximately 8 months starting in September 2021 and ending in April 2022. As shown in the tables below, the construction tasks for the proposed land and wharf improvements would generally occur sequentially but may also overlap.

Table 2.2-1: Project Construction Schedule – Land Improvements

Construction Task	Start Date	End Date	Workdays
Mobilization	12/16/2021	12/22/2021	5
Erosion Control	12/23/2021	12/29/2021	5
Demolition	12/30/2021	1/5/2022	5
Utilities Underground Construction (Water, Electrical, Sanitary Sewer, Storm Drain)[1]	1/6/2022	3/30/2022	60
Construct Building Foundations (Spread Footings)	3/31/2022	6/1/2022	45
Erect Pre-Engineered Metal Building	6/10/2022	7/7/2022	20
Site Paving	3/31/2022	6/22/2022	60
Erect Light Poles	3/31/2022	4/27/2022	20
Building Interior Construction	7/8/2022	8/4/2022	20
Building Finishes	8/5/2022	9/1/2022	20
Final Completion	9/2/2022	9/8/2022	5

Notes:

1. The City determined a new sewer main would be needed to serve the project. This was assumed to occur during the utilities phase but accounted for separately.

Table 2.2-2: Project Construction Schedule – Wharf Improvements

Construction Task	Start Date	End Date	Workdays
Mobilization (Place Barge)	9/3/2021	9/3/2021	1
Pile Driving	9/6/2021	11/30/2021	62
Deck Construction Demolition	9/3/2021	9/7/2021	3
New Deck Construction	11/3/2021	2/8/2022	70
Fenders, Wharf Appurtenances, Utilities	11/30/2021	3/15/2022	76
Mobilization (Remove Barge)	3/15/2022	3/15/2022	1
Final Completion	3/30/2022	4/12/2022	10

Project construction hours would be in accordance with the City of Antioch noise ordinance, which limits activity during the hours specified below:

1. On weekdays prior to 7:00 AM and after 6:00 PM
2. On weekdays within 300 feet of occupied dwellings prior to 8:00 AM and after 5:00 PM
3. On weekends and holidays prior to 9:00 AM and after 5:00 PM, irrespective of the distance from the occupied dwellings

There would be an average of 24 temporary onsite workers during construction. It is anticipated that the construction workforce would be available from nearby areas.

2.2.2 Construction Equipment, Access, and Staging Areas

The project site would be accessed by construction crews from SR-160 and Wilbur Avenue. All construction materials and equipment would be staged onsite. Construction activities would generally be anticipated to occur within the project site; however, work may extend into Wilbur Avenue to connect to existing utility lines, construct the new sewer line connection, and other necessary improvements. Any 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 for each phase is listed in Tables 2.2-3 and 2.2-4. No pile driving would be needed for the proposed land improvements; however, it would be needed for the proposed wharf improvements. Pile driving for the proposed wharf

improvements is expected to take 30 days and would not occur until after the concrete deck has been constructed. It is anticipated that a vibratory hammer and a diesel impact hammer would be required to drive the 72-inch piles.

Table 2.2-3: Project Construction Equipment – Land Improvements

Phase Name	Equipment Type	# of Equipment	Usage (hours/day)	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	2	6	40	0.73
	Excavators	1	6	162	0.38
	Rubber Tired Dozers	1	6	247	0.40
	Tractors/Loaders/Backhoes	2	6	97	0.37
Utilities Underground Construction (Water, Electrical, Sanitary Sewer, Storm Drain)	Tractors/Loaders/Backhoes	2	6	97	0.37
	Excavators	1	6	162	0.38
	Rollers	1	6	80	0.38
	Plate Compactors	1	6	8	0.43
Construct Building Foundations (Spread Footings)	Tractors/Loaders/Backhoes	2	6	97	0.37
	Excavators	1	6	162	0.38
	Rollers	1	6	80	0.38
Erect Pre-Engineered Metal Building	Crane	1	6	226	0.29
	Forklifts	2	6	89	0.20
	Generator Sets	2	6	84	0.74
	Tractors/Loaders/Backhoes	2	6	97	0.37
	Welders	3	6	46	0.45
Site Paving	Asphalt Cold Planers	2	6	225	0.78
	Asphalt Paver	2	6	130	0.36
	Rollers	2	6	80	0.38
	Tractors/Loaders/Backhoes	2	6	97	0.37
Erect Light Poles	Crane	1	6	226	0.29
Building Interior Construction	Aerial Lift	1	6	62	0.31
	Forklift	1	6	89	0.20
Building Finishes	Aerial Lift	1	6	62	0.31
	Forklift	1	6	89	0.20

As shown in Table 2.2-4, the proposed wharf improvements would require the use of two tugboats, which would position a derrick barge and materials barge and materials barge adjacent to the existing wharf. A derrick barge is a non-motorized, flat-bottomed boat of approximately 7,200 square feet and would be fitted with a crane to use during pile driving and construction of the new deck. A materials barge is also a non-motorized, flat-bottomed boat of approximately 9,000 square feet and would be used to store construction materials. The derrick barge would require anchoring to the riverbed. The project contractor would place anchors at strategic locations to reposition the barges by using on-board winches and cables to the anchors, so that anchors would not be relocated for every move. Spud piles would also be used to fix the barge position for driving piles in the correct location. As part of project construction, the project contractor would determine the locations of anchorage points and as part of the Lake and Streambed Alteration Agreement would coordinate with the California Department of Fish and Wildlife to verify that the identified locations would be protective of any potential sensitive resources. A copy of the Lake and Streambed Alteration Agreement would be provided to the California State Lands Commission. As part of project construction, the project contractor would determine the locations of anchorage points and would coordinate with the California State Lands Commission to verify that the identified locations would be protective of any potential sensitive resources.

Once construction of the proposed wharf improvements is complete, the two tugboats would return to the site to remove the barges.

Table 2.2-4: Project Construction Equipment – Wharf Improvements

Phase Name	Equipment Type	# of Equipment	Usage (hours/day)	Horsepower	Load Factor
Mobilization[1]	Tugboats (place barges)	2	8	1200	0.45
	Tugboats (remove barges)	2	8	1200	0.45
Pile Driving	Derrick Barge	1	2	500	0.43
	Vibratory Hammer	1	5	1050	0.6
	Impact Hammer	1	3	300	0.6
Deck Construction	Derrick Barge (demo)	1	8	500	0.43
	Derrick Barge (new deck construction)	1	6	500	0.43

Phase Name	Equipment Type	# of Equipment	Usage (hours/day)	Horsepower	Load Factor
Fenders, Wharf Appurtenances, Utilities	Derrick Barge (new deck construction)	1	4	500	0.43

Notes:

[1] Tugboats would come to place barges and then return to remove the barges once construction is complete.

2.2.3 Construction Activities

Construction activities associated with the proposed land improvements would include site clearing, grading, utility connections, building construction, and site paving. The land improvements would disturb approximately 7.2 acres, including up to approximately 0.72 acres for the proposed sewer main improvements. Preliminary grading estimates proposed the land improvements would require approximately 6,660 cubic yards of cut and approximately 4,110 cubic yards of fill, resulting in a net cut of 2,550 cubic yards. However, the proposed project would aim to balance the earthwork on the site.

The proposed wharf improvements would disturb approximately 0.005 acres for the in-water improvements and approximately 0.2 acres for the over-water improvements. The proposed wharf improvements would involve no export and no imported filled.

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 would require mitigation to reduce the impact from "Potentially Significant" to "Less Than Significant" as indicated by the checklist on the following pages.

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

Evaluation of Environmental Impacts

This section presents the environmental checklist form found in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the 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.

Less Than Significant with Mitigation Incorporated: This designation applies when applicable and feasible mitigation measures 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 IS/MND.

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

No Impact: The proposed project would have no impact. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources that a Lead Agency cites following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis)**.**

DETERMINATION

On the basis of this IS/MND:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that are significant and unavoidable.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Zoe Merideth
Associate Planner, City of Antioch

07/01/21
Date

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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

The proposed project is located on an approximately 38.9-acre vacant site in the northeast portion of the City. It is in an industrial area adjacent to the San Joaquin River and approximately 1.3 miles west of SR-160. The project site is currently developed with a one-story metal warehouse building, paved parking areas, and a security guard station. The project site also has access to an approximately 770-foot-long wharf, of which the main portion is approximately 422 feet in length and approximately 15 feet in height above the mean low water level. The existing wharf is situated approximately 60 feet from the southern bank of the San Joaquin River.

The project site is bordered by industrial uses to the east and west; the San Joaquin River to the north; and Wilbur Avenue to the south. Other land uses include industrial and commercial uses to the south, beyond which consists of single-family residences and agricultural lands. Mount Diablo is approximately 12 miles southwest of the project site. Views of Mount Diablo, the ridgelines, and the San Joaquin River are important resources to the City. Some historic and panoramic views of Mount Diablo and the ridgelines that were once visible from roads and neighborhoods located at a distance from these features have now been obstructed due to new developments south of SR 4, specifically those built on or near the ridgelines (City of Antioch 2003a). Additionally, the General Plan designates the San Joaquin River, the Antioch Bridge (approximately 1.3 miles to the northeast), and Mount Diablo as prominent natural landmarks. The City

does not contain any officially designated scenic corridors or highways (City of Antioch 2003a). The segment of SR-160 that extends north from the Contra Costa County and Sacramento County border is the nearest officially designated state scenic highway and located approximately 1.3 miles northeast of the project site (Caltrans 2020).

3.1.2 Methodology

Analysis of the proposed 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 existing visual quality of the affected environment; specific changes to the visual character and quality of the affected environment resulting from implementation of the proposed project; 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, their activities, and the extent to which these activities are related to the aesthetic qualities that would be affected by implementation of the proposed project. The existing setting was based on a review of documents pertaining to the project site including the General Plan.

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

There are no designated scenic vistas in the project vicinity; however, the City's General Plan considers views of the San Joaquin River and Mount Diablo as important scenic resources (City of Antioch 2003b). The project site is within the City's Eastern Waterfront Employment Focus Area, an urbanized area that has been developed primarily with industrial and commercial uses. The project site is adjacent to the San Joaquin River and approximately 12 miles northeast of Mount Diablo. In this part of the City, views of Mount Diablo and the San Joaquin River are mostly blocked by surrounding development, electrical infrastructure, and vegetation. The proposed project would construct a pre-engineered one-story vehicle processing building with a maximum height of 24 feet and 3 inches. The proposed vehicle processing building would be similar in height as the existing onsite warehouse building and would be consistent with the development standards for the Heavy Industrial (M-2) zoning district,

which allows buildings up to 70 feet tall. The project site is also located north of Wilbur Avenue and construction of the vehicle processing building would not further obstruct southwestern views of Mount Diablo as compared to existing conditions.

The proposed project would also involve improvements to the existing wharf structure located on the southern bank of the San Joaquin River. The existing wharf structure does not provide public access to the San Joaquin River. Furthermore, it is approximately 15 feet tall and due to distance, topography, and the surrounding development and vegetation it is not visible to viewers from Wilbur Avenue. The wharf would primarily occur within its existing footprint and the maximum height would remain 15 feet. During operation, 25 vessels would arrive per year to unload automobiles at the project site. The vessels would be intermittently visible to southbound drivers on SR-160 while crossing the Antioch Bridge. However, as SR-160/Antioch Bridge provides viewers with an elevated view of the surrounding area, the vessels would not obstruct southwestern views of Mount Diablo. The San Joaquin River is also currently used by other vessels and the presence of 25 vessels per year as a result of the project would not substantially alter existing views toward Mount Diablo or the San Joaquin River. Therefore, the proposed project would have a less than significant impact on scenic vistas.

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 designated state scenic highways in the City of Antioch. The closest officially state designated scenic highway is a segment of SR-160 located in Sacramento County, approximately 1.3 miles northeast of the project site (Caltrans 2020). The project site is mostly paved and developed with a one-story metal warehouse building and security guard station. It does not contain vegetation, rock

outcroppings, or historic buildings that are identified as scenic resources by the City's General Plan.

As discussed in Impact AES-1, southbound viewers driving on the designated segment of SR-160 would have intermittent views of the existing wharf structure at the project site. The wharf would primarily occur within its existing footprint and the maximum height would remain 15 feet. Operation of the proposed project would result in 25 vessels per year docking at the wharf structure to unload automobiles at the project site. The vessels would be intermittently visible to viewers travelling south on SR-160; however, the San Joaquin River is currently used by other vessels and the presence of 25 vessels per year as a result of the project would not substantially alter existing views from SR-160. Therefore, the proposed project would not damage scenic resources within a state scenic highway 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-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 is located within an urbanized area in the northeastern portion of the City, which predominately consists of industrial and commercial uses. The project site is bordered by industrial uses to the west and east; the San Joaquin River to the north; and Wilbur Avenue to the south. The project site is primarily paved for vehicle parking and is developed with a one-story metal warehouse building, and a security guard station. It is also connected to an existing wharf located approximately 60 feet from the southern bank of the San Joaquin River.

During construction, heavy equipment would be present on the site and tugboats, a derrick barge, and a materials barge would be located off the wharf. Although the

presence of construction equipment and barges would alter the existing character and quality of the site, construction activities would be temporary in nature and would not result in a permanent change in the visual character or quality of the site. Therefore, impacts due to construction activities would be less than significant.

Operation of the proposed project would result in the construction of an automotive logistics and processing facility that includes a vehicle processing building, utility improvements, and improvements to the existing wharf structure. The proposed vehicle processing building would be one-story tall with a maximum height of 24 feet and 3 inches. The building would be approximately 25,328 square feet and include an open bay for six vehicle processing lanes, as well as administration offices, a conference room, restrooms, a break room, and storage areas. Each vehicle processing bay would be secured with a metal coiling door. The building would consist of gray color exterior wall panels, white color roof panels and doors, and blue accent color gutters and trim. The proposed vehicle processing building would appear consistent with the surrounding industrial development in this part of the City. Furthermore, the vehicle processing building would be consistent with the height requirements for the Heavy Industrial (M-2) zoning district, which allows buildings up to 70 feet tall. The landside improvements would be subject to the City's design review process in accordance with Section 9-5.2607 of the Antioch Municipal Code. Compliance with the City's design review process would ensure that the landside improvements are compatible with the surrounding land uses.

Upgrades to the existing wharf structure would include the demolition of treated timber structures such as wooden piles and planking, concrete repair, installation of new steel and concrete piles, concrete deck installation, new walkways, installation of new breasting and mooring dolphins, and construction of a stern ramp to roll-on/roll-off new automobiles (see Section 2.1.2, Wharf Improvements). The proposed wharf structure would be approximately 31,240 square feet and primarily occur within the wharf's existing footprint, except for the new stern ramp that would be constructed from the wharf to the shoreline to support loading and unloading operations. Additionally, the overall length of the wharf structure would increase by approximately 19 feet due to the installation of mooring dolphin 5.

The proposed project would result in 25 vessels per year docking at the wharf structure to unload automobiles at the project site. While the proposed project would activate the existing wharf, the presence of vessels would not be uncommon as the San Joaquin River is currently used by other vessels. The presence of vessels at the project site would also be intermittent as the proposed project would result in 25 vessels per year.

Therefore, the proposed project would not degrade the existing visual character or quality at the site or its surroundings and would not conflict with applicable zoning and regulations governing scenic quality. 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 developed and contains onsite security lighting for the existing warehouse building and surface parking areas. Areas adjacent to the project site also contain multiple sources of lighting that are typical of developed areas. Sources of nighttime lighting include exterior security lighting on the nearby commercial buildings, lighting associated with the industrial facilities east and west of the project site, and headlights from vehicles driving along Wilbur Avenue. Glare is also generated in the project area from parked and 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. Operation of the proposed project would provide new exterior lighting throughout the project site to illuminate the automobile parking areas and wharf structure. The parking lot lighting would consist of 27 pole lighting fixtures approximately 50 feet in height and 38 wall mounted lights ranging from 10 to 30 feet in height. The wall mounted lights would be placed over vehicle and pedestrian areas. Lighting provided near the wharf would be amber color for waterfront use. All lighting associated with the landside improvements would be shielded and directed away from adjacent streets and properties in accordance with Section 9-5.1715 of the Antioch Municipal Code. The landside lighting improvements would also be subject to the City's Design Review process to ensure that light and glare created by the proposed project would not affect day- or nighttime views in the area.

Vehicle headlights and vessel lighting would be a secondary source of light in the early morning, at night, and during inclement weather. It is anticipated that the proposed facility would operate Monday through Friday from 7:00 AM to 4:00PM. The proposed facility is not anticipated to operate during weekends; however, it is possible that a vessel could arrive on a Saturday or Sunday due to tidal influences or shipping schedules. The introduction of new operational light sources to the site at night and early morning would incrementally add to background light levels currently present as a result of the existing and surrounding industrial development. Additionally, all lighting generated by the vessels would be intermittent and comparable to lighting created by other existing vessels that currently use the San Joaquin River. As such, the proposed project would not introduce new sources 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 an industrial part of the City, adjacent to the San Joaquin River. It is primarily paved for surface parking and developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. The project site is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River.

The California Department of Conservation's (DOC) Important Farmland map classifies the project site as Urban and Built-Up land (DOC 2021). The DOC defines Urban and Built-Up Land as land that is used for residential, industrial, commercial, construction, institutional, public administrative purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes.

The project site is designated General Industrial by the General Plan and zoned Heavy Industrial (M-2). According to the City's General Plan EIR, the lands planned for development do not include prime farmland, important agricultural resources, or forest land (City of Antioch 2003b). Additionally, there are no lands planned for development that are contracted under the Williamson Act (City of Antioch 2003b).

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's Important Farmland 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 primarily paved and developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. It is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. According to the DOC's Important Farmland map, the project site is classified as "Urban and Built-Up Land" and does 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
According to the City's General Plan EIR, the lands planned for development by the General Plan do not contain any land zoned for agriculture or land subject to a Williamson Act contract (City of Antioch 2003b). The project site is zoned Heavy Industrial and does not permit agricultural uses. 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. The project site is primarily paved and developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. It does not contain any forestry resources, timberland production zones, or active timberland uses, and does not meet the definition of "forest land" as defined by PRC Section 12220(g). Furthermore, the project site is zoned Heavy Industrial (M-2), which does not permit agriculture or timberland production uses. The proposed project would have no impact on forestland, timberland, or timberland zoned Timberland Production.

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
The General Plan does not identify any forestry resources, timberland resource zones, or active timberland production within or adjacent to the project site, and the project site does not meet the definition of "forest land" as defined by PRC Section 12220(g). As such, the proposed project would not result in the loss of forestland 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 primarily paved and developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. It is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. The project site does not contain agricultural resources, forestland, or timberland resources (DOC 2021; City of Antioch 2003b). None of the properties adjacent to the project site contain forestland, timberland resources, or agricultural land. As such, the proposed project would not involve other changes 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.

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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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
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

The City of Antioch is in Contra Costa County, which is within the boundaries of the San Francisco Bay Area Air Basin (Air Basin) and under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and the California Air Resources Board (CARB).

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 (NO_x), 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 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.

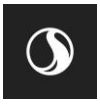


Table 3.3-1: California and National Ambient Air Quality Standards

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
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	—	—

Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
	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 CARB 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 Contra Costa 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, NO_x, 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 NO_x—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 (BAAQMD 2017a).

Table 3.3-2: Contra Costa 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
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	Attainment	—
Lead	Attainment	Unclassified/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

California Air Resources Board

The CARB has adopted numerous regulatory measures to address emissions from on-road mobiles, and ocean-going and harbor craft vessels. The following is a summary of measures that would be applicable to the proposed project.

Truck and Bus Regulation — CARB On-road Heavy Duty Diesel Vehicles (In-Use) Regulation

In April 2014, CARB amended the 2008 Statewide Truck and Bus Regulation to modernize in-use heavy-duty vehicles operating throughout the state. Under this regulation, existing heavy-duty trucks are required to be replaced with trucks meeting the latest NO_x and particulate matter (PM) Best Available Control Technology (BACT) or retrofitted to meet these levels.

Trucks with a gross vehicle weight rating greater than 14,000 pounds and less than 26,000 pounds are required to replace engines with 2010 engines or newer engines, or equivalent, by January 2023. Trucks with a gross vehicle weight rating greater than 26,000 pounds must meet PM BACT and upgrade to a 2010 or newer model year engine pursuant to the compliance schedule set forth by the rule. By January 1, 2023,

all model year 2007 class 8 drayage trucks are required to meet NO_x and PM BACT (e.g., USEPA 2010 and new standards) (CARB 2014).

Drayage Truck Regulation

CARB adopted the drayage truck regulation in December 2007 to modernize the class 8 drayage truck fleet (e.g., trucks with a gross vehicle weight rating greater than 33,000 pounds) in use at California's ports. Emergency vehicles and yard trucks are exempted from this regulation.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs, including diesel particulate matter (DPM), and has adopted USEPA's list of Hazardous Air Pollutants as TACs.

Once a TAC is identified, CARB adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the source must incorporate best available control technology for toxics to minimize emissions.

CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Recent milestones included the low-sulfur diesel fuel requirement and stricter emissions standards for heavy-duty diesel trucks (effective in 2007 and subsequent model years) and off-road diesel equipment (2011). Over time, replacing older vehicles would result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1,3-butadiene, DPM) in California have been reduced substantially over the last decade; such emissions will be reduced further through a progression of regulatory measures (e.g., low-emission vehicles, clean fuels, and Phase II reformulated-gasoline regulations) and control technologies.

At-Berth Regulations

Since 2014, emissions from container, refrigerated cargo (reefer), and cruise vessels have been controlled at berth through CARB's Existing at Berth Regulation. CARB's existing regulation has resulted in a reduction of 80 percent of emissions from those vessel types (approximately 13,000 vessel visits since 2014). However, additional reductions are needed to further protect public health and the environment in disproportionately impacted port and Environmental Justice communities. CARB amended the At-Berth regulations in August 2020. The rule builds on progress achieved by the groundbreaking At-Berth Regulation adopted in 2007. The updated rule will apply to new vessel categories, such as roll-on/roll-off (auto carriers) and tanker vessels, and will require those vessels to control pollution when they run auxiliary engines or auxiliary boilers (for most tanker vessels) while docked. These auxiliary engines power the electricity and other onboard operations during a vessel's visit, which can run from less than one day to several days.

Commercial Harbor Craft Regulation

The Commercial Harbor Craft (CHC) Regulation was adopted in 2007 to reduce toxic and criteria emissions to protect public health. It was then amended in 2010 and will be fully implemented by the end of 2022. CARB is currently developing additional amendments to the CHC regulation.

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. BAAQMD has developed the *CEQA Air Quality Guidelines* to help public agencies evaluate air quality impacts (BAAQMD 2017c). 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)	
GHGs (stationary source project)	None	10,000 $MTCO_2e/yr$	

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
NO_x = 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

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 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 BAAQMD in accordance with the procedures detailed in the BAAQMD Asbestos ATCM Inspection Guidelines Policies and Procedures.

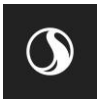
City of Antioch

As a component of the 2003 General Plan, the City has adopted policies to minimize air pollutant emissions within the City's Planning Area. The following policies are applicable to the proposed project:

10.6.2 Air Quality Policies

Construction Emissions

a) *Require development projects to minimize the generation of particulate emissions during construction through implementation of the dust abatement actions outlined in the CEQA Handbook of the Bay Area Air Quality Management District.*



Mobile Emissions

a) Require developers of large residential and non-residential projects to participate in programs and to take measures to improve traffic flow and/or reduce vehicle trips resulting in decreased vehicular emissions.

b) Budget for the purchase of clean fuel vehicles, including electrical and hybrid vehicles where appropriate, and if feasible, purchasing natural gas vehicles as diesel vehicles are replaced.

c) Support and facilitate employer-based trip reduction programs by recognizing such programs in environmental mitigation measures for traffic and air quality impacts where the ongoing implementation can be ensured, and their effectiveness can be monitored.

Stationary Sources

a) As part of the development review process for non-residential development, require the incorporation of best available technologies to mitigate air quality impacts.

b) Provide physical separation between (1) proposed new industries having the potential for emitting toxic air contaminants and (2) existing and proposed sensitive receptors (e.g., residential areas, schools, and hospitals).

3.3.2 Methodology

Construction and operational emissions for the proposed project were modeled using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. Vessel emissions were calculated and provided by Environmental Science Associates (ESA). For detailed information on the assumptions please refer to Appendix A.

3.3.3 Environmental Impact Analysis

This section discusses potential impacts on 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, BAAQMD does not provide a threshold of significance for project-level consistency analysis. Therefore, the following criteria will be used for determining the 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

As discussed in impact discussions AIR-2 below, the proposed project would significantly contribute to cumulative nonattainment pollutant violations because of its exceedance of BAAQMD's annual and daily NO_X threshold of significance even with implementation of Mitigation Measures AIR-1 and AIR-2. Mitigation Measure AIR-3 would reduce annual and daily NO_X emissions to below the BAAQMD thresholds of significance. The proposed project would not expose sensitive receptors to substantial pollutant concentrations (Impact AIR-3), or create objectionable odors affecting a substantial number of people (Impact AIR-4). Therefore, the proposed project would be consistent with criterion 1 with incorporation of Mitigation Measures AIR-1, AIR-2, and AIR-3.

Criterion 2

The 2017 Clean Air Plan contains 85 control measures aimed at reducing air and climate pollutants in the Bay Area. For purposes of consistency with climate planning efforts at the state level, the control strategy in the Clean Air Plan is based upon the same economic sector framework used by the CARB for its 2014 update to the AB 32, Scoping Plan. 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 three transportation control measures would be applicable. The project's potential to implement the measure or impede implementation is assessed in Table 3.3-4.

Table 3.3-4: Applicable Transportation Control Measures

Transportation Control Measure	Description	Included in the Project/Hinder Implementation
TR19: Medium and Heavy Duty Trucks	Directly provide, and encourage other organizations to provide, incentives for the purchase of 1) new trucks with engines that exceed ARB's 2010 NO_x emission standards for heavy-duty engines, 2) new hybrid trucks, and 3) new zero-emission trucks. The Air District will work with truck owners, industry, ARB, the California Energy Commission, and others to demonstrate additional battery-electric and hydrogen fuel cell zero-emission trucks.	The proposed project does not have the ability to control the trucks accessing the project site; therefore, it would not be able to directly implement this measure. The proposed project would not impede BAAQMD's and CARB's ability to develop new technologies and incentivize truck vehicle fleets to implement said technologies.
TR20: Ocean Going Vessels	Replicate the Green Ship Program that has been implemented at the ports of Los Angeles and Long Beach. Financial incentives for cleaner Tier 2 and Tier 3 oceangoing vessels to call at the ports serve as the basis of the Program. The Program was initiated as part of the San Pedro Bay Ports Clean Air Action Plan. This measure also recognizes the need to monitor progress under such programs and augment them as necessary to ensure sufficient results.	The proposed project does not have the ability to control the auto carriers transporting vehicles to the project site. The proposed project would not impede implementation of the Green Ship Program. Mitigation Measure AIR-2 would implement an emission reduction measure prior to regulatory requirement dates.
TR21: Commercial Harbor Craft	Focus on assisting fleets to achieve early compliance with	The proposed project does not have the ability to control the tugs that

Transportation Control Measure	Description	Included in the Project/Hinder Implementation
	the CARB harbor craft air toxic control measure and supporting research efforts to develop and deploy more efficient engines and cleaner, renewable fuels for harbor craft.	would provide assistance to the marine vessels accessing the project site. The proposed project would not impede implementation of CARB's control measures.

Source: BAAQMD, Clean Air Plan 2017

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.

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. The proposed project would not impede the applicable AQP control measures and would not result in an exceedance of the annual and daily NO_X thresholds of significance with implementation of Mitigation Measures AIR-1, AIR-2, and AIR-3.

Conclusion

The proposed project would be inconsistent with the criteria of the AQP without mitigation. As such, the impact is potentially significant. With the implementation of mitigation, the 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 BAAQMD to reduce fugitive dust emissions. Emission reduction measures will include, at a

minimum, the following measures. Additional measures may be identified by the BAAQMD or contractor as appropriate:

a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day;

b) All haul trucks transporting soil, sand, or other loose material off-site will be covered;

c) All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;

d) All vehicle speeds on unpaved roads will be limited to 15 miles per hour;

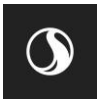
e) All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.

f) 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.

g) 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.

h) Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person will respond and take corrective action within 48 hours. The BAAQMD's phone number will also be visible to ensure compliance with applicable regulations.

MM AIR-2 **Implement Early CARB At-Berth Regulations.** The Applicant shall provide either shore power or a CARB-approved control technology to auto carrier vessels docking at port to reduce NO_X emissions. Alternatives to shore power may include what is known as capture-and-control technology that employs a "bonnet" to cover a ship's exhaust stacks, both containing and treating harmful emissions. The Applicant shall notify the City's Community Development Department which compliance mechanism they have selected prior to issuance of a grading permit.



MM AIR-3 **Reduce Annual Vessel Calls, Provide Emissions Offsets, or Otherwise Demonstrate a Reduction in Emissions.** To reduce operation phase NO_X emissions to below the BAAQMD annual and daily mass emissions thresholds, the Applicant shall limit vessel calls to no more than eight (8) vessel calls per year; or incorporate additional emission reduction measures which may include but are not limited to the following:

- Secure and surrender NO_X emissions offsets for NO_X emissions over the BAAQMD threshold of significance; or,
- Truck fleet electrification
- Truck fleet alternative fuels (natural gas, hydrogen, etc.)
- Truck model year restrictions, e.g., 2018 or newer
- Truck idling restrictions

The Applicant shall be responsible for the preparation of documentation demonstrating revised operational characteristics are below BAAQMD annual and daily mass thresholds of significance for NO_x and shall also be responsible for a third-party verification on behalf of the City, if required by the City's Planning Manager.

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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

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 Emission

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 minimal fugitive dust (due to the developed nature of the project site). These construction emissions would include criteria air pollutants from the operation of heavy construction equipment.

Construction of the proposed project would be completed in two distinct phases for the landside and wharfside improvements as shown in Tables 2.1-1 through 2.2-2 in Chapter 2.0, Project Description. Construction of both phases of improvements would require approximately 210 workdays.

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 3.3-5 provides the construction emissions estimate for the proposed project.

Table 3.3-5: Annual Construction Emissions

Year	ROG	NO_X	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
2021	0.25	1.67	0.06	0.05
2022	0.36	2.64	0.10	0.10
Total Tons	0.60	4.32	0.16	0.16
Total Pounds	1,202.98	8,633.05	315.96	303.96
Average Daily Construction Emissions in Pounds	5.73	41.11	1.50	1.45
BAAQMD Threshold of Significance (average pounds/day)	54	54	82	54
Significant?	**No**	**No**	**No**	**No**

As shown in Table 3.3-5, the construction emissions are well below the recommended thresholds of significance. However, the proposed project would implement Mitigation

Measure AIR-1, as recommended by the BAAQMD to reduce potential fugitive dust impacts. Therefore, the emissions from project construction would be less than significant with mitigation incorporated.

Operational Emissions

As previously discussed, the pollutants of concern include ROG, NO_x, PM_{10}, and $PM_{2.5}$. The first full year of operational emissions in 2023 were used to assess potential impacts from project operations. The BAAQMD Criteria Air Pollutant Significance thresholds were used to determine impacts.

Operational emissions would occur over the lifetime of the proposed project and would be from mobile sources, with the ocean-going vessels (auto carrier vessels) and the harbor craft (tug assists) accounting for 90 percent of all operational emissions. The unmitigated emission estimates are presented in Table 3.3-6.

Table 3.3-6: Operational Annual Emissions for 2023 (Unmitigated)

Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
Area	0.22	0.00	0.00	0.00
Energy	0.00	0.03	0.00	0.00
Mobile – Employee Vehicles and Delivery Trucks	0.40	9.90	1.64	0.47
Auto Carrier Vessels	1.07	19.36	0.28	0.26
Tug Vessels	0.03	1.69	0.05	0.05
Total Project Annual Emissions	*1.72*	*30.98*	*1.97*	*0.78*
BAAQMD Threshold of Significance (tons per year)	10	10	15	10
Exceeds Significance Threshold?	**No**	**Yes**	**No**	**No**
Total Project Annual Emissions (Pounds)	3,440	61,960	3,940	1,560
Total Project Average Daily Emissions (pounds/day)	9.42	169.75	10.79	4.27

Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
BAAQMD Threshold of Significance (average pounds per day)	54	54	82	54
Exceeds Significance Threshold?	**No**	**Yes**	**No**	**No**

Notes:
NO_x = nitrogen oxide
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
ROG = reactive organic gas
Source: Appendix A

As shown in Table 3.3-6, the project exceeds the BAAQMD's threshold of significance for NO_X on an annual and daily basis. Therefore, the impact is potentially significant.

CARB At-Berth regulations amended in 2020 would require the use of shore power or a CARB-approved control technology to reduce harmful emissions. The regulation would be applicable to auto carriers in 2025. The Applicant would implement this regulatory measure upon full operations in 2023 pursuant to Mitigation Measure AIR-2. Mitigation Measure AIR-2 would reduce NO_X emissions by 12 percent; however, the total operational emissions would still exceed the BAAQMD annual and daily thresholds of significance. As shown in Table 3.3-7, implementation of Mitigation Measure AIR-3 would reduce NO_X emissions to below the BAAQMD annual and daily thresholds of significance.

Table 3.3-7: Operational Annual NO_X Emissions for 2023 with Eight Vessel Calls Per Year (Mitigated)

Source	NO_x
Area	0
Energy	0.01
Mobile – Employee Vehicles and Delivery Trucks	3.17
Auto Carrier Vessels of eight vessels as per Mitigation Measure AIR-3 with 12% Reduction in Hoteling Emissions as per Mitigation Measure AIR-2	6.12

Source	NO_x
Tug Vessels	0.54
Total Project Annual Emissions	*9.84*
BAAQMD Threshold of Significance (tons per year)	10
Exceeds Significance Threshold?	**No**
Total Project Annual Emissions (Pounds)	19,816.4
Total Project Average Daily Emissions (pounds/day)	53.91
BAAQMD Threshold of Significance (average pounds per day)	54
Exceeds Significance Threshold?	**No**

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures AIR-1, AIR-2, and AIR-3 are required.

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 construction-generated fugitive dust (PM_{10}), naturally occurring asbestos, construction-generated DPM, operational related TACs, or operational CO hotspots. 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 itself is not considered a sensitive receptor.

The closest sensitive receptors are the single-family residential homes at 1887-1957 Santa Fe Avenue, which are located across the railroad tracks from the project site, with the northern edge of the residential backyards approximately 100 feet from the southern edge of the project site. The existing warehouse building on the project site is located approximately 540 feet from the backyard edge of the single-family home at 1957 Santa Fe Avenue.

Construction Emissions

Fugitive Dust PM_{10}

As discussed in Impact AIR-2, minimal fugitive dust (PM_{10}) would be generated from site work and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the project site. The proposed project would implement Mitigation Measure AIR-1 requiring fugitive dust control measures that are consistent with best management practices (BMPs) established by the BAAQMD, to reduce the project's construction-generated fugitive dust impacts to a less than significant level.

Naturally Occurring Asbestos

Construction in areas of rock formations that contain naturally occurring asbestos could release asbestos into the air and pose a health hazard. As described in the Regulatory Setting, BAAQMD enforces CARB's ATCMs at sites that contain ultramafic rock. The ATCM for Construction, Grading, Quarrying and Surface Mining Operations was signed into state law on July 22, 2002, and became effective in the Air Basin in November 2002. The purpose of this regulation is to reduce public exposure to naturally occurring asbestos. A review of the map containing areas more likely to have rock formations containing naturally occurring asbestos in California indicates that there is no asbestos in the immediate project area (USGS 2011). Therefore, it can be reasonably concluded that the proposed project would not expose sensitive receptors to naturally occurring asbestos. Impacts would be less than significant.

Diesel Particulate Matter

Construction-related activities would result in temporary, short-term project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; application of architectural coatings; and other miscellaneous activities. For construction activity, DPM

is the primary air toxic of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by CARB in 1998.

The project site is located within 100 to 540 feet of existing sensitive receptors (residences located southeast of the project site) that could be exposed to diesel emission exhaust during the construction period. The wind direction in Antioch is primarily from the west/southwest to the north/northeast, which means that any potential emissions from construction would blow away from sensitive receptors. Given the distance to the nearest receptor, the predominant wind direction, and the temporary nature of construction, potential health risks would be less than significant.

Operational Emissions

Carbon Monoxide Hotspots

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 2017 Congestion Management Plan for Contra Costa County indicates that the construction and operation of the proposed project is consistent with the applicable congestion management plan. The proposed project would generate fewer than 50 peak hour trips and would not substantially increase traffic volumes on nearby roadways above 44,000 vehicles per hour (see level of service [LOS] Screening/vehicle miles traveled [VMT] Analysis provided in Appendix F). 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 Contaminant Emissions

To address potential risk and hazard impacts, the BAAQMD has developed individual project and cumulative thresholds of significance for air toxics evaluations (BAAQMD 2017c). The individual project thresholds are as follows:

- An increased cancer risk level of more than 10 in 1 million
- An increased non-cancer (chronic or acute) hazard index greater than 1.0
- An incremental increase of greater than 0.3 µg/m^3 annual average $PM_{2.5}$

The cumulative thresholds are as follows:

- A cancer risk level of more than 100 in 1 million from all local sources
- A chronic non-cancer hazard index greater than 10.0 from all local sources
- An annual average $PM_{2.5}$ concentration greater than 0.8 µg/m^3 from all local sources

The proposed project does not consist of the siting of new sensitive receptors. Employees are not considered sensitive receptors because visits to the work and commercial uses would be short-term in duration (compared to residential occupancy) and episodic. However, because there are sensitive receptors within 1,000 feet of the project site, the screening below was prepared to evaluate the project's potential to cause a health risk impact. CARB's land use handbook provides recommended distances for siting sensitive receptors; the project would involve the siting of a source of TACs from marine vessels and trucks. Although the project does include sources of TACs those emissions would not be substantial based on the screening analysis below.

Table 3.3-8 : Health Risk Assessment Screening

Source Category	Advisory Recommendation	Consistency Determination
Freeways and High-Traffic Roads	• Avoid siting sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.	**Consistent.** The proposed project is not considered a sensitive land use and SR-160 is located over 1 mile away from the project site.
Distribution Centers	• Avoid siting sensitive land uses within 1,000 feet of a distribution center (that	**Consistent**. The proposed project is not a sensitive receptor. The proposed project is not a

Source Category	Advisory Recommendation	Consistency Determination
	accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.	distribution center and would not have more than 100 trucks per day. Although residences would be located closer than 1,000 feet, the proposed project would not have a substantial number of truck trips on a daily basis. Additionally, the wind direction is predominantly from the west/southwest to the north/northeast away from the residences.
Rail Yards	• Avoid siting sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.	**Consistent.** The proposed project is not a sensitive receptor and does not involve any rail traffic.
Ports	• Consider limitations on the siting of sensitive land uses immediately downwind of ports in the most heavily impacted zones. • Consult with local air districts for the latest available data on health risks associated with port emissions.	**Consistent.** The proposed project would construct a new wharf, however as a single-use port the number of vessel trips is limited. Additionally, the wind direction is predominantly from the west/southwest to the north/northeast away from the residences.
Refineries	• Avoid siting sensitive land uses immediately downwind of petroleum refineries. • Work with local air districts to determine an appropriate separation.	**Consistent.** The proposed project is not a sensitive land use and does not include refinery uses.
Chrome Platers	• Avoid siting sensitive land uses within 1,000 feet of a chrome plater.	**Consistent.** The proposed project does not involve chrome plating.
Dry Cleaners Using Perchloroethylene	• Avoid siting sensitive land uses within 300 feet of any dry cleaning operation. For large operations with two or more machines, provide 500 feet.	**Consistent.** The proposed project is not a sensitive receptor and does not include dry cleaning uses.

Source Category	Advisory Recommendation	Consistency Determination
	• Do not site sensitive land uses in the same building with perc dry cleaning operations.	
Gasoline Dispensing Facilities	• Avoid siting sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas stations.	**Consistent.** The proposed project is not a sensitive receptor and does not include gasoline dispensing facilities.

Source: CARB, Land Use Handbook, 2005

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure AIR-1 is 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
As stated in the BAAQMD 2017 Air Quality Guidelines, odors are generally regarded as an annoyance rather than a health hazard, and the ability to detect odors varies considerably among the populations and overall is subjective.

BAAQMD does not have a recommended odor threshold for construction activities. However, BAAQMD recommends screening criteria that are based on distance between types of sources known to generate odor and the receptor. For projects within the screening distances, the BAAQMD has the following threshold for project operations:

- An odor source with five or more confirmed complaints per year averaged over 3 years is considered to have a significant impact on receptors within the screening distance shown in the BAAQMD's guidance (see Table 3.3-3).

The BAAQMD's 2017 Air Quality Guidelines provide a table with odor screening distances recommended by BAAQMD for a variety of land uses. Projects that would site an odor source or a receptor farther than the applicable screening distance, as shown in Table 3.3-9, would not likely result in a significant odor impact.

Table 3.3-9: Screening Levels for Potential Odor Sources

Odor Generator	Distance
Wastewater Treatment Facilities	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	1 mile

Source: BAAQMD 2017c

Construction

Diesel exhaust and ROGs would be emitted during construction of the proposed project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore not create objectionable odors affecting a substantial number of people. As such, construction odor impacts would be less than significant.

Operation

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project does not contain land uses typically associated with emitting objectionable odors. The project site

is in an industrial portion of the City, and the new auto import facility would be consistent with the zoning designation for the site. Therefore, the proposed project would result in a less than significant impact related to creating objectionable odors affecting a substantial number of people during operation. The potential for the proposed project to create objectionable odors affecting a substantial number of people during construction and operation would be considered 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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 project site is primarily covered by a large concrete pad where the existing paper mill was located. On the west side of the project area, a small strip of grassland occurs with minimal trees. There are no natural drainages on the property. The topography of the project area is mostly flat with a moderate rise from the lower concrete pad adjacent to the San Joaquin River to the southern, larger concrete pad. Elevations on the project site range from 0 feet above sea level at the north end along the San Joaquin River to 31 feet above sea level at the southern end, adjacent to Wilbur Avenue. Regionally, the

project area has a Mediterranean climate characterized by hot, dry summers and moderate winters, with average temperatures ranging seasonally from 73.3 to 48.0 degrees Fahrenheit (°F). Historical data used to describe the climate was collected at the Antioch Pumping Plant 3, California (ID 040232) National Oceanic and Atmospheric Administration (NOAA) Coop Station, approximately 2.6 miles southeast of the project area (Western Regional Climate Center 2021). Precipitation in the project area occurs as rain. Average annual rainfall is 13.22 inches and occurs primarily from October through May. The growing season (i.e., 50 percent probability of air temperature 32ºF or higher) in the project area is around 289 days and occurs between early February and November (NRCS 2021).

3.4.2 Methodology

This section is based on the Biological Constraints Analysis prepared by Stantec (Appendix B1). The Biological Constraints Analysis included a review of existing information about sensitive biological resources known to occur in the vicinity of the proposed project as well as the reconnaissance-level field survey conducted to determine whether the biological resources are absent, present, and/or are likely to be present.

For the purpose of this evaluation, “special-status” plant species include plants that are: 1) listed as threatened or endangered under the California Endangered Species Act (CESA) and/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 or 2B species. Special-status animal species include species that are: 1) listed as threatened or endangered under the CESA and/or FESA; 2) proposed for federal listing as threatened or endangered; 3) State and/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 of 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 – Ranks S1 to S3 or classified by CDFW in the CNDDB as rare natural communities.

The potential for special-status species to occur within the project area, was classified under one of five categories as described below. Only those special-status species with an occurrence potential of “Moderate” or greater are evaluated in detail.

- **Present:** The species is known to be present or has been recently observed in the survey area.
- **High:** The species has been observed and documented within 5 miles of the survey area within the last 5 years and suitable habitat for the species is present.
- **Moderate:** The proposed project is located within the range of the species, there are documented occurrences within 5 miles of the survey area, and/or suitable habitat for the species exists in the survey area.
- **Low:** The proposed project is located within the range of the species and low-quality (e.g., disturbed, agricultural) habitat is present.
- **Absent:** The project area is located outside of the species range and/or potential habitat to support the species is not present in the survey area.

Information about habitat types and special-status species that could occur in the project area was obtained from the following sources:

- California Department of fish and Wildlife CNDDB plant and animal records (CDFW 2021a);
- California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants (CNPS 2021a);
- Calflora (2021);
- U.S. Fish and Wildlife Service (USFWS) list of endangered and threatened species that may occur in the survey area (USFWS 2021a);
- USFWS Designated Critical Habitat within the survey area (USFWS 2021a); and
- National Marine Fisheries Service (NMFS) – West Coast Region Endangered Species Act Species List (NMFS 2016).

The project area is within the *Antioch North* U.S. Geological Survey (USGS) 7.5-minute quadrangle. A CNDDB and CNPS database search for special-status species included

the USGS 7.5-minute quadrangles within a 5-mile radius of the project site. In this case, the *Antioch North*, *Antioch South*, *Jersey Island*, and *Brentwood* topographic quadrangles were queried. A 5-mile radius quadrangle search was conducted based on habitat types and migration distances for potential special-status species that could occur within the project area. The USFWS and NMFS databases of endangered species was also utilized to query all federally endangered, threatened, candidate, and proposed animal and plant species, as well as designated critical habitat with known occurrences in this and adjacent quadrangles. Calfora and CNPS' Online Inventory databases were used to obtain more information on the habitat requirements of rare plants.

Other information sources consulted to determine which special-status species could potentially occur in the project area included:

- USGS California 7.5-minute topographic quadrangles for *Antioch North*, *Antioch South*, *Jersey Island*, and *Brentwood*;
- Aerial photographs of the project area and surrounding vicinity (Google Earth 2021);
- USFWS National Wetlands Inventory (USFWS 2021b);
- *Special Animals List* (CDFW 2021b);
- *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2021c);
- *State and Federally Listed Endangered, Threatened and Rare Plants of California* (CDFW 2021d);
- *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2021e);
- California Wildlife Habitat Relationships System (WHRS) (CDFW 2014);
- University of California Agriculture and Natural Resources California Fish Website (UC ANR 2021); and
- Other pertinent databases and literature, including The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et. al. 2012).

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 area and vicinity was developed. The list was refined based on a reconnaissance-level biological field survey to determine the potential for those species to occur in the project area.

Site Surveys

A reconnaissance-level biological survey was conducted by Stantec Biologists on March 23, 2021. The reconnaissance-level survey was performed by walking meandering transects throughout the entire project area to characterize habitats, identify aquatic resources that may be subject to regulatory agency jurisdiction (e.g., U.S. Army Corps of Engineers [USACE], Regional Water Quality Control Board (RWQCB) and CDFW), assess potential for special-status species to occur, and to record observed species. The reconnaissance-level survey did not include an aquatic survey to document underwater conditions within the project area. To better focus the field survey efforts on those plant and animal special-status species that may occur in the project area, a target list of potentially occurring species was developed during the literature and database review process. Plant taxonomy for the botanical survey was determined using the Jepson Manual (Baldwin et al. 2012).

Habitat Communities

Vegetation types in the project area were classified based on descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988), as well as the California Natural Community List (CDFW 2021f), which is adapted from the technical approach and vegetation alliance classification system described in *A Manual of California Vegetation* (Sawyer et al. 2009). The vegetation communities present in the project area are primarily urban, with minor areas consisting of annual grassland. Aquatic vegetation communities within the project area consist of Estuarine. Descriptions of the vegetation communities within the project area are provided below.

<u>Upland Habitat Types</u>

Annual Grassland

Annual grassland habitat occurs primarily along the western limits of the project area, with minor sections of annual grassland located on the east and west ends of the slope between the two concrete pads. This habitat is characterized as a moderate herbaceous layer and a limited overstory canopy. Dominant plant species within the annual grassland habitat includes California man-root (*Marah fabacea*), soft chess

(*Bromus hordeaceus*), and ripgut brome (*Bromus diandrus*). No small mammal burrows were observed within the grassland habitat.

Urban

This land use type does not describe any specific vegetation type under Sawyer et al. (2009) but encompasses land that has been anthropogenically modified with structures and facilities, including roads and buildings. Ornamental plantings and ruderal vegetation may be present within and/or on the margins of developed areas. A majority of the project area is urban habitat consisting of two large concrete pads with ruderal vegetation growing sporadically throughout including sweet fennel (*Foeniculum vulgare*) and telegraph weed (*Heterotheca grandiflora*). In the northwest corner of the project area there is an old concrete stormwater detention basin that is hydraulically connected to the San Joaquin River. During the reconnaissance survey, water was observed within this basin along with minimal vegetation and algae.

Aquatic Habitat Types

Estuarine

Estuarine habitats are diverse coastal waterbodies containing a mixture of seawater and freshwater. Estuarine habitat occurs within the San Joaquin River that flows through the northern portion of the project area. The USFWS National Wetlands Inventory mapped this section of the San Joaquin River as estuarine due to tidal influence from Suisun Bay and saltwater intrusion during the summer and fall months when freshwater influx is low. The shoreline is lined with rock slope protection (RSP) with minimal vegetation growing on top, including a patch of Himalayan blackberry (*Rubus armeniacus*). During the reconnaissance survey, no vegetation was observed on the water surface.

Special-Status Species

Plants

Regionally occurring special-status plant species were identified based on a review of pertinent literature, the USFWS species list, CNDDB, and CNPS database records, and the reconnaissance-level biological field survey results (see Appendix B1, Figure 3 for CNDDB special-status plant species occurrences within 5 miles of the project area). For each species, habitat requirements were assessed and compared to the habitats in the project area and immediate vicinity to determine if potential habitat occurs in the project area (see Appendix B1, Table 1 for special-status plant species). Based on database

records 40 special-status plants were evaluated for their potential to occur within the project area. Of these 40 species, none were found to have moderate or high potential to occur within the project area due to the urban and disturbed annual grassland habitats.

Wildlife

Regionally occurring special-status animal species were identified based on a review of pertinent literature, the USFWS species list, CNDDB database records, a query of the California WHRS (CDFW 2014), and the reconnaissance-level biological field survey results (see Appendix B1, Figure 4 for CNDDB special-status animal species occurrences within 5 miles of the project area). For each species, habitat requirements were assessed and compared to the habitats in the project area and immediate vicinity to determine the species' potential to occur in or near the project area (see Appendix B1, Table 2 for special-status animal species). The literature and database review identified 50 special-status wildlife species with suitable habitat or known to occur in or near the project area. Based on initial assessment of wildlife habitats conducted during the reconnaissance-level field survey, 16 of these species were determined to have a moderate to high potential to occur.

Critical Habitat

Within the project area (associated with wharf improvements), USFWS and NMFS designated critical habitat occurs for five special-status fish species consisting of delta smelt (*Hypomesus transpacificus*), Central Valley Spring Run chinook salmon Evolutionarily Significant Unit (ESU) (*Oncorhynchus tshawytscha*), Sacramento River Winter Run chinook salmon ESU (*Oncorhynchus tshawytscha*), California Central Valley steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss irideus*), and southern DPS green sturgeon (*Acipenser medirostris*). Suitable aquatic habitat for these species occurs within the project area.

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 Plants Species

There is no potential habitat within the project area for special-status plants to have any moderate or high potential to occur. The project site consists of mostly urban habitat with annual grassland occurring along the western project limits and two small portions at the east and west ends of the slope between the two concrete pads. Multiple special-status plant species within 5 miles of the project area occur within grassland habitats (Appendix B1, Table 1). However, these species have a low potential to occur due to the disturbed nature and high amount of non-native and invasive plants growing within the grassland habitat. In addition, species with low potential to occur were not observed during the reconnaissance survey. In a previous survey conducted by Arcadis in 2008 (Arcadis 2008), Antioch Dunes evening primrose (*Oenothera deltoides* ssp. *howellii*) and Contra Costa wallflower (*Erysimum capitatum* ssp. *angustatum*) were found on the property directly east of the project site. These two species occur on inland dune habitat and this habitat type is absent from the project site. Also, these two species were not observed during the reconnaissance survey. Based on the lack of suitable habitat, the project site does not provide potential habitat for special-status plant species to occur, and there would be no impacts to special-status plants.

Special-Status Wildlife Species

Special-Status Fish

The portion of the San Joaquin River within the project area provides potentially suitable habitat for 14 special-status fish species. These species have a moderate or high potential to occur within the project area. See Appendix B1 for more information about each species habitat requirements. These species are listed below:

- Southern DPS Green Sturgeon (*Acipenser medirostris*), Federally threatened (FT)/species of special concern (SSC);
- White sturgeon (*Acipenser transmontanus*), SSC;
- Pacific lamprey (*Entosphenus tridentatus*), SSC;

- Delta smelt (*Hypomesus transpacificus*), FT/State endangered (SE);
- Western river lamprey (*Lampetra ayresii*), SSC;
- Sacramento hitch (*Lavinia exilicauda exilicauda*), SSC;
- Hardhead (*Mylopharodon conocephalus*), SSC;
- California Central Valley steelhead DPS (*Oncorhynchus mykiss irideus*), FT;
- Central Valley Spring Run Chinook Salmon ESU (*Oncorhynchus tshawytscha*), FT/State threatened (ST);
- Central Valley fall/ late fall-run Chinook Salmon ESU (*Oncorhynchus tshawytscha*), SSC;
- Sacramento River Winter Run Chinook Salmon ESU (*Oncorhynchus tshawytscha*), Federally endangered (FE)/SE;
- Sacramento splittail (*Pogonichthys macrolepidotus*), SSC;
- Sacramento perch (*Archoplites interruptus*), SSC; and
- Longfin smelt (*Spirinchus thaleichthys*), Federal candidate (FC)/ST.

Avoidance and minimization measures would be incorporated into the proposed project to avoid direct and indirect effects to special-status fish species and their habitat. In-water work associated with wharf improvements may cause direct effects (e.g., pile driving) and indirect effects (e.g., noise and vibration) to these fish species. Mitigation Measure BIO-1 would require pile driving to occur from July 1 to November 1, a Worker Environmental Awareness Program to inform project personnel about the protection of special-status species and specific measures to protect aquatic species, measures to protect water quality, and additional requirements for pile driving operations. Based on potential suitable aquatic habitat in and adjacent to the project site, there is moderate to high potential for special-status fish species to occur; however, with the implementation of Mitigation Measure BIO-1, impacts to special-status fish species would be less than significant.

Special-Status Marine Mammals

The portion of the San Joaquin River within the project area provides potentially suitable habitat for two special-status marine mammal species. These species have a moderate potential to occur within the project area. See Appendix B1 for more information about each species habitat requirements. These species are listed below:

- Pacific harbor seal (*Phoca vitulina*), Marine Mammal Protection Act (MMPA); and
- California sea lion (*Zalophus californianus*), MMPA.

Avoidance and minimization measures would be incorporated into the proposed project to avoid direct and indirect effects to special-status marine mammals and their habitat. In-water work associated with wharf improvements may cause direct effects (e.g., pile driving) and indirect effects (e.g., noise and vibration) to these marine mammals. Driving of piles with a vibratory hammer, or driving concrete piles is not likely to create sounds capable of causing post-traumatic stress to marine mammals; however, piles may also be installed with an impact hammer, which may result in potential injury. Based on the Hydroacoustic Assessment (Appendix B2), temporary direct effects to special-status fish and marine mammals are estimated from the maximum hydroacoustic impact (using highest sound pressure levels) as follows:

- Fish and marine mammals within 3,400 meters would be exposed to root mean square sound levels of 150 decibel (dB).
- Any fish or marine mammal within 470 meters (1,527 feet) will be subject to direct effects, or cumulative sound exposure level (SEL) impacts at or above 183 dB when driving 72-inch steel piles.
- Fish and marine mammals within 29 meters (94 feet) will be subject to cumulative SEL impacts at or above 183 dB when driving 24-inch concrete piles.
- Fish and marine mammals within 10 meters (33 feet) of pile driving for 72-inch steel piles may be exposed to peak sound levels above 206 dB.

These direct effects from pile driving activity are anticipated to be temporary, and no ongoing or permanent adverse effects are anticipated.

Mitigation Measures BIO-1 and BIO-2 would be implemented to protect these species. In addition to Mitigation Measure BIO-1, Mitigation Measure BIO-2 requires a biological monitor to be present during steel pile driving to observe for marine mammals within

500 meters of the project area and direct work to halt until marine mammals have left the area on their own. Based on potential suitable aquatic habitat in and adjacent to the project site, there is moderate potential for special-status marine mammals to occur; however, with the implementation of Mitigation Measures BIO-1 and BIO-2, impacts to special-status marine mammals would be less than significant.

Migratory Birds

The project area does not provide suitable nesting habitat for special-status birds or raptors; however, trees, shrubs, and wharf structures within the project area could provide suitable nesting habitat for other migratory birds protected under the Migratory Bird Treaty Act (MBTA) or California Fish and Game Code (FGC).

Avoidance and minimization measures would be incorporated into the proposed project to avoid direct and indirect effects to migratory birds and their nests. If proposed project activities occur during the nesting bird season (generally considered from February 15 through September 15), construction may cause direct effects (e.g., tree removal and vegetation clearing) and indirect effects to nesting birds (e.g., noise and vibration) by causing adults to abandon active nests, resulting in nest failure and reduced reproductive success. Mitigation Measure BIO-3 would require preconstruction nesting bird surveys to document all nests on and adjacent to the project site and implementation of protective buffers around documented nests during construction to minimize disturbance to nesting birds. Based on potential suitable nesting habitat in and adjacent to the project site, there is low potential for migratory nesting bird species to occur; however, with the implementation of Mitigation Measure BIO-3, impacts to migratory nesting bird species would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM BIO-1 **Special-Status Fish – Pile Driving.** Prior to initiation of construction, the Applicant will consult with regulatory agencies with jurisdiction over the project activities, such as CDFW, NMFS, and USFWS to obtain appropriate permits, recommendations for mitigation measures and habitat mitigation recommendations for project impacts. In addition, the Applicant shall provide evidence of compliance with the permits to the City prior to start of project construction activities. This series of consultations

will provide a comprehensive list of measures, which will be required to be implemented by the project. Any such measures will be incorporated into the project, but at a minimum, the following measures will be implemented during the driving of all piles:

- Pile driving will be limited to the period between July 1 and November 1 for concrete and high-density polyethylene (HDPE) piles, and from August 1 and November 30 for steel piles.
- A Worker Environmental Awareness Program will be developed which will inform project personnel about the ecology, and protection of special-status species, as well as any project specific measures to be implemented for the protection of aquatic species. A sign-in sheet documenting all onsite project personnel have attended the Worker Environmental Awareness Program will be kept onsite and a copy will be sent to the City's Community Development Department and appropriate agencies.
- A Spill Prevention, Control, and Countermeasure Plan will be developed in advance of the project initiation (Mitigation Measure HAZ-2).
- Any wildlife encountered within the work area will be allowed to leave the area unharmed.
- A "soft start" shall be used during vibratory pile driving to give marine mammals, birds, and nearshore fish species an opportunity to move out of the area away from the sound source. Soft starts would be implemented at the start of each day's pile driving and at any time following the cessation of pile driving for a period of 30 minutes or longer.
- For vibratory pile drivers, the sound shall be initiated for 15 seconds at reduced energy followed by a 30-second waiting period; this procedure shall then be repeated two additional times.

The following measures will also be included for times when work involves driving steel piles:

- To the extent feasible, pile driving for steel piles will be conducted with a vibratory hammer.

- When installation with an impact hammer is required for steel piles, the following additional measures will be employed:
  - Underwater sound monitoring will be performed during pile driving activities, according to the details of a sound attenuation and monitoring plan accepted by the regulatory agencies.
  - Use of a bubble curtain.
  - Use of a slow start (gradually increasing energy and frequency).
- To protect general water quality for special-status fish species, Mitigation Measure HAZ-1: Prepare and Implement a Hazardous Materials Business Plan (Section 3.9, Hazardous Materials) and Mitigation Measure HYD-1: Prepare and Implement a SWPPP (Section 3.10, Hydrology and Water Quality) would be required.

MM BIO-2 **Special-Status Marine Mammals – Pile Driving.** To prevent impacts to marine mammals during the driving of steel piles which require use of an impact hammer, a biological monitor will be present to observe for marine mammals within 500 meters of the project area, which is the safety zone established around the work area based on pile driving estimates. If the monitor observes a marine mammal within the 500-meter disturbance zone, they will direct work to halt until the animal has left the area on its own and passed beyond the zone of influence for acoustic impacts or 15 minutes has elapsed since the last sighting.

MM BIO-3 **Migratory Nesting Birds.** If initial construction activities commence during the nesting season (February 15 through September 15) a survey for active bird nests will be conducted by a qualified biologist no more than 5 days prior to the start of project activities. The survey will be conducted to the extent feasible for all areas within 250 feet around the project area in order to identify the location and status of any nests that could potentially be directly or indirectly affected by construction activities.

If active nests of MBTA or FGC protected species are found within the project area or close enough to the area to affect nesting success, a work exclusion zone will be established around each nest. Established exclusion zones will remain in place until all young in the nest have

fledged or the nest otherwise becomes inactive (e.g., due to predation). Appropriate exclusion zone sizes vary dependent upon bird species, nest location, existing visual buffers, ambient sound levels, and other factors; an exclusion zone radius may be as small as 25 feet (for common, disturbance-adapted species) or as large as 250 feet or more for raptors.

Exclusion zone size may also be reduced from established levels if supported by nest monitoring by a qualified biologist indicating that work activities are not adversely impacting the nest.

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

Potential Waters of the U.S. and State

The portion of the San Joaquin River that occurs within the project area associated with wharf improvements is considered potential waters of the U.S. and State, therefore subject to the USACE and RWQCB jurisdiction under Sections 404 and 401 of the Clean Water Act, and subject to CDFW jurisdiction under Section 1600 of the California FGC. The San Joaquin River is also a navigable water of the U.S. under Section 10 of the Rivers and Harbors Act of 1899. Riparian habitat is absent from the project area due to the shoreline being lined with RSP.

Construction activities and in-water work associated with the proposed wharf improvements would impact approximately 0.005 acres of potential waters of the U.S and approximately 0.2 acres for the over-water improvements. In addition, the proposed project would build approximately 11,918 square feet of permanent over-water structure. This is a net increase of 9,286 square feet of over-water structure from the original wharf, the majority of which would be solid cover that would shade the habitat. Mitigation Measure BIO-4 requires the proposed project to mitigate for the impacts to aquatic resources resulting from permanent fill consisting of new piles and shading of open waters by purchasing credits from an agency-approved mitigation or conservation bank at a ratio of no less than 1:1 (may be higher once agency permits are issued).

With the implementation of Mitigation Measure BIO-4, impacts to potential Waters of the U.S. and State would be less than significant.

Critical Habitat

Within the project area (associated with wharf improvements), USFWS and NMFS designated critical habitat occurs for five special-status fish species. The proposed project has already initiated Section 7 Consultation with USFWS and NMFS to evaluate impacts to federally endangered and threatened fish species and their critical habitats. USFWS issued a Programmatic Agreement and NMFS issued a Biological Opinion for the project. The proposed project would follow and adhere to all avoidance and minimization measures and conditions for mitigation within both documents. With the implementation of these avoidance and minimization measures, impacts to critical habitat would be less than significant.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) was passed in 1976 for the conservation and management of the fishery resources of the U.S. to prevent overfishing, to rebuild overfished stocks, to ensure conservation, and to facilitate long-term protection of Essential Fish Habitat (EFH). EFH is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The MSA is implemented by regional Fishery Management Councils that work with NMFS to develop and implement fishery management plans (FMP). The plans must identify the EFH for each fishery within their jurisdiction. When a project is proposed that could adversely affect EFH, federal agencies must consult with NMFS in order to obtain avoidance and minimization consultation as well as conservation and enhancement recommendations.

Within the project area, EFH for species managed under the Pacific Coast Salmon FMP (Chinook salmon) and also for species managed under the Coastal Pelagic Species FMP and Pacific Coast Groundfish FMP occur. As stated above, NMFS has already issued a Biological Opinion for the project. The proposed project would follow and adhere to all avoidance and minimization measures (including Mitigation Measures BIO-1 and BIO-2) and conditions for mitigation within the Biological Opinion. With the implementation of these avoidance and minimization measures, impacts to EFH would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM BIO-4 Fill Below the Water Line and Shading of Open Waters of the San Joaquin River. The project will mitigate for the lost aquatic resource function resulting from permanent fill consisting of new piles and shading of open waters in the San Joaquin River by purchasing shallow freshwater habitat credits from an agency-approved mitigation or conservation bank at a ratio of no less than 1:1. The Applicant will provide proof of purchase for these credits to the City's Community Development Department in order to show compliance with agency permits.

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

Impact BIO-3	**Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Impact Analysis
No potential wetlands covered under the jurisdiction of the USACE or RWQCB occur within the project area. As such, there would be no impact to state or federally protected wetlands.

Level of Significance Before Mitigation
No Impact.

Mitigation Measures
No mitigation is necessary.

Level of Significance After Mitigation
No Impact.

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
Habitat corridors are segments of land that provide linkages for wildlife movement between different habitats while also providing cover. Corridors also function as

avenues along which plants can propagate, genetic interchange can occur, populations can move in response to environmental changes and natural disasters, and populations can be replenished from other areas. Habitat corridors often consist of riparian areas along streams, rivers, or other natural features. The project area is not located within a defined essential connectivity area as identified in the California Essential Habitat Connectivity Project (Spencer et al. 2010). However, the portion of the San Joaquin River that occurs within the project area serves as one of two primary migratory wildlife corridors for special-status anadromous fish species that migrate from the Pacific Ocean to tributaries of the Sacramento and San Joaquin Rivers and vice versa.

Impacts to the San Joaquin River, including 0.005 acres of permanent fill and approximately 0.2 acres of over-water shading, will have a minimal impact on migratory fish utilizing the river as a migratory corridor. Therefore, the proposed project would have a less than significant impact on special-status anadromous fish species and their migratory corridors.

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

Impact Analysis
There are trees located within the project area adjacent to the large concrete pad. However, no trees would be removed by the proposed project since all construction would occur on the existing concrete pad and existing wharf structure. As such, the proposed project would not conflict with any local policies or ordinances protecting biological resources, including the City's Tree Preservation and Regulation Ordinance, and there would be no impact.

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
In July 2007, the East Contra Costa County Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) was adopted by Contra Costa County, other member cities, the USFWS, and CDFW (East Contra Costa County Habitat Conservancy 2006). However, the City declined to participate in the HCP/NCCP. The City is currently developing an HCP/NCCP in coordination with the East Contra Costa County Habitat Conservancy, USFWS, and CDFW. The City is designing the HCP/NCCP to be entirely consistent with the approved East Contra Costa County HCP/NCCP, but it has not been finalized or adopted. Therefore, the project site is not located in an area with an approved HCP/NCCP, or local, regional, or state HCP. As such, the proposed project would not conflict with the provisions of such a plan, 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.

3.5 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 formal cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

The project site is located in the City of Antioch in northern Contra Costa County, California. Antioch is located in the Sacramento/San Joaquin Delta region of the California Central Valley to the south of the San Joaquin River. Regionally, the project site has a Mediterranean climate characterized by hot, dry summers and moderate winters.

3.5.2 Methodology

To determine the presence or absence of cultural resources within the project site and vicinity, Stantec prepared a Cultural Resources Assessment. The cultural resources assessment was conducted to satisfy the requirements of CEQA and follows CEQA Appendix G Guidelines. The Cultural Resources Assessment is provided in Appendix C.

Records Search and Literature Review

As part of the cultural resource review, a records search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) on April 23, 2021 (NWIC File No.: 20-1802) for the project site and a half-mile around it. The record search included a review of all previously recorded cultural resources and studies. Other sources reviewed include the Office of Historic Preservation (OHP) Historic Property Data File, Determination of Eligibility, National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listings, California Inventory of Historical Resources, California State Historical Landmarks, Points of Historic Interest, Caltrans Bridge Inventory, and Historic Maps. No NRHP or CRHR eligible sites are within or adjacent to the project site. A record search

of the Native American Heritage Commission (NAHC) Sacred Lands File was completed for the proposed project and the results were negative.

No cultural resources have been recorded in the project site. Six previously recorded historic-era resources (Sites P-07-000806/CA-CCO-732H, P-07-000878, P-07-002952, P-07-004623, P-07-0046424, and P-07-004629) and one prehistoric resource (Site P-07-004625) are within 0.5-mile of the project site. Site P-07-000806/CA-CCO-732H, the Atchison, Topeka, and Santa Fe Railroad, is approximately 473 feet south of the project site. Site P-07-000878, the site of the Marsh Landing, is 2,535 feet east of the project site. Site P-07-002952, a diffuse historic-period scatter of mainly glass and brick fragments, is 2,479 feet south of the project site. Site P-07-004623, a historic-period refuse deposit, is 2,209 feet east of the project site. Site P-07-004624, and isolated shard of bottle glass, is 2,131 feet east of the project site. Site P-07-004629, a charcoal lens and cast-iron fragment, is 2,640 feet east of the project site. Site P-07-004625, five obsidian pressure flakes, is 2,552 feet east of the project site. These resources are outside the project site, and the proposed project would not change the significance of these resources.

One previous study has been completed within the project site and 21 previous studies have been completed within 0.5-mile of, but outside of, the project site. Appendix C includes the complete NWIC records search results.

Native American Outreach

Local Native American tribes and representatives were contacted for information regarding cultural resources in the project site. The results of the Native American outreach efforts are discussed in Section 3.18, Tribal Cultural Resources.

Field Survey

No field study was conducted for the proposed project. The entire project site is within a built environment context although there would be some aquatic construction. All locations of planned construction activity are currently paved, which prevented a visual inspection of the ground surface. Additionally, construction work would occur within the water and prevented visual inspection.

Buried Site Sensitivity

Assessing the sensitivity for an area to contain buried archaeological sites takes into consideration the potential for the presence of buried cultural deposits by examining past use of a project location, factors that support human occupation, such as access to resources and water, slope, and the underlying geomorphology of the area. This section summarizes the archaeological buried site sensitivity for the project site.

The project area is underlain by Quaternary sand deposits and unidentified alluvium with soils consisting of Delhi sands, which are excessively drained deposits derived from igneous and sedimentary rock (CGS 2010; NRCS 2021a/b). Delhi sands are found on alluvial fans, floodplains, and terraces and have 2 to 9 percent slopes. While Quaternary alluvium is generally considered sensitive for cultural resources due to its age and depositional history, the undifferentiated nature of soils in the project site, the extensive use of imported fill material, and the high levels of previous disturbance suggest a low to moderate sensitivity for buried 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

The project site consists of a partially improved lot that has been modified by the construction of existing structures, grading, and the construction of adjacent roads and railroad lines. A railroad spur identified on the property may be associated with the historic-period Atchison, Topeka, and Santa Fe Line (P-07-000806/CA-CCO-732H); however, the railroad has been previously evaluated and was found not eligible for listing on the NRHP or the CRHR. The rail spur is therefore not considered a resource for the purposes of CEQA and requires no further management consideration. The existing wharf associated with the proposed project, the Crown Zellerbach wharf, has been formally evaluated and recommended not eligible for listing on the NRHP or CRHR. The wharf is therefore not considered a resource for the purposes of CEQA and requires no further management consideration. No additional historic properties were identified within or near the project site. Therefore, the proposed project would have no 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
The archival research and the NWIC records search performed as part of the cultural resources analysis indicated that there are no known resources within the project area. Furthermore, it is unlikely that buried archaeological resources are present as the project site has been developed and modified by the construction of existing structures, grading, and the construction of adjacent roads and railroad lines. However, subsurface construction activities such as trenching, and grading associated with the proposed project could potentially damage or destroy previously undiscovered cultural resources. In the event undiscovered archeological resources are encountered during construction, the proposed project would implement Mitigation Measure CUL-1. The implementation of Mitigation Measure CUL-1 would require adherence to standard inadvertent discovery procedures and reduce potential impacts to previously undiscovered subsurface archeological resources. Additionally, the proposed project would implement Mitigation Measure CUL-2 to ensure that construction personnel would be aware of the procedures to follow in the event that potential cultural resources are identified. Therefore, with the implementation of Mitigation Measure CUL-1 and Mitigation Measure CUL-2, potential impacts on archeological resources would be reduced to a less than significant level.

Level of Significance Before Mitigation
Potentially Significant Impact.

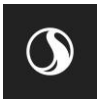
Mitigation Measures
MM CUL-1 Cultural Materials Discovered During Construction. If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential archeological, historical, or tribal resource shall cease until an archaeologist who meets the

Secretary of the Interior's Standards and Guidelines for Professional Qualifications in archaeology and/or history evaluates the resource for its potential significance and determines whether the resource requires further study. If the qualified archaeologist determines that the cultural resource does not appear to be eligible for inclusion on the CRHR and is not identified as a tribal cultural resource, it will be appropriately documented on Department of Parks and Recreation (DPR) 523 series forms and project activity may resume. If the qualified archaeologist determines that the cultural resource appears eligible for inclusion on the CRHR, the archaeologist shall make recommendations to the City of Antioch on the measures to be implemented to protect the discovered resources. The measures may include avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in PRC Section 21083.2. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate DPR forms and evaluated for significance in terms of CEQA criteria. The Applicant shall be responsible for the costs of retaining a qualified archaeologist, and for the recording of resources on DPR forms.

Title to all archaeological sites, and historic or cultural resources on or in the tide and submerged lands of California is vested in the State and under the jurisdiction of the California State Lands Commission. Commission staff shall be notified of any cultural resources or paleontological specimens discovered on lands under the jurisdiction of the California State Lands Commission. The final disposition of archaeological and historical resources or paleontological specimens from such lands must be approved by the California State Lands Commission.

No further grading shall occur within a 50-foot radius of the discovery until the City of Antioch approves the measures to protect these resources. Any archaeological artifacts recovered because of mitigation shall be donated to a qualified scientific institution approved by the City where they would be afforded long-term preservation to allow future scientific study.

MM CUL-2 **Worker Awareness Training.** Prior to the start of any ground disturbance, all field personnel shall receive worker's environmental awareness training on cultural resources. The training, which may be conducted with other environmental or safety trainings, will provide a description of cultural resources that may be encountered during



construction and outline the steps to follow in the event that a discovery is made. Documentation of training shall be submitted to the City's Community Development Department.

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

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

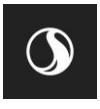
Impact Analysis
There are no known human remains within the project site and no indications that it has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, ground disturbance and subsurface construction activities such as trenching, and grading associated with the proposed project could potentially disturb previously undiscovered human burial sites. Therefore, Mitigation Measure CUL-3 would be implemented to reduce impacts to a less than significant level by ensuring compliance with Section 7050.5 of the California Health and Safety Code and PRC 5097.98.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM CUL-3 Human Remains Discovered During Construction. If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed:

There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Contra Costa County Coroner and the appropriate City representative are contacted. Duly authorized representatives of the Coroner and the City shall be permitted onto the project site and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 27460, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re-commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the



circumstances, manner, and cause of any death. If the Coroner determines that the remains are Native American, the Coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of the human remains and any associated grave goods with appropriate dignity, as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the MLD's recommendations, the owner or the MLD may request mediation by NAHC.

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

PG&E provides electricity and natural gas service to the City of Antioch. The City is located within PG&E's Delta Distribution Planning Area, which covers the eastern portion of Contra Costa County from Bay Point to Discovery Bay. Electricity distribution facilities are located throughout the Delta Distribution Planning Area, with no one set of facilities dedicated to serving the City.

Upon buildout of the proposed project, electricity to the project site would be provided by PG&E. All electrical 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 54 percent of PG&E's electricity came from renewable resources including solar, wind, geothermal, biomass and small hydroelectric sources in 2019 (PG&E 2020).

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 and calculated in the Energy Consumption Summary completed for the proposed project (refer to Appendix A). Short-term construction and long-term energy consumption are 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 and are discussed separately below.

Short-Term Construction

Table 3.6-1 provides estimates of the proposed project's construction fuel consumption.

Table 3.6-1: Construction Off-Road Fuel Consumption

	Total Construction Fuel Consumption
Construction Vehicle Fuel Use	8,550 gallons (diesel and gasoline)
Construction Equipment Fuel Use	12,129 gallons (diesel)
Total	**20,679**

Source: Appendix A

As shown in Table 3.6-1, construction activities associated with the proposed project would be estimated to consume 20,679 gallons of diesel and gasoline. There are no unusual characteristics to the proposed project that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the state. Therefore, it is expected that construction fuel consumption associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region. The proposed project would not result in wasteful, inefficient, or unnecessary consumption of fuel.

Long-Term Operations

Transportation Energy Demand

Table 3.6-2 provides an estimate of the annual fuel consumed by vehicles traveling to and from 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: Long-Term Operational Energy Consumption

Source	Quantity	Unit of Measurement
Operational vehicle fuel use	390,715	gallons (gasoline, diesel)
Operational vessel and tug fuel use	103,602	gallons (marine distillate)
Operational natural gas consumption	668,153	kilo-British Thermal Units
Operational electricity consumption	514,129	kilowatt hours

Source: Appendix A

In terms of land use planning decisions, the proposed project would constitute development of a port within an existing service area, thus it would not be opening up a new geographical area for development such that it would draw mostly new shipping trips, or substantially lengthen existing trips. Similarly, with respect to the truck deliveries, the proposed project may help reduce vehicle trip lengths by providing a closer import location. As such, the proposed project would be well positioned to accommodate existing demand and reduce fuel demand associated with truck and ocean vessels. For these reasons, it would be expected that energy 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.

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 California Green Building Standards Code (CALGreen) and Title 24 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 operation of 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 business park development.

Based on the above information, the proposed project would not result in the inefficient or wasteful consumption of electricity or natural gas 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 EN-2	**Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

Impact Analysis
The City's General Plan includes Energy Objectives 10.8.1 and 10.8.2 to reduce the reliance on nonrenewable energy sources in existing and new commercial, industrial, and public structures through implementation of energy resource policies to encourage the use of renewable energy and decrease energy demand. The City's Climate Action Plan (CAP) also includes strategies focused on green building, renewable energy, transportation, land use, education, and waste management.

The proposed project would not conflict with the energy objectives of the General Plan nor the strategies in its CAP. The proposed project would constitute industrial development within an established industrial area within the City and would not be opening up 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. The proposed project would not impede the City's bicycle and pedestrian network.

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

For the above reasons, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. 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.

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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

Regional Setting

The City of Antioch is in eastern Contra Costa County and is characterized as a geologically young region. The City is defined by two general topographic areas: Lowland Area and Upland Area. The Lowland area includes the estuarine and flatland soils near the San Joaquin River and the low-lying areas in the western and eastern

portions of the City, and the Upland Area includes the hillside soils in the southern portion of the City. The Lowland Area is underlain by alluvium and consists of unconsolidated floodplain deposits with sand, silt, gravel, and clay. Soils in the Lowland Area include well drained Rincon clay loam with moderate shrink-swell potential and Delhi Sand with low shrink-swell potential. The Upland Area consists primarily of tilted sedimentary rocks, sandstone, siltstone, and surficial deposits (City of Antioch 2003b). Native soils in the Upland Area consist of clay, clay loam, loam, and loamy sand. The shrink-swell potential of these soils ranges from low to high depending on the soil type (City of Antioch 2003b).

Eastern Contra Costa County and the San Francisco Bay Area are in one of the most seismically active regions in the United States. Major earthquakes have occurred near Antioch in the past and can be expected to occur again in the future (City of Antioch 2003b). The California Geological Survey defines an active fault as one that has had surface displacement in the last 11,000 years or has experienced earthquakes in recorded history. Although no known active faults are located in the City, there are several major faults located within a few miles including, the Hayward Fault, Calaveras Fault, Concord-Green Valley Fault, and Marsh Creek-Greenville Fault (City of Antioch 2003b). The San Andreas Fault is located approximately 45 miles west of the City. The intensity of ground shaking that would occur in Antioch because of an earthquake in the San Francisco Bay Area depends on the size, distance, and response of the geologic materials in the area (City of Antioch 2003b).

The 1972 Alquist-Priolo Earthquake Fault Zoning Act requires the California Geological Survey to establish regulatory Earthquake Fault Zones around the surface ruptures of active faults to reduce the hazard of surface fault rupture to structures built for human occupancy. There are no Alquist-Priolo Earthquake Fault Zones in the City (City of Antioch 2003b). However, the City is located within a seismically active region, and earthquakes have the potential to cause ground shaking of significant magnitude. Strong ground shaking that occurs during earthquakes can induce other geologic hazards such as liquefaction, landslides, subsidence, lateral spreading, or collapse. The potential for these geologic hazards ranges from low to very high and depends on soil conditions, groundwater levels, and slope stability.

Project Site Setting

The project site is located in an industrial area of the City and is bordered by the San Joaquin River to the north and Wilbur Avenue to the south. The project site is mostly paved and developed with a one-story metal warehouse building and a security guard

station. It is also connected to a wharf located approximately 60 feet the southern bank of the San Joaquin River. The project site and surrounding area are relatively flat and not located within a landslide hazard zone (DOC 2015). According to Figures 4.5.4 and 4.5.5 of the General Plan EIR, the project site is in an area with moderate liquefaction risk and the slope stability of the project site is generally stable (City of Antioch 2003b).

Surface soils at the project site have been mapped as Delhi sand (2 to 9 percent slopes) by the U.S. Department of Agriculture (USDA) Web Soil Survey. These soils are characterized as generally moist soils with very slow runoff potential. Historically, groundwater has been encountered beneath the site at depths ranging from 7.24 below ground surface (bgs), near the river, to 26.28 feet bgs in the southern portion of the site (PES Environmental, Inc. 2011).

Paleontological Resources

According to the City's General Plan EIR, numerous fossils have been collected from within the City. A fossil locality search at the Cultural Access Services identified marine fossils collected from almost all the sedimentary formations located in Antioch. Literature review also indicated that all the formations north of Mount Diablo contain fossils. There are at least eight fossil localities within and immediately adjacent to the City's Planning Area and another five are within a 1-mile radius of the City's Planning Area. Fossils in the City's Planning Area identified by the California Museum of Paleontology, UC Berkeley include mammoths, primitive horses, bison, rats, beaver-type creatures, and sloths (City of Antioch 2003b).

3.7.2 Methodology

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

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. The nearest Alquist-Priolo Earthquake Fault Zones are the Concord-Green Valley Fault located approximately 15 miles west of the project site and the Marsh Creek-Greenville Fault located approximately 12 miles southwest of the project site (CGS 2020). Due to the lack of Alquist-Priolo fault zones in the project site, the potential for damage to structures at the project site due to rupture of a known earthquake fault is very low, and the impact 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. The proposed project would be constructed in accordance with the latest edition of the California Building Code, which includes engineering standards appropriate to withstand anticipated ground accelerations at the project site. Conformance with the earthquake design parameters of the California Building Code would be subject to review by the City's Building Division. Additionally, the proposed project would be subject to General Plan Policy 11.3.2-a, which requires new developments to prepare a site-specific geotechnical investigation and incorporate the recommendations and findings of the report into the project development plans (City

of Antioch 2003a). Therefore, compliance with General Plan Policy 11.3.2-a and the requirements of the California Building Code would ensure ground shaking impacts at the project site would be less than significant.

iii. Liquefaction

According to Figure 4.5.4 in the General Plan EIR, the potential for liquefaction to occur at the project site is moderate (City of Antioch 2003b). As discussed, the proposed project would be required to comply with the latest edition of the California Building Code, which contains seismic building criteria and standards that are designed to reduce liquefaction risks to acceptable levels. The proposed project would also be required to comply with General Plan Policies 11.3.2-k and 11.3-2-l, which require new developments to prepare site-specific soil reports to address potential liquefaction impacts and implement appropriate measures identified in these reports into the project development plans to reduce potential impacts. As required by General Plan Policy 11.3-2-l, the City would review the project development plans prior to the approval of building permits to ensure appropriate measures addressing liquefaction are implemented. As such, compliance with the California Building Code and General Plan Policies 11.3.2-k and 11.3-2-l would reduce impacts related to liquefaction to a less than significant level.

iv. Landslides

The project site and the surrounding area are relatively level and not located near a slope that would result in a landslide hazard. Therefore, the potential for a seismically induced landslide to occur at the project site is very low. No impact would occur.

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

Impact Analysis
The project site has already experienced substantial soil compaction as it is primarily paved and developed with a one-story metal warehouse building, a security guard

station, and an inactive rail spur. Project construction activities related to the proposed land improvements would include site clearing, grading, utility connections, building construction, and site paving. The landside improvements would disturb approximately 7.2 acres and require approximately 6,600 cubic yards of cut and 4,110 cubic yards of fill, resulting in a net cut of 2,550 cubic yards. However, the proposed project would aim to balance the earthwork on the site. Earth movement activities associated with the landside improvements could expose unprotected soils to stormwater runoff causing erosion and loss of topsoil. Projects that disturb more than 1 acre are 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 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.

During operation, the project site would remain mostly paved (approximately 31 acres) as under existing conditions, which would prevent substantial soil erosion from the site. 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. Refer to Section 3.10, Hydrology and Water Quality, for complete details pertaining to this mitigation measure.

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

Impact GEO-3	**Be located on strata 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 level and are not located near a slope that would result in a landslide hazard. As discussed in Impact GEO-1, there is moderate potential for liquefaction to occur at the project site (City of Antioch 2003b).

The proposed project would be required to comply with the latest edition of the California Building Code. Additionally, the proposed project would be required to comply with General Plan Policies 11.3.2-k and 11.3-2-l which requires new development projects to prepare site-specific soils reports. The proposed project would be required to implement the recommendations of the site-specific soils report into the project design to address potential impacts related to liquefaction, subsidence, and lateral spreading. The City would review the project development plans prior to the approval of building permits to ensure appropriate measures are implemented.

Based on review of the USDA Web Soil Survey, the project site consists of Delhi sand (2 to 9 percent slope). These soils are characterized as generally moist soils with very slow runoff potential (USDA 1977). Historically, groundwater has been encountered beneath the site at depths ranging from 7.24 bgs, near the river, to 26.28 feet bgs in the southern portion of the site (PES Environmental, Inc. 2011). During construction, excavation activities for the landside improvements are expected to be relatively shallow for the installation of utilities; however, there is a possibility that the proposed project may encounter groundwater and temporary dewatering would be required. All temporary dewatering activities would be required to comply with the waste discharge requirements issued by the Central Valley RWQCB. Additionally, Mitigation Measure GEO-1 would require the project contractor to prepare a dewatering plan. The dewatering plan would identify 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 engineering standards and specifications. As such, impacts related to unstable soils would be less than significant with implementation of Mitigation Measure GEO-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM GEO-1 **Prepare and Implement Dewatering Plan.** If groundwater is expected to be encountered during construction activities, a dewatering plan will be submitted to the City for approval prior to issuance of a grading permit. At a minimum, the dewatering plan will detail dewatering methods, location of dewatering activities, equipment, groundwater sampling, disposal, and discharge point in accordance with the applicable waste discharge requirements of the Central Valley 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 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 City's 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, creating substantial risks to life or property?

Impact Analysis
The project site consists of Delhi sand (2 to 9 percent slope), which are characterized as generally moist soils with very slow runoff potential (USDA 1977). As a result, soils within the project site could be subject to shrinking and swelling as moisture is lost and gained throughout the year. The proposed project would be required to comply with the latest edition of the California Building Code and General Plan Policy 11.3.2-k, which requires preparation of a site-specific soils report. The proposed project would be required to implement the recommendations identified in the site-specific soils report to ensure all structures are located on stable soils. Compliance with these state and local regulations would ensure the proposed project would not be located on expansive soils once constructed, and 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.

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 project site is currently not connected to the City's public sewer system. As

discussed in Section 2.1.3, Utility Improvements, the City would condition the proposed project to construct a new 15-inch sewer main to serve the project. Should the sewer run the length of the frontage, the new sewer main would be a maximum length of approximately 0.3-mile (1,584 feet) to connect to the existing 15-inch sewer main located within Wilbur Avenue, east of Viera Avenue. The new 15-inch sewer main within Wilbur Avenue would be used by the proposed project to connect a new onsite sanitary sewer lateral of approximately 600 linear feet and a sanitary sewer manhole to serve the new vehicle processing building. All sewer distribution improvements would be constructed and designed in accordance with the current version of the City's Construction Details. Therefore, the proposed project would not rely on the use of septic tanks or alternative wastewater disposal systems, 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 GEO-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis
The project site is mostly paved and developed with a one-story metal warehouse building, security guard station, and inactive rail spur. It is also connected to an existing wharf located approximately 60 feet from the southern bank of the San Joaquin River. The City's General Plan does not identify the presence of any unique geologic features within the City's Planning Area (City of Antioch 2003b). The project site has been used for industrial processing uses since 1956 and is mostly paved; therefore, it is unlikely that paleontological or unique geologic resources would be encountered during construction. However, the proposed project would include some ground disturbance during construction, such as grading and excavation, which could directly or indirectly destroy an unknown unique paleontological or unique geologic feature. If unknown unique paleontological resources are discovered onsite during construction, all activities would be stopped within a 50-foot radius of the identified resource until a qualified paleontologist evaluates the finding as required by Mitigation Measure GEO-2.

Therefore, impacts to paleontological or unique geologic features would be less than significant with implementation of Mitigation Measure GEO-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM GEO-2 Procedures for Paleontological Resources Discovered During Construction. If any paleontological resources are encountered during ground-disturbing or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified resource shall cease and the City shall immediately be notified. The Applicant shall retain a qualified paleontologist (as approved by the City) to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resource. The appropriate treatment of an inadvertently discovered paleontological resource shall be implemented to ensure that impacts to the resource are avoided.

The title to all paleontological resources on or in the tide and submerged lands of California is vested in the State and under the jurisdiction of the California State Lands Commission. California State Lands Commission staff shall be notified of any cultural resources or paleontological specimens discovered on lands under the jurisdiction of the California State Lands Commission. The final disposition of archaeological and historical resources or paleontological specimens from such lands must be approved by the California State Lands Commission.

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?	☐	☐	☒	☐
c)	The proposed project would not be subject to significant adverse effects because of global climate change?	☐	☐	☒	☐

3.8.1 Environmental Setting

Greenhouse Gases

GHGs and climate change are cumulative global issues. CARB and USEPA regulate GHG emissions within the State of California and the United States, respectively. While 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). GHGs 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 (e.g., water vapor, carbon dioxide [CO_2], methane [CH_4], and nitrous oxide), 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:

<u>Carbon Dioxide</u>

CO_2 enters the atmosphere through the burning of fossil fuels (e.g., oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the

manufacture of cement). CO_2 is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane

CH_4 is emitted during the production and transport of coal, natural gas, and oil. CH_4 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 $MMTCO_{2e}$ 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 executive orders related to the state's evolving climate change policy. Of particular importance are AB 32 and Senate Bill (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.

In 2009, the City of Antioch approved Resolution 2009/57 adopting GHG reduction targets to reduce overall city-wide carbon emissions by 25 percent of the 1990 levels by 2020 and 80 percent by 2050. The reduction targets adopted by the City are consistent with the statewide GHG reduction targets established by AB 32. On May 24, 2011, the City Council approved the Community and Municipal Climate Action Plans. The plan included potential programs and actions the City could implement to reach the reduction targets established by Resolution 2009/57. The City's plans include city-wide goals and strategies, but not a project-specific threshold for determining the significance of GHG emissions. Given the 2020 timeframe of the Community CAP and the post-2020 timeframe of the project, the City's CAP would not be applicable to the proposed project.

3.8.2 Methodology

BAAQMD provides multiple options for project-level GHG thresholds in its 2017 CEQA Guidelines. BAAQMD does not presently provide a construction-related GHG generation threshold but recommends that construction-generated GHGs be quantified and disclosed. BAAQMD also recommends that lead agencies (in this case, the City of Antioch) make a determination of the level of significance of construction-generated GHG emissions in relation to meeting AB 32 GHG reduction goals. The lead agency is also encouraged to incorporate BMPs to reduce GHG emissions during project construction, as feasible and applicable.

The proposed project is located within the BAAQMD. BAAQMD provides recommendations for GHG thresholds for non-stationary source projects; however, the proposed project is not a traditional land use development, and it does not include residences, thus the service population metric would not be applicable. Lastly given the industrial nature of the proposed project, BAAQMD's stationary source threshold would be more applicable to the proposed project. As such, the proposed project will use a threshold of 10,000 $MTCO_2e$ to determine significance.

BAAQMD's CEQA Guidelines state that if annual emissions of GHG exceed the thresholds, the proposed project would result in a cumulatively considerable significant impact to global climate change. Therefore, if the proposed project is less than the threshold identified above, then the proposed project would result in a less than significant cumulative impact to global climate change.

The modeling data is provided in its entirety in Appendix A.

3.8.3 Environmental Impact Analysis

This section discusses potential impacts concerning GHGs 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

Constructions Emission Inventory

The proposed project would emit GHG emissions during construction from the off-road equipment, worker vehicles, and any hauling that may occur. As previously indicated, BAAQMD does not presently provide a construction-related GHG generation threshold but recommends that construction-generated GHG be quantified and disclosed. Because impacts from construction activities occur over a relatively short-term period, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, a standard practice is to amortize construction emissions over the anticipated lifetime of a project, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. Construction emissions would be generated from the exhaust of equipment, the exhaust of construction hauling trips, and worker commuter trips. The construction phases include, site preparation, site grading, paving, building construction, and architectural coating. $MTCO_2e$ emissions during construction of the project are shown in Table 3.8-1.

Table 3.8-1: Construction Greenhouse Gas Emissions

Year	Pollutant	Wharfside Construction	Landside Construction[1]	Total $MTCO_2e$
2021	$MTCO_2e$	98.52	5.56	104.08
2022	$MTCO_2e$	77.15	263.30	340.45
Total $MTCO_2e$		**175.67**	**268.86**	**444.52**
Amortized Emissions based on 20-year lease				**22.23**

Notes:
1. Includes new sewer line extension
$MTCO_2e$ = metric tons of carbon dioxide equivalent
Source: Appendix A

As shown in Table 3.8-1, the proposed project's estimated maximum yearly construction emissions would be 104 and 340 $MTCO_2e$. Commercial projects are typically amortized over a 30- to 40-year lifespan; however, based on the 20-year lease for the project the emissions were amortized over 20 years. The amortized construction emissions are expected to be 22 $MTCO_2e$ per year.

Operational Emission Inventory

Long-term operational GHG emissions would result from project generated vehicular/truck traffic, onsite combustion of natural gas, off-site generation of electrical power over the life of the proposed project, the energy required to convey water to and wastewater from the project site, and the emissions associated with the hauling and disposal of solid waste from the project site.

Operational GHG emissions by source and operational year are shown in Table 3.8-2. The total project emissions are estimated to be 7,109.15 $MTCO_2e$ per year in 2023, which is below the project thresholds of significance. Therefore, the proposed project would have a less than significant GHG impact during operations.

Table 3.8-2: Unmitigated Project Operational GHG Emissions (Full Buildout Scenarios)

Source	$MTCO_2e$
Area	0.00
Energy	186.02
Mobile	5,913.33
Auto Carrier Vessels	848.77
Tug Vessels	138.80
Subtotal $MTCO_2e$	7,086.92
Amortized Construction Emissions	22.23
Total $MTCO_2e$ per year	7,109.15
Project Threshold of Significance	10,000
Exceed Threshold of Significance?	**No**

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 City has adopted two separate CAPs, the first being the Community CAP, and the second being the Municipal CAP, as well as a Climate Action and Resilience Plan. The Community CAP is focused on implementing strategies to reduce GHG emissions through green building design, renewable energy, transit-oriented development, and education. The Municipal CAP has been developed to address GHG emissions resulting from municipal operations and infrastructure. The Community CAP includes a goal of reducing County GHG emissions by 25 percent below 2005 levels by 2020 and 80 percent below 2005 levels by 2050, but has no mandatory provisions that would apply to the proposed project. The State of California has adopted regulations that apply to the proposed project that would help the City achieve its reduction goal. The proposed project would be subject to Title 24 energy efficiency standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. 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 and truck 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. The proposed project would not conflict with the City's Community CAP and regulations adopted by the State of California 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.

Impact GHG-3 The proposed project would not be subject to significant adverse effects because of global climate change?

Impact Analysis

This impact addresses CEQA Guidelines section 15126.2(a), which requires that an EIR analyze the significant effects of bringing development and people to the affected area. Section 15126.2 provides that a lead agency should analyze the effects of bringing development to an area that is susceptible to hazards such as flooding and wildfire, both as such hazards currently exist or may occur in the future. Several limitations apply to the analysis of future hazards, however. For example, such an analysis may not be relevant if the potential hazard would likely occur sometime after the projected life of the project (i.e., if sea-level projections only project changes 50 years in the future, a 5-year project may not be affected by such changes). Additionally, the degree of analysis should correspond to the probability of the potential hazard (CEQA Guidelines, Section 15143 [". . . significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence."]).

Although this document is not an EIR, the potential effects of climate change are a concern given the proximity to the San Joaquin River and are addressed below.

As previously discussed**,** climate change could result in environmental impacts in California. Although certain environmental effects are widely accepted to be a potential hazard to certain locations, such as rising sea level for low-laying coastal areas, it is currently infeasible to predict all environmental effects of climate change on any one location. Therefore, this analysis examines only the following potential impacts:

- Inundation of low-lying coastal areas by sea level rise
- Increased incidents and severity of wildfire events
- Reduced water availability

Sea Level Rise

Climate change could result in sea level rise (SLR) and increased flooding. SLR is already affecting much of California's coastal region, including the Southern California coast, the Central California open coast, and the San Francisco Bay and upper estuary. During the past century, sea levels along California's coast have risen about 7 inches. The rate of SLR observed at the gauges along the California coast is similar to the estimate for global mean sea level. According to the Legislative Analyst's Office (LAO), the magnitude of SLR is projected to be about half of one foot in 2030 and as much as seven feet by 2100. These estimates represent the range between how sea levels might

rise under two different climate change scenarios. The range between potential scenarios is greater in 2100, reflecting the increased level of uncertainty about the degree of climate change impacts the planet will experience further in the future.

During the original design of the project the Applicant originally used the mean sea level change estimate from the "State of California Sea-Level Rise Interim Guidance Document" (2009), developed by the Sea-Level Rise Task Force of the Coastal and Ocean Working of California Climate Action Team (CO-CAT) in the design of the new wharf deck structure. The California State Lands Commission requested that the deck be designed to the updated State of California Sea-Level Rise Guidance (updated 2018), developed by California Natural Resources Agency and California Ocean Protection Council (Guidance) to determine if the original design elevation was still acceptable. The Applicant commissioned a *Revised Review of Sea-Level Rise for RORO Operations at the Antioch Berth* (2019) (Appendix G). The original design considered a SLR of 2.0 feet with criteria from the Co-Cat. The new SLR Guidance resulted in a design of 1.9 feet for SLR, thus the original design remained compliant with updated guidelines.

The existing wharf deck is approximately 15.5 feet above Mean Lower Low Water (MLLW), which sets it 10.59 feet above Mean Higher High Water (MHHW). The new concrete deck elevation will be 12.0 feet above MLLW (7.09 feet above MHHW). Both the existing wharf and the new deck are connected back to land via ramps that slope to a consistent ground elevation of 10.6 feet above MLLW (5.69 feet above MHHW).

SLR guidance is continually being updated as evidenced by the LAO's recent estimation that SLR will be higher than expected and that there is a great deal of uncertainty associated with climate scenarios through 2100. However, based on current data, the analysis prepared for the project (Appendix G) showed that SLR would not impact the facility over the next 50 years through 2070.

The analysis found the projected sea-level change would set calm-water MHHW at 5.8 feet at the project site. The negative consequences of sea-level change would be most critical during a storm event including the effect of a large storm tide and runoff with elevated baseline sea-level. When combined with surge and waves there could potentially be an effect on the existing walkways, existing catwalks, and existing mooring dolphins, as well as the shoreline itself. This would mostly be due to splashing of water at the levels anticipated rather than overtopping. According to the analysis, 5.0 feet of combined surge and waves at this location is unlikely.

Inundation maps for 100-year storm events under no SLR show no inundation of the landside south of the top of bank (10.7 feet MLLW), and therefore, above the lowest point of the top of new deck, through the 0.5 meter (1.64 feet) SLR projection. At 3.28 feet of SLR combined with a 100-year storm, some puddling occurs south of the top of the bank, so the lowest part of the deck might be temporarily affected. However, this may only occur at SLR scenarios above the 2.0 feet. As such, stormwater events combined with SLR would not be anticipated to have a significant impact.

A facility such as the proposed project would require maintenance during the design life of the project (40 years) and potential upgrades and repairs at the end of its design life, which would be subject to future environmental review as permit and lease extensions are potentially requested. The current predicted SLR would not impact this facility over the next 50 years. Using the 2018 California Ocean Protection Council Sea-Level Rise Guidance publication, the likely range for a low risk aversion with high emission scenario the SLR would be 1.5 feet for 2060, and 1.9 feet for 2070. As SLR is better understood those revised elevations would be incorporated into future design changes. As currently designed, the proposed project would not be impacted by SLR through the year 2070 which is beyond the project's design life.

Wildfire

As discussed in Section 3.20, Wildfire, the areas of potential wildland fire hazard exist within the southern and unincorporated portions of the City, including rural, hilly terrain as well as the areas adjacent to or covered by natural grassland or brush (City of Antioch 2003b). The project site is in the northeast portion of the City and is currently vacant. Even though wildfires are expected to be exacerbated by climate change, the project site is not identified as an area of wildfire concern.

Reduced Water Availability

The City addressed potential water availability impacts because of climate change in its Climate Action and Resilience Plan (City of Antioch 2020c). The City has already begun taking actions to prepare for drought. The City is currently planning a desalination plant to adapt to higher salinity in the Delta. As snowpack shrinks, the desalination plant would provide large-scale resilience as Delta water becomes increasingly saline and perhaps non-potable.

Water conservation is also critical to adapting to drought and drought-like conditions. Implementing drought-resistant landscaping strategies and planting vegetation that does not need much water to survive can take pressure off water use for landscaping

purposes. As discussed in Section 3.19, Utilities, the proposed project would be required to comply with the water conservation requirements codified in Chapter 6-10 of the Antioch Municipal Code.

By 2040, the 2015 Urban Water Management Plan (UWMP) estimates that total potable water demand for the City would be 7,504 million gallons per year which equals approximately 20.6 million gallons per day (mgd) (City of Antioch 2016). The proposed project would represent a less than 0.01 percent increase in the total water demand to the City.

Given the anticipated low water demand of the proposed project and the requirement to comply with conservation measures, the proposed project would not represent a high water use that would be adversely impacted by reduced water availability. The City's implementation of strategies in its Climate Action Resilience Plan also addresses potential water availability challenges. Therefore, 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.

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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 or excessive noise 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, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.9.1 Environmental Setting

Hazardous materials, as defined by 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.

California Government Code Section 65962.5 requires the CalEPA 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 DTSC and the online GeoTracker database from the State Water Resources Control Board (SWRCB). These two databases include hazardous material release sites along with other categories of sites or facilities specific to each agency's jurisdiction. As discussed in Section 1.7, Site History, the project site operated as a containerboard and linerboard production facility from 1956 to 2002. Once the facility closed in 2002, most of the existing structures and underground pipelines were demolished and removed with regulatory oversight provided by DTSC. Site investigation and remediation activities were conducted in accordance with the Voluntary Environmental Oversight Agreement between Gaylord Container Corporation, DTSC, and CalEPA. Based on the site investigation and remediation activities, it was determined that the past paper mill activities resulted in the contamination of soil with PCBs. Accordingly, the project site was remediated to remove onsite sources of PCBs in soil and on March 2, 2011 a Removal Action Implementation Report was completed to document successful completion of the removal of PCBs. DTSC evaluated the Removal Action Implementation Report and determined that the site would not pose a threat to human health or the environment under residential land use. Therefore, DTSC determined no further action is necessary with respect to the investigation and remediation of hazardous substances at the project site. DTSC certified the site as a voluntary cleanup site on June 29, 2011 (DTSC 2011).

There are no public or private airports within 2 miles of the City limits, and there are no lands in the City that are within an airport land use plan (City of Antioch 2003b). The nearest public airports to the project site are the Byron Airport and the Buchanan Field Airport, located approximately 14 miles southeast and 16 miles west of the project site, respectively. The nearest private airport is the Funny Farm Airport, approximately 6 miles southeast of the project site in the City of Brentwood (Tollfree Airline 2021).

According to the California Department of Forestry and Fire Protection (CAL FIRE), the City is not located in a local or state fire hazard severity zone (CAL FIRE 2009). Additionally, the U.S. Forest Service Wildfire Hazard Potential map classifies the project site as "non-burnable" and the potential for wildfire to occur in the surrounding area as "very low" to "low" (USFS 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.

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

Construction

The proposed project would involve the development of a vehicle processing facility on a 38.9-acre site that is mostly paved for vehicle parking and developed with a one-story metal warehouse building and security guard station. It is also connected to an existing wharf located on the southern bank of the San Joaquin River.

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. The wharfside improvements would include

demolition of treated timber structures such as wooden piles and planking, which would be handled in accordance with applicable regulations and disposed of at a landfill approved to receive such material.

Construction activities would use and transport small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) to and from the project site as needed. Barges and tugboats that would dock at the wharf during construction would also use hazardous materials including petroleum products, lubricants, and solvents. 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. The barges and tugboats are subject to federal, state, and international regulations related to oil spill prevention and response. Additionally, contractors would be required to transport, store, and handle hazardous materials and toxic substances related to construction activities in accordance 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 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 CCR, Title 13); the California State Fire Marshal regulations (contained in CCR, Title 19); United States Department of Transportation regulations (CFR, Title 49); and USEPA regulations (contained in CFR, Title 40). The use of hazardous materials is also regulated by DTSC (CCR, Title 22, Division 4.5).

As discussed in Section 3.10, Hydrology and Water Quality, the proposed project would also be required to prepare a SWPPP for construction activities in accordance with the NPDES Construction General Permit. During construction, the SWPPP and applicable BMPs would be implemented as part of Mitigation Measure HYD-1 to reduce potential impacts from pollutants entering the City's water system. 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 with the implementation of Mitigation Measure HYD-1.

Operation

As an automotive logistics and processing facility, operation of the proposed project would include the use of marine vessels to ship new automobiles from overseas. The new automobiles would be unloaded from the marine vessels, stored, and processed at

the project site prior to transporting to dealerships throughout the San Francisco Bay Area. Project operations would require the routine transport, handling, storage, and use of hazardous materials such as solvents, lubricants, gasoline and additives, diesel fuel and additives, and other fluids and chemicals.

Operation of the marine vessels would be subject to navigation and navigable waters regulations (Title 33 of the CFR) to prevent and control the release of hazardous materials, maintain traffic control, and prevent collision with other vessels. Operation of the proposed project would also be subject to Title 40 of the CFR, which requires sites that handle any individual hazardous materials or mixture in excess of the following quantities: 55 gallons (liquid); 500 pounds (solid); or 200 cubic feet (gases) to prepare a Hazardous Materials Business Plan (HMBP). The proposed project would implement the HMBP as required by Mitigation Measure HAZ-1 and include measures for safe storage, transport, use, and handling of hazardous materials. The HMBP would also include a contingency plan that describes the proposed facility's emergency response procedures in the event of a hazardous materials release. The HMBP would be submitted to Contra Costa Health Services, which is the Certified Unified Agency for Contra Costa County.

As discussed in Section 3.10, Hydrology and Water Quality, operation of the proposed project would implement Mitigation Measure HYD-2, which requires implementation of a post-construction SWPPP in accordance with the NPDES Industrial General Permit. The post-construction SWPPP would identify the proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite. Additionally, operation of the proposed project would be required to implement Mitigation Measure HAZ-2 and prepare a Spill Prevention and Countermeasure Plan (SPCC). The SPCC would include BMPs to prevent the discharge of oil or other hazardous materials from entering into navigable waters or adjoining shorelines as required by Section 311(j)(1)(c) of the Clean Water Act. Therefore, operation of the proposed project would result in a less than significant impact related to the routine transport, use, disposal, or accidental release of hazardous materials with implementation of Mitigation Measures HAZ-1, HAZ-2, and HYD-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM HAZ-1 **Prepare and Implement a Hazardous Materials Business Plan.** The Applicant shall prepare a HMBP in accordance with CFR, Title 40. The

HMBP shall include inventory of any individual hazardous materials or mixture in excess of any of the following quantities: 55 gallons (liquid); 500 pounds (solid); or 200 cubic feet (gases). The HMBP would include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP shall also include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release. The HMBP shall be submitted to Contra Costa Health Services prior to occupancy and operation. The Applicant will provide documentation of submittal to the City's Community Development Department.

MM HAZ-2 **Prepare and Implement a Spill Prevention, Control and Countermeasure Plan.** A Spill Prevention, Control, and Countermeasure Plan (SPCC) shall be prepared in accordance with Section 311(j)(1)(C) of the Clean Water Act. The Applicant will develop and implement an SPCC Plan that describes oil handling operations, spill prevention practices, discharge or drainage controls, and the personnel, equipment and resources at the facility that are used to prevent oil spills from reaching navigable waters or adjoining shorelines. The SPCC Plan must describe and include the following elements:

- Operating procedures at the facility to prevent oil spills;
- Control measures (such as secondary containment) installed to prevent oil spills from entering navigable waters or adjoining shorelines; and
- Countermeasures to contain and cleanup the effects of an oil spill that has impacted navigable waters and adjoining shorelines.

The SPCC shall be submitted to Contra Costa Health Services prior to occupancy and operation. The Applicant will provide documentation of the submittal to the City's Community Development Department.

Mitigation Measures HYD-1 and HYD-2 are also required. Refer to Section 3.10, Hydrology and Water Quality, for complete details pertaining to these mitigation measures.

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

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 not located within 0.25-mile of an existing or proposed school. The nearest school is the Cornerstone Christian School, which is about 0.60-mile southwest of the project site. 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 and confined to construction areas and within existing roadways. Construction of the proposed project would comply with all applicable federal, state, and local laws and regulations pertaining to the transport, use, disposal, handling, and storage of hazardous materials to reduce the likelihood and severity of accidents during buildout of the project site. As such, project construction and operation would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school. 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-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

As discussed in Section 3.9.1, Environmental Setting, the DTSC EnviroStor database lists the project site as a certified voluntary cleanup site (DTSC 2011). On June 29, 2011, DTSC certified the site as a voluntary cleanup site and determined that the site would not pose a threat to human health or the environment under residential land use (DTSC 2011). The sewer line extension would occur within the City's right-of-way, in and adjacent to Wilbur Avenue, and is also not listed on a hazardous materials site. Therefore, 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 or excessive noise for people residing or working in the project area?**

Impact Analysis
The project site is not located within 2 miles of a public airport. The nearest public airports to the project site are the Byron Airport and the Buchanan Field Airport, located about 14 miles southeast and 16 miles west of the project site, respectively. The project site does not fall within an airport land use plan for either of these airports. Therefore, the proposed project would not result in a safety hazard or excessive noise levels for people residing or working in the project area. 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 proposed project would be required to comply with the Contra Costa County Emergency Operations Plan (Contra Costa County 2015). The Contra Costa County Emergency Operations Plan does not identify specific emergency evacuation routes.

However, operation of the proposed project would not result in the permanent modification to any of the surrounding roadways that would impair the Contra Costa County Emergency Operations Plan. All construction work is anticipated to occur within the project site and would not require road closures, alternate traffic or pedestrian routes, or parking closures. During final utility service connections, a TCP and an encroachment permit from the City would be implemented for any work along Wilbur Avenue. The TCP would identify all detours and appropriate traffic controls and would ensure adequate circulation and emergency access are provided during the construction phase. As such, 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 either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?**

Impact Analysis
Based on review of Fire Hazard Severity Zone maps developed by CAL FIRE, the project site is not within or near a state responsibility area and does not contain lands classified as very high fire hazard severity zones (CAL FIRE 2020). According to the General Plan EIR, the southern and unincorporated portions of the City are the most susceptible to wildland fire hazards because these areas contain rural, hilly terrain, and are adjacent to natural grasslands and brush (City of Antioch 2003b). The project site is in the northeast portion of the City and located in an urban area near commercial and industrial uses. The proposed project would be required to comply with the California Fire Code and all applicable fire safety standards set forth by the City to protect the proposed structures and future occupants from possible wildland fires. Additionally, the proposed project would rehabilitate and reuse the existing fire water loop and hydrants on site to serve the wharf structure, vehicle processing building, and vehicle staging areas. As such, 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.

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?; or	☐	☐	☒	☐
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

A watershed is the geographic area draining into a river system, ocean, or other body of water through a single outlet and includes the receiving waters. The project site is located in the East County Delta Drainage Watershed. This watershed is approximately 88 square miles and includes Contra Costa County's agricultural core along with a mix of grasslands, wetlands, municipal, and industrial uses. There are numerous irrigation

canals and channels throughout this area, which drain into Old River and the San Joaquin River (ECWMA 2019). Other principal waterways within the City include East Antioch Creek, West Antioch Creek, Markely Creek, Sand Creek, Marsh Creek, and Deer Creek (City of Antioch 2003b). In general, the creeks flow from the hills southwest of Antioch to the north and ultimately drain into the Delta, located north of the project site. The existing drainage system in Antioch is comprised primarily of channelized creeks fed by groundwater, surface runoff, and underground storm drains.

Groundwater

The City is located within the East Contra Costa Subbasin which is part of the larger San Joaquin Valley Groundwater Basin. The East Contra Costa Subbasin is drained by the San Joaquin River and Marsh Creek. The San Joaquin River flows northward into the Sacramento and San Joaquin Delta, which ultimately discharges into the San Francisco Bay (East Contra Costa Subbasin 2018). The City does not pump groundwater for municipal water supplies (City of Antioch 2003b). The state has designated the East Contra Costa Subbasin as a medium-priority basin per the Sustainable Groundwater Management Act. Therefore, preparation of a Groundwater Sustainability Plan (GSP) is required by January 31, 2022. In May 2017, the City formed a Groundwater Sustainability Agency to manage groundwater resources beneath and within City limits. Accordingly, the City is working with other local agencies to prepare a GSP (East Contra Costa Subbasin 2018).

Flooding

Most flooding in the City is caused by heavy rainfall, high tides from the San Joaquin River, and subsequent runoff volumes that cannot be adequately conveyed by the existing storm drainage system and surface water (City of Antioch 2003b). Areas subject to flooding in Antioch are mainly found adjacent to the San Joaquin River and tributary creeks. A 100-year flood hazard zone runs adjacent to the San Joaquin River. Flood hazard zones are identified on official Flood Insurance Rate Maps (FIRM) issued by the Federal Emergency Management Agency (FEMA). Most of the project site is in unshaded Zone X, which are areas of minimal flood hazard. However, the northern portion of the project site is within a shaded Zone X area, which are areas of moderate flood hazard as they are between the limits of the 100-year and 500-year flood zones. Additionally, the existing wharf structure is within Zone AE, which is identified as a Special Flood Hazard Area subject to inundation by the 1 percent annual chance flood (also known as the base flood), which has a 1 percent chance of being equaled or exceeded in any given year (FEMA 2015).

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 UWMP. Mapping tools provided by FEMA and the Department of Water Resources were also reviewed.

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 ground water quality?

Impact Analysis

Construction

Construction activities for the proposed landside and wharfside improvements would occur concurrently. The landside improvements would include the construction of a pre-engineered metal processing building, site clearing, grading, paving, and utility connections. The land improvements would disturb approximately 7.2 acres and require approximately 6,660 cubic yards of cut and approximately 4,110 cubic yards of fill, resulting in a net cut of 2,550 cubic yards. However, the proposed project would aim to balance the earthwork on the site. Construction activities associated with the landside improvements would be subject to the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2012- 0006-DWQ (Construction General Permit). The Construction General Permit includes the preparation of a SWPPP and incorporation of BMPs to control sedimentation, erosion, and hazardous materials from contacting stormwater, with the intent of preventing polluted runoff from leaving the project site. The proposed project would implement the SWPPP and applicable BMPs as part of Mitigation Measure HYD-1 to reduce potential water quality impacts during construction of the landside improvements to a less than significant level.

The wharfside improvements would include demolition of treated timber structures such as wooden piles and planking, concrete repair, installation of new steel and concrete

piles, concrete deck installation, new walkways, installation of new breasting and mooring dolphins, and construction of a stern ramp to roll-on/roll-off new automobiles. The proposed wharf improvements would disturb approximately 0.005 acres for the in-water improvements and approximately 0.2 acres for the over-water improvements. Demolition of the existing wharf components is not expected to result in a substantial release of contaminants. As discussed in Impact BIO-1, the proposed project would be required to implement Mitigation Measure BIO-1 and comply with the water quality requirements in permits issued from the Central Valley RWQCB, USACE, CDFW, NMFS, and USFWS to protect the aquatic environment surrounding the wharf.

The existing timber piles would either be pulled or cut at the mud line (for piles that cannot be extracted via pulling), which could re-suspend some bottom sediments and create localized and temporary turbidity plumes and associated water quality issues. In addition to turbidity, re-suspended sediments could result in slightly reduced dissolved oxygen and pH levels. Those reductions would be brief and localized and would therefore not be expected to cause substantial detrimental effects to biological resources. Additionally, the new steel piles would be installed using vibratory and hammer methods which could re-suspend some bottom sediments, thereby creating localized and temporary turbidity plumes and associated water quality issues. As discussed above, any such increases in turbidity, sediment contaminants, or nutrients would be temporary and would not result in substantial adverse effects on the biological environment or result in violations of water quality standards. Therefore, construction activities would have a less than significant impact on water quality with the implementation of Mitigation Measures HYD-1 and BIO-1.

Operation

Once completed, the proposed project would result in the operation of an automotive logistics and processing facility. Operation of the proposed project would be subject to the NPDES Statewide General Permit for Stormwater Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ (Industrial General Permit) from the State Water Resources Control Board. As such, the proposed project would obtain coverage under the Industrial General Permit as required by Mitigation Measure HYD-2. The implementation of Mitigation Measure HYD-2 would require the Applicant and facility operators to eliminate unauthorized non-stormwater discharges, develop and implement an operational SWPPP, and perform monitoring of stormwater discharges and authorized non-stormwater discharges. For any industrial discharges to the City's wastewater system, review and approval of a separate discharge permit to protect treatment plant functioning and local water quality would be required in accordance with

Chapter 6-4, Sewer System, of the Antioch Municipal Code. The City would also include review of the design and treatment of any wastewater generated by the proposed project before it is approved to connect to the City's wastewater collection system.

In addition, operation of the proposed project would be required to comply with the Contra Costa Clean Water Program Stormwater C.3 requirements by implementing a Stormwater Control Plan in accordance with Chapter 6-9, Stormwater Management and Discharge Control, of the Antioch Municipal Code. The preliminary Stormwater Control Plan for the proposed project is provided in Appendix D. As discussed in the preliminary Stormwater Control Plan, the proposed project would provide two bioretention areas in the eastern and western portions of the project site totaling approximately 12,200 square feet. The proposed bioretention areas would collect, treat, and convey stormwater runoff from the project site to the City's stormwater system. All bioretention areas would be sized based on the design requirements of the Contra Costa County Clean Water Program Stormwater C.3 Guidebook. The Stormwater Control Plan would be submitted to the City for review and approval.

Overall, the proposed project has the potential to affect water quality through pollutant discharges in stormwater runoff during construction and operation, and through discharges to the City wastewater system. The proposed project would implement Mitigation Measures HYD-1, HYD-2, and BIO-1 to ensure that impacts on water quality during construction and operation would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM HYD-1 **Prepare and Implement a SWPPP.** 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 SWPPP shall be prepared for the project to reduce the potential for water pollution and sedimentation from proposed 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 Waste Discharge Requirements of the Central Valley RWQCB Permit.

MM HYD-2 **Obtain Industrial General Permit.** Prior to operation, the Applicant shall obtain coverage under the Industrial General Permit (Order No. 2014-0057-DWQ). Per the requirements of the State Water Resources Control

Board, the Applicant and facility operators would be required to prepare an operational SWPPP, eliminate unauthorized non-stormwater discharges, and perform monitoring of stormwater discharges and authorized non-stormwater discharges. The operational SWPPP shall comply the City's sewer discharge requirements, as specified in Chapter 6-4, of the Antioch Municipal Code, and the Waste Discharge Requirements of the Central Valley RWQCB Permit.

Mitigation Measure BIO-1 is also required. Refer to Section 3.4, Biological Resources, for complete details pertaining to this mitigation measure.

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 East Contra Costa Subbasin, which the state has designated as a medium-priority basin per the Sustainable Groundwater Management Act. The GSP for the East Contra Costa Subbasin is still under development and has not been approved by the City's Groundwater Sustainability Agency (East Contra Costa Subbasin 2018). The City does not pump groundwater for municipal water supplies; therefore, operation of the proposed would not rely on groundwater.

Historically, groundwater has been encountered beneath the project site at depths ranging from 7.24 bgs, near the river, to 26.28 feet bgs in the southern portion of the site (PES Environmental, Inc. 2011). During construction, excavation activities for the landside improvements are expected to be relatively shallow for the installation of utilities; however, due to the varying depth there is potential to encounter groundwater. If the proposed project encounters groundwater 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 and project contractor would be required to comply with the waste discharge requirements of the Central Valley RWQCB. Additionally, Mitigation Measure GEO-1 would require the project contractor to prepare a dewatering plan. The dewatering plan would identify the selected temporary dewatering system for the proposed project. If shoring methods are implemented for any excavations, the

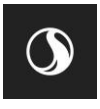
project contractor would also be required to prepare shoring plans in accordance with the California Division of Occupational Safety and Health regulations and the City's engineering standards and specifications. The dewatering plan would be submitted to the City for review and approval prior to the 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-1.

The project site contains approximately 31.3 acres (1,363,920 square feet) of impervious paved surface and approximately 7.6 acres of pervious surface. Operation of the proposed project would create new impervious surface but would provide approximately 12,200 square feet of pervious surface in accordance with the requirements of the Contra Costa County C.3 Stormwater Standards in Chapter 6-9, Stormwater Management and Discharge Control, of the Antioch Municipal Code. The new impervious surface would consist of two bioretention areas in the eastern and western portions of the project site to control, collect, and treat stormwater prior to entering the piped storm drain system. As such, the proposed project would not decrease the amount of groundwater recharge or substantially interfere with local groundwater recharge from existing conditions. Impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure GEO-1 is required. Refer to Section 3.7, Geology and Soils, for complete details pertaining to this mitigation measure.

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; or

iv) Impede or redirect flood flows?

Impact Analysis

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

The proposed project would not substantially alter the drainage pattern of the project site as it is mostly paved for vehicle parking and developed with a warehouse building, security guard station, and inactive rail spur. During construction, the proposed project would disturb approximately 7.2 acres of the site and require approximately 6,660 cubic yards of cut and approximately 4,110 cubic yards of fill, resulting in a net cut of 2,550 cubic yards. However, the proposed project would aim to balance the earthwork on the site. Ground-disturbing and earth-moving activities could increase the potential for erosion on or off-site. As discussed in Impact HYD-1, 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.

Once completed, the proposed project would implement Mitigation Measure HYD-2 and obtain coverage under the NPDES Industrial General Permit prior to operation. The implementation of Mitigation Measure HYD-2 would require the Applicant to prepare an operational SWPPP, which would eliminate unauthorized non-stormwater discharges and require monitoring of stormwater discharges and authorized non-stormwater discharges. Therefore, with implementation of

Mitigation Measures HYD-1 and HYD-2, 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 currently contains approximately 31.3 acres (1,363,920 square feet) of impervious surface and approximately 7.6 acres of pervious surface. The proposed project would not create new impervious surface, which would increase on- or off-site flooding at the project site. Currently, stormwater at the project site flows northwest to an onsite stormwater detention facility, which is connected to a stormwater outfall pipe that discharges into the San Joaquin River. The proposed project would construct a new storm drain line and stormwater inlet in the central portion of the project site to tie into the existing onsite storm drain system. In accordance with the Contra Costa County C.3 Stormwater Standards, the proposed project would also provide two bioretention areas on the eastern and western portions of the project site totaling approximately 12,200 square feet. The bioretention areas would collect impervious surface runoff prior to entering the piped storm drain system and control the volume of stormwater at the project site to reduce the potential for flooding. 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 discussed above, the project site contains approximately 31.3 acres (1,363,920 square feet) of impervious surface and approximately 7.6 acres of pervious surface. Operation of the proposed project would not create new impervious surface, and therefore would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems.

The proposed project would construct a new storm drain line and stormwater inlet in the central portion of the project site to tie into the existing onsite storm drain system. The proposed project would also comply with the Contra Costa Clean Water Program Stormwater C.3 requirements and provide two bioretention areas in the eastern and western portions of the project site totaling

approximately 12,200 square feet. The proposed bioretention areas would collect, treat, and convey stormwater runoff from the project site to the onsite stormwater system. All bioretention areas would be sized based on the design requirements of the Contra Costa County Clean Water Program Stormwater C.3 Guidebook. 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.

iv. Impede or redirect flood flows

According to FEMA Flood Insurance Rate Map #06013C0144G, most of the project site and the surrounding area are located in Zone X (FEMA 2015). However, due to the project site being located along the San Joaquin River, the northern portion of the project site and the existing wharf are within a 100-year floodplain. The proposed project would not place structures within the northern portion of the project site. Additionally, the existing wharf structures would mostly occur within its existing footprint, except for the new stern ramp that would be constructed from the wharf to the shoreline to support loading and unloading operations. The height of the wharf structure would also remain 15 feet and extend above the base flood elevation of 11 feet. As such, the proposed project would not substantially impede or redirect flood flows as compared to existing conditions and impacts would be less than significant.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1 and HYD-2 are required. Refer to Impact HYD-1 for complete details pertaining to these mitigation measures.

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
Tsunamis typically affect coastlines and areas up to 0.25 mile inland. The project site is more than 50 miles from the coastline and the Pacific Ocean, and therefore would not be subject to tsunami hazards. A seiche affects locations adjacent to larger water bodies such as lakes or reservoirs. The project site is not located near any such water

body but is adjacent to the San Joaquin River. As identified in the General Plan EIR, the San Joaquin River is not a closed body of water, and risk from seiche would be low (City of Antioch 2003b). Most of the project is located within FEMA Flood Zone X, which consists of areas not located within a 100-year or 500-year flood zone. However, the proposed project would involve improvements to the existing wharf structure which is located within Zone AE and is subject to inundation by the 1 percent annual chance flood (FEMA 2015). The wharf structure would primarily occur within its existing footprint, except for the new stern ramp that would be constructed from the wharf to the shoreline to support loading and unloading operations. The height of the wharf structure would remain 15 feet and extend above the base flood elevation of 11 feet.

Furthermore, the proposed project would implement Mitigation Measures HYD-1 and HYD-2 which requires implementation of a SWPPP during construction and operation to control the release of pollutants from the project site. As such, impacts related to inundation by seiche, tsunami, or flood flows would be less than significant with implementation of Mitigation Measures HYD-1 and HYD-2.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1 and HYD-2 are required. Refer to Impact HYD-1 for complete details pertaining to these mitigation measures.

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

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

Impact Analysis
The State Department of Water Resources identified the East Contra Costa Subbasin as a medium-priority basin. The City formed a Groundwater Sustainability Agency in May 2017 to manage groundwater resources beneath and within City limits. Accordingly, the City is working with other local agencies to prepare a GSP by January 31, 2022 (East Contra Costa Subbasin 2018). The GSP for the East Contra Costa Subbasin is still under development and has not been approved. Therefore, the proposed project would not conflict with or obstruct implementation of a sustainable groundwater management plan.

As discussed above, the proposed project does not plan to draw groundwater from the site and would not substantially deplete groundwater supplies. The proposed project is required to comply with the policies and objectives of the Water Quality Control Plan for the Central Valley RWQCB. As required by Mitigation Measures HYD-1 and HYD-2 the proposed project would obtain coverage under the NPDES General Construction Permit and Industrial General Permit. Compliance with these regulations would require the proposed project to prepare a construction SWPPP and post-operation SWPPP that includes BMPs that meet the requirements of the Central Valley RWQCB's Water Quality Control Plan. If construction activities encounter groundwater, the proposed project would implement Mitigation Measure GEO-1 and prepare a dewatering plan in accordance with the waste discharge requirements of the Central Valley 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.

The implementation of Mitigation Measures HYD-1, HYD-2 and GEO-1 would reduce potential impacts to water quality to a less than significant level and ensure that the proposed project would not conflict with or obstruct implementation of the Water Quality Control Plan for the Central Valley RWQCB.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures HYD-1, HYD-2, and GEO-1 are required. Refer to Impact HYD-1 for complete details pertaining to Mitigation Measures HYD-1 and HYD-2. Refer to Section 3.7, Geology and Soils, for complete details pertaining to Mitigation Measure GEO-1.

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 proposed project is in an industrial part of the City, adjacent to the San Joaquin River. The project site is bordered by industrial uses to the east and west; the San Joaquin River to the north; and Wilbur Avenue to the south. Other land uses surrounding the project site include industrial and commercial uses to the south, beyond which consists of single-family residences and agricultural lands. The project site is within the City's Eastern Waterfront Employment Focus Area, which is intended to provide employment opportunities and to assist the City in achieving its goal of a balance between local housing and employment. The project site is designated General Industrial by the General Plan and zoned Heavy Industrial (M-2).

The 38.9-acre project site consists of two vacant parcels identified as APNs 051-020-006 and 051-020-012. The project site is primarily paved for vehicle parking and is developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. The project site is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. The existing wharf is located on lands managed by the California State Lands Commission.

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 the Antioch 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 project site is in a fully developed industrial area. The project site is bordered by industrial uses to the east and west; the San Joaquin River to the north; and Wilbur Avenue to the south. The project site is primarily paved for vehicle parking and is developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. The rail spur is no longer connected to the main rail line located to the south, and the proposed project does not include the use of the rail line. The project site is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. Trucks and employee vehicles would access the project site from the existing 30-foot-wide gated entrance on Wilbur Avenue. Additionally, vessels would access the project site from the San Joaquin River and dock at the wharf. The proposed project would not permanently modify the existing roadway network or vessel routes. The proposed project would be accommodated by existing roadways and routes and would not preclude access to the surrounding area. 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

The primary land use planning documents that govern the project site are the City's General Plan and Zoning Code. The project site is within the City's Eastern Waterfront Employment Focus Area. It is designated General Industrial by the General Plan and zoned Heavy Industrial (M-2). The proposed project is consistent with the General Industrial land use designation, which is intended for a range of industrial businesses, including uses, which, for reasons of potential environmental effects are best segregated from other, more sensitive, land uses, such as residential neighborhoods. Uses permitted include light manufacturing and assembly, general manufacturing and

assembly, research and development, operable vehicle storage, personal storage, light and general storage and distribution, building contractor's offices and yards, boating and related activities, and open space (City of Antioch 2003a). Additionally, the proposed project would be consistent with the intent of the Eastern Waterfront Employment Focus Area as it would provide new employment opportunities in this part of the City.

The proposed project would be subject to the development standards for the Heavy Industrial (M-2) zoning district. The Heavy Industrial (M-2) zoning district allows heavy industrial uses, which may generate adverse impacts on health or safety. Automobile storage facilities are conditionally allowed uses in the Heavy Industrial (M-2) zoning district; therefore, the proposed project would require approval of a Use Permit. According to the City's Zoning Code, the maximum height for buildings within the Heavy Industrial (M-2) zoning district is 70 feet. The proposed project would construct a pre-engineered vehicle processing building of approximately 25,328 square feet with a maximum height of 24 feet and 3 inches. Therefore, the proposed project would meet the maximum height of the Heavy Industrial (M-2) zoning district and would not vary from the zoning code requirements relative to height.

The proposed wharf improvements are located on lands owned and managed by the California State Lands Commission. As discussed in Section 1.10, Potential Responsible and Trustee Agencies, the California State Lands Commission would have discretionary approval for project activities that will require California State Lands Commission approval or will affect resources entrusted to the California State Lands Commission. The California State Lands Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The proposed project's lease agreement would be subject to the terms and obligations of the California State Lands Commission's management of tidelands and submerged lands.

As such, with approval of the Use Permit and compliance with the requirements of the lease agreement with California State Lands Commission, the proposed project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding an environmental effect, 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.

3.12 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 classified MRZ-2 by the State Geologist that would be of 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 Mining and 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 project site is in an industrial part of the City and is currently vacant. It is primarily paved for vehicle parking and is developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. The project site is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. According to the City's General Plan EIR, none of the areas identified in the General Plan as available for new development contain known mineral resources that would be of value to the region and residents of the state (City of Antioch 2003b).

3.12.2 Methodology

The following analysis is based on a review of the General Plan, General Plan EIR and the DOC's Division of Mine Reclamation mineral lands classification maps.

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 classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the State?

Impact Analysis

According to the DOC's Mineral Lands Classification map of Aggregate Resources, the project site is in an area designated MRZ-2 as well as MRZ-3 (DOC 1982). MRZ-2 zones are classified as areas where adequate information indicated that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. MRZ-3 zones are areas containing mineral deposits; however, the significance of which cannot be evaluated from available data.

The project site is primarily paved and developed with a one-story metal warehouse building of approximately 5,000 square feet, a security guard station, and an inactive rail spur. It is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. No mineral extraction operations exist on the project site, and mineral extraction is not included as part of the proposed project. Furthermore, according to the City's General Plan EIR, areas in the City that have been identified for new development do not contain known mineral resources that would be of value to the region or residents of the state (City of Antioch 2003b). Therefore, 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 recovery site by the General Plan, the General Plan EIR, or by any specific plan or other land use plan (City of Antioch 2003b). 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.

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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
	-80-	Garbage Disposal at 3 Feet
Noisy urban area, daytime		
Gas lawnmower, 100 Feet	-70-	Vacuum Cleaner at 10 Feet
Commercial area		Normal Speech at 3 Feet
Heavy traffic at 300 Feet	-60-	
		Large business office
Quiet urban daytime	-50-	Dishwasher in next room
Quiet urban nighttime	-40-	Theater, large conference room (Background)
Quiet suburban nighttime		
	-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 (Leq), the minimum and maximum sound levels (Lmin and Lmax, respectively), percentile-exceeded sound levels (such as L10, L20), the day-night sound level (Ldn), and the community noise equivalent level (CNEL). Ldn and CNEL values often differ by less than 1 dB. As a matter of practice, Ldn and CNEL values are equivalent and are treated as such in this

assessment. Table 3.13-2 defines sound measurements and other terminology used in this section.

Table 3.13-2: Definition of Sound Measurement

Sound Measurements	Definition
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.
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 (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded xx% of a specific time period. L10 is the sound level exceeded 10% of the time. L90 is the sound level exceeded 90% of the time. L90 is often considered to be representative of the background noise level in a given area.
Day-Night Level (Ldn)	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 PM to 7:00 AM
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 PM to 10:00 PM and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 PM to 7:00 AM

Sound Measurements	Definition
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/second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: FHWA 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. These subjective reactions to changes in noise levels were developed based on 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 1–2 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

Vibration is like noise such that vibration 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 inches per second (in/sec) of peak particle velocity (PPV). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of 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 for continuous/frequent sources.

Table 3.13-3: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

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.
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	0.2	0.12
Historic and some old buildings	0.5	0.25
Older residential structure	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

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 will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will 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: Vibration Source Levels for Select Construction Equipment

Equipment	PPV at 25 ft.
Vibratory roller	0.210
Large bulldozer	0.089
Loaded trucks	0.076
Small bulldozer	0.003

Notes:
PPV = 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:

PPV = PPVref x (25/Distance)^1.5

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 or state noise standards are directly applicable to this 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.

Local Regulations

City of Antioch General Plan

Section 11.6 “Noise Objectives and Policies” in the General Plan identifies noise standards for noise-sensitive land uses affected by transportation and non-transportation noise sources. Paragraph 11.6.1 “Noise Objective” states the following:

> *“Achieve and maintain exterior noise levels appropriate to planned land uses throughout Antioch, as described below:*
>
> - *Residential*
> *Single Family: 60 dB(A) CNEL within rear yards*
> *Multi Family: 60 dB(A) CNEL within interior open space*
> - *Schools*
> *Classrooms: 65 dB(A) CNEL*
> *Play and Sports Areas: 70 dB(A) CNEL*
> - *Hospitals, Libraries: 60 dB(A) CNEL*
> - *Commercial/Industrial: 70 dB(A) CNEL at the front setback”*

The General Plan also lists several policies relating to noise including the following:

- *“Maintain a pattern of land uses that separates noise-sensitive land uses from major noise sources to the extent possible, and guide noise-tolerant land uses into the noisier portions of the Planning Area.*
- *Minimum motor vehicle noise in residential areas through property route location and sensitive roadway design:*
  - *Provide planned industrial areas with truck access routes separate from residential areas to the maximum feasible extent.*
- *Where new development (including construction and improvement of roadways) is proposed in areas exceeding the noise levels identified in the General Plan Noise Objective, or where the development of proposed uses could result in a significant increase in noise, require a detailed noise attenuation study to be prepared by a qualified acoustical engineer to determine appropriate mitigation and ways to incorporate such mitigation into project design and implementation.*

- *When new development incorporating a potentially significant noise generator is proposed, require noise analyses to be prepared by a qualified acoustical engineer. Require the implementation of appropriate noise mitigation when the proposed project will cause new exceedances of General Plan noise objectives, or an audible (3.0 dB(A)) increase in noise in areas where General Plan noise objectives are already exceeded as the result of existing development.*

- *In reviewing noise impacts, utilize site design and architectural design features to the extent feasible to mitigate impacts on residential neighborhoods and other uses that are sensitive to noise. In added to sound barriers, design techniques to mitigate noise impacts may include, but are not limited to:*

    - *Increased building setbacks to increase the distance between the noise source and sensitive receptor.*

    - *Orient buildings which are compatible with higher noise levels adjacent to noise generators or in clusters to shield more noise sensitive areas and uses.*

    - *Orient delivery, loading docks, and outdoor work areas away from noise-sensitive uses.*

    - *Place noise tolerant uses, such as parking areas, and noise tolerant structures, such as garages, between the noise source and sensitive receptors.*

- *Where feasible, require the use of noise barriers (walls, berms, or a combination thereof) to reduce significant noise impacts.*

- *Ensure that construction activities are regulated as to hours of operation in order to avoid or mitigate noise impacts on adjacent noise-sensitive land uses.*

- *Require proposed development adjacent to occupied noise sensitive land uses to implement at construction-related noise mitigation plan. This plan would depict the location of construction equipment storage and maintenance areas, and document methods to be employed to minimize noise impacts on adjacent noise sensitive land uses.*

- *Require that all construction equipment utilize noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.*

- *Prior to the issuance of any grading plans, the City shall condition approval of subdivisions and non-residential development adjacent to any developed/occupied noise-sensitive land uses by requiring applicants to submit a construction-related noise mitigation plan to the City for review and approval. The plan should depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the project through the use of such methods as:*
    - *The construction contractor shall use temporary noise-attenuation fences, where feasible, to reduce construction noise impacts on adjacent noise sensitive land uses.*
    - *During all project site excavation and grading on site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.*
    - *The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.*
    - *The construction contractor shall limit all construction-related activities that would result in high noise levels to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. No construction shall be allowed on Sundays and public holidays.*
- *The construction-related noise mitigation plan required shall also specify that haul truck deliveries be subject to the same hours specified for construction equipment. Additionally, the plan shall denote any construction traffic haul routes where heavy trucks would exceed 100 daily trips (counting those both to and from the construction site). To the extent feasible, the plan shall denote haul routes that do not pass sensitive land uses or residential dwellings. Lastly, the construction-related noise mitigation plan shall incorporate other restrictions imposed by the City."*

City of Antioch Municipal Code

Chapter 5, Article 19 "Noise Attenuation Requirements" in the Antioch Municipal Code states the following regarding stationary noise sources in Paragraph (A):

> *"(A) Stationary noise sources. Uses adjacent to outdoor living areas (e.g., backyards for single-family homes and patios for multi-family units) and parks*

shall not cause an increase in background ambient noise which will exceed 60 CNEL."

Paragraph (D) in the same Article states the following:

"(D) Noise attenuation. The city may require noise attenuation measures be incorporated into a project to obtain compliance with this section. Measures outlined in the noise policies of the General Plan should be utilized to mitigate noise to the maximum feasible extent."

Paragraphs 5.17.04 "Heavy Construction Equipment Noise" and 5.17.05 "Construction Activity Noise" within the Antioch Municipal Code states the following:

"5-17.04 HEAVY CONSTRUCTION EQUIPMENT NOISE.

A. For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

HEAVY CONSTRUCTION EQUIPMENT. Equipment used in grading and earth moving, including diesel engine equipped machines used for that purpose, except pickup trucks of one ton or less.

OPERATE. Includes the starting, warming up, and idling of heavy construction equipment engines or motors.

B. It shall be unlawful for any person to operate heavy construction equipment during the hours specified below:

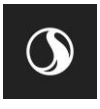
1) On weekdays prior to 7:00 a.m. and after 6:00 p.m.

2) On weekdays within 300 feet of occupied dwelling space, prior to 8:00 a.m. and after 5:00 p.m.

3) On weekends and holidays, prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from the occupied dwelling.

§ 5-17.05 CONSTRUCTION ACTIVITY NOISE.

A. As used in this section, CONSTRUCTION ACTIVITY means the process or manner of constructing, building, refurbishing, remodeling or demolishing a structure, delivering supplies thereto and includes, but is



not limited to, hammering, sawing, drilling, and other construction activities when the noise or sound therefrom can be heard beyond the perimeter of the parcel where such work is being performed. The term CONSTRUCTION ACTIVITY also includes the testing of any audible device such as a burglar or fire alarm or loudspeaker. CONSTRUCTION ACTIVITY does not include floor covering installation or painting when done with non-powered equipment.

B. It shall be unlawful for any person to be involved in construction activity during the hours specified below:

1) On weekdays prior to 7:00 a.m. and after 6:00 p.m.

2) On weekdays within 300 feet of occupied dwellings, prior to 8:00 a.m. and after 5:00 p.m.

3) On weekends and holidays, prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from the occupied dwellings.

C. In addition to the penalties provided by this code, authorized employees may issue "Stop Work Orders" when a violation of this section or § 5-17.04 has occurred. If such a Stop Work Order is issued, it shall not be released until the holder of the building permit provides assurance that future violations will not occur."

The City Council delegates to the City Manager or designee the authority to grant a waiver of the restrictions in 5-17.04 and 5-17.05 for a specific project for a specific period of time."

Existing Noise Environment

The existing noise environment at the project site is referenced in the May 7, 2019 "Antioch Wharf Structural Upgrade Project Construction Noise and Vibration Assessment" document prepared by Illingworth & Rodkin, Inc (Appendix E). The project site is located offshore along the San Joaquin River at 2301 Wilbur Avenue. The existing wharf is surrounded by industrial and commercial facilities to the west, east and south, and the San Joaquin River to the north. The Gaylord Sports Fields and Antioch Youth Sports Complex are located 2,300 feet to the southwest. Single family residential units are located 2,600 feet to the southwest and 1,850 feet to the southeast. The

Sardis Unit of the Antioch Dunes National Wildlife Refuge is located approximately 1,400 feet to the west. All distances noted above are as measured from the wharf.

The noise environment at the site and in the surrounding areas results primarily from industrial activity of adjacent properties on shore and vessel traffic along the San Joaquin River. Local vehicle traffic along Wilbur Avenue and SR-160, and occasional railroad traffic would also contribute to the existing noise environment.

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.

As stated in the May 7, 2019 Illingworth & Rodkin report (Appendix E), the following criteria were used to evaluate the significance of environmental noise and vibration resulting from the project:

1. **Temporary Noise Increases in Excess of Established Standards**. A significant impact would be identified if project construction (or operation) would result in a substantial temporary increase in ambient noise levels at sensitive receivers in excess of the local noise standards contained in the General Plans or Municipal Codes. A significant temporary noise impact would be identified if construction would occur outside of the hours specified in the Municipal Codes or if construction- or operational-related noise would result in hourly average noise levels exceeding 60 dB(A) Leq at the property lines shared with residential land uses, and the ambient by at least 5 dBA Leq, for a period of more than one year.

2. **Generation of Excessive Groundborne Vibration**. A significant impact would be identified if the construction of the project would generate excessive vibration levels. Groundborne vibration levels exceeding 0.3 in/sec PPV would be considered excessive as such levels would have the potential to result in cosmetic damage to older buildings.

In addition, a Hydroacoustic Assessment was completed for the proposed project to determine temporary direct impacts to aquatic species from pile driving (Appendix B2). The results of the Hydroacoustic Assessment and temporary direct impacts to aquatic species is discussed in Section 3.4, Biological Resources. The following analysis includes discussion of indirect noise and vibration impacts to aquatic species.

3.13.3 Environmental Impact Analysis

This section discusses the potential impacts on 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 Noise Level Impacts

The proposed project is located along Wilbur Avenue, which would provide primary access to the project site via a 30-foot-wide gated entrance on the eastern end of the project site. Regional access to the project site would be provided primarily by SR-160.

Traffic accessing the site via SR-160 and Wilbur Avenue would not directly pass any noise sensitive receptors. Therefore, noise generated by traffic associated with the proposed project would have a less than significant impact on the community.

Project Fixed-Source Noise

Typical processing and industrial building construction would involve new mechanical equipment, such as exhaust fans and rooftop air conditioning units. This equipment would generate noise that would radiate to the neighboring properties. The noise from this equipment would be required to comply with the maximum noise levels listed in Paragraph 11.6.1 “Noise Objective” in the General Plan and Chapter 9-5, Article 19 “Noise Attenuation Requirements”, Paragraph (A) in the Antioch Municipal Code.

Thus, the onsite equipment would be designed to incorporate measures, such as shielding and/or appropriate attenuators as required, to reduce noise levels that may affect the nearby single-family residential properties. Therefore, the impact of fixed-source noise on the neighboring properties would be less than significant.

Project Operational Noise

Once the project is functioning, noise would be generated from wharf activity as well as from operation of the vehicle processing building. The closest residential receptors are located about 1,050 feet southeast of the new vehicle processing building.

The pre-engineered vehicle processing building includes an open bay for six vehicle processing lanes. Each vehicle processing bay would be secured with a metal coiling door which may remain open during operation of the building. Noise from the activity within the vehicle processing building would propagate to the surrounding neighborhood.

Tables 4-13 and 4-14 in the FTA Transit Noise and Vibration Impact Assessment Manual can be used to estimate the noise generated from the vehicle processing building for this project. Assuming the noise generated from the vehicle processing building is similar to that of a bus system operating facility, assuming a “worst-case” condition of approximately 100 vehicles accessing the facility and 30 vehicles processed per peak hour and using the reference noise levels and equations in Tables 4-13 and 4-14, a noise level of 55 dB(A) Leq (1-Hour) is estimated at the closest residential receptor from the operation of the facility. This level would be below the requirements for residential outdoor spaces in Paragraph 11.6.1 “Noise Objective” in the General Plan and Chapter 9-5, Article 19 “Noise Attenuation Requirements”, Paragraph (A) in the Antioch Municipal Code. Therefore, the impact from noise generated from the operation of the facility would be less than significant.

Short-Term Construction Noise

As stated in the May 7, 2019 Illingworth and Rodkin study, neither the City of Antioch nor the State of California specify quantitative thresholds for the impact of temporary increases in noise due to construction. The threshold for speech interference indoors is 45 dB(A). Assuming a 15 dB(A) exterior-to-interior reduction for standard residential construction and a 25 dB(A) exterior-to-interior reduction for standard commercial construction, this would correlate to an exterior threshold of 60 dB(A) Leq at residential land uses. Additionally, temporary construction would be substantial to surrounding land uses if the ambient noise environment increased by at least 5 dB(A) Leq for an extended period. Therefore, the temporary construction noise impact would be considered significant if project construction activities exceeded 60 dB(A) Leq at nearby residences and exceeded the ambient noise environment by 5 dB(A) Leq or more for a period longer than one year.

Construction activities would include structural and operational safety repairs and improvements, demolition of structures without replacement, demolition and replacement of existing structures, and new construction and repairs. The proposed project would include construction with crane barges, material barges, tugboats, vibratory hammers, and impact hammers. A vibratory hammer would be used for both

the removal and installation of piles, whereas the impact hammer would be used only to drive concrete piles and complete the installation of new steel piles after the vibratory hammers has driven piles to refusal.

Construction equipment noise varies greatly depending on the construction activity performed, type and specific model of equipment, and the condition of equipment used. Typical noise levels for different construction equipment at a distance of 50 feet are shown in Table 3.13-6.

Table 3.13-6: Construction Equipment, 50-foot Noise Emission Limits

Equipment Category	L_{max} Level (dBA)[1,2]	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor[3]	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous

Equipment Category	L_{max} Level (dBA)[1,2]	Impact/Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous

Notes:
[1] Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time constant.
[2] Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.
[3] Portable Air Compressor rated at 75 cfm or greater and that operated at greater than 50 psi.

The levels in Table 3.13-6 are consistent with construction noise levels calculated for the project in the Federal Highway Administration Roadway Construction Noise Model (RCNM), including the anticipated equipment that would be used for each phase of the project. Most demolition and construction noise ranges from 80 to 90 dB(A) at 50 feet from the source. Construction-generated noise levels drop off at a rate of about 6 dB(A) per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dB(A) noise reduction at distant receptors, however, the effects of intervening shielding were not accounted for in the calculations.

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities,

the distance between construction noise sources and noise-sensitive receptors, any shielding provided by intervening structures or terrain, and ambient noise levels. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time.

Construction activities would include demolition, site preparation, grading and excavation, trenching and foundation, building with a vibratory pile driver, building with an impact pile driver, architectural coating, and paving. The in-water work is expected to last 8 months. All work would occur between 7:00 AM and 6:00 PM on weekdays and between 9:00 AM and 5:00 PM on weekends and holidays. Work on structures raised above the water may occur outside of this window, supported by construction barges as needed.

For each phase, the equipment is summarized in Table 3.13-7 in hourly average noise levels. Noise levels are reported at a reference distance of 50 feet, as well as at distances to the nearest receptors. The hourly average noise level is calculated by an energy summation of the hourly average noise levels for each piece of equipment. Therefore, with more equipment operating simultaneously, the combined hourly average noise level may be greater than the maximum instantaneous noise level. The noise levels summarized in Table 3.13-7 during each phase would occur over a span of four acres in size, including the wharf itself, surrounding waters, and portions of the adjacent shoreline. Assuming “worst-case” scenario conditions, where each piece of equipment listed in Table 3.13-7 (per phase) would operate simultaneously, the estimated noise levels at 50 feet propagated from the edge of the construction site to the nearest property lines of the surrounding noise-sensitive receptors.

Table 3.13-7: Summary of Construction Nosie Levels at the Nearest Receptors

Phase	Estimated Noise Level at Nearby Land Uses, dBA Leq			
	Reference Level (50 ft.)	Southeast Residential Receptor (1,850 ft.)	Southwest Sports Fields (2,300 ft.)	Southwest Residential Receptor (2,600 ft.)
Demolition	85	54	52	51
Site Preparation	83	52	50	49
Grading/ Excavation	84	53	51	50

Phase	Estimated Noise Level at Nearby Land Uses, dBA Leq			
	Reference Level (50 ft.)	Southeast Residential Receptor (1,850 ft.)	Southwest Sports Fields (2,300 ft.)	Southwest Residential Receptor (2,600 ft.)
Trenching/ Foundation	77	46	44	43
Building – Vibratory Pile Driving	94	63	61	60
Building – Impact Pile Driving	95	64	62	61
Building – Architectural Coating	75	44	42	41
Paving	81	50	48	47

The construction of the vehicle processing building would be approximately 1,050 feet away from the southeast residential receptor. Assuming pile driving is not required for the construction of the vehicle processing building, the construction work of the process building would be included under the demolition, site preparation, grading/excavation, trenching/foundation, building – architectural coating, and paving phases. Accounting for distance attenuation as calculated by the RCNM program, the construction activity would be about 5 dB(A) louder at the southeast residential receptor due to the construction of the vehicle processing building. Therefore, construction noise levels at the southeast residential receptor from the vehicle processing building were calculated as follows:

- Demolition – 59 dB(A)
- Site Preparation – 57 dB(A)
- Grading/Excavation – 58 dB(A)
- Trenching/Foundation – 51 dB(A)
- Building – Architectural Coating – 49 dB(A)
- Paving – 55 dB(A)

Based on the results of Table 3.13-7 and the list above, the nearest noise-sensitive receptors would be exposed to temporary construction noise in excess of 60 dB(A) Leq only during pile driving. Since the total time of the pile driving activity for the wharf improvements is expected to only occur 30 days out of the 8-month construction period, the temporary noise increase would be considered less than significant.

As discussed in Section 3.4, Biological Resources, the in-water work associated with the proposed wharf improvements may cause indirect noise impacts to aquatic species present in the waters surrounding the wharf. The proposed project would be required to implement Mitigation Measure BIO-1, which would require underwater sound monitoring be performed during pile driving activities and require the use of bubble curtains to reduce indirect construction noise impacts from pile driving. Therefore, temporary construction noise impacts would be less than significant with implementation of Mitigation Measure BIO-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure BIO-1 is required. Refer to Section 3.4, Biological Resources, for complete details pertaining to this mitigation measure.

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
For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.25 in/sec PPV for historic and some old buildings (see Table 3.13-4). The 0.3 in/sec PPV vibration limit would be applicable to properties in the vicinity of the project site.

Construction activities would include demolition of existing structures, replacement of existing structures, and new construction and repairs. Table 3.13-8 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities may generate substantial vibration in the immediate

vicinity of work areas, but vibration levels would vary at off-site receptor locations depending on distance from the source of the vibration, soil conditions, construction methods, and equipment used.

Table 3.13-8: Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft./ (in/sec)	PPV at 1,260 ft. (in/sec)	PPV at 1,865 ft. (in/sec)
Pile Driver (impact)	Upper range	1.158	0.015	0.010
	Typical			
Pile Driver (Sonic)	Upper range	0.644	0.009	0.006
	Typical			
Clam shovel drop		0.202	0.003	0.002
Hydromill (slurry wall)	In soil	0.008	0.000	0.000
	In rock	0.017	0.000	0.000
Vibratory Roller		0.210	0.003	0.002
Hoe Ram		0.089	0.001	0.001
Large bulldozer		0.089	0.001	0.001
Caisson drilling		0.089	0.001	0.001
Loaded trucks		0.076	0.001	0.001
Jackhammer		0.035	0.000	0.000
Small bulldozer		0.003	0.000	0.000

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006 and modified by Illingworth & Rocklin, Inc., May 2019.

At a distance of 1,050 feet (between the vehicle processing building construction and the southeast residential receptor), vibration levels experienced from the non-pile driving/drilling-related construction equipment are as follows:

- Vibratory Roller – 0.003 PPV
- Hoe Ram, Large Bulldozer – 0.001 PPV
- Loaded Trucks – 0.001 PPV
- Jackhammer – 0.000 PPV
- Small Bulldozer – 0.000 PPV

The nearest off-site structures are located 1,260 feet to the south and 1,865 feet to the southeast of the intersection of the wharf and the shoreline and 1,050 feet to the southeast of the vehicle processing building. At this distance, vibration levels would be barely perceptible (0.015 in/sec PPV or less) and would not have an effect on building structures. As such, direct impacts related to vibration would be less than significant.

As discussed in Section 3.4, Biological Resources, the in-water work associated with the proposed wharf improvements may cause indirect vibration impacts to aquatic species present in the waters surrounding the wharf. The proposed project would implement Mitigation Measure BIO-1, which requires underwater sound monitoring be performed during pile driving activities and requires the use of bubble curtains to limit potential vibration impacts to aquatic species. Therefore, indirect vibration impacts would be less than significant with implementation of Mitigation Measure BIO-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure BIO-1 is required. Refer to Section 3.4, Biological Resources, for complete details pertaining to this mitigation measure.

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 nearest public airports to the project site are the Byron Airport and the Buchanan Field Airport, located about 14 miles southeast and 16 miles west of the project site, respectively. Additionally, there are no private airstrips or helipads located within the proximity of the project site. The closest helipad is located at the Kaiser Permanente Antioch Medical Center, about 4.3 miles to the south of the project site. As such, the proposed project is not located within a land use plan for a public airport or private use airport, and therefore would not expose people residing or working in the project area to excessive noise levels. 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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3.14 POPULATION AND HOUSING

	Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Induce substantial 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

Antioch is the second largest city in Contra Costa County. According to the California Department of Finance (DOF), the City had a population of 102,372 in 2010 (DOF 2020a). As of January 1, 2020, the City's population has increased by 9 percent to 112,520 (DOF 2020b). By the year 2040, it is estimated the City's population would increase to 130,725 (ABAG 2017). Antioch's economy functions as a small part of the Bay Area economy and makes up 1.1 percent of the Bay Area labor force (City of Antioch 2003b). One of the objectives of the General Plan is to create a larger employment base within the City by 2030. The General Plan includes policies to provide for a mix of employment generating uses and ample employment opportunities for City residents (City of Antioch 2003b). According to the City's Economic Development Department website, there are 23,800 jobs in Antioch (City of Antioch 2020b). Association of Bay Area Governments (ABAG) projected the total number of jobs in the City would increase to 25,745 by 2040 (ABAG 2017).

The project site is in an industrial part of the City and currently vacant. It is primarily paved and developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. The project site is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. There are no residential buildings onsite, and the project site is not zoned for residential use.

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 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

The proposed project involves the development of an automotive logistics and processing facility consisting of the construction of a pre-engineered metal vehicle processing building of approximately 25,328 square feet, grading, paving, new utility connections, and stormwater improvements. Additionally, the proposed project would involve structural upgrades to the existing wharf located on the southern bank of the San Joaquin River. The proposed project would not involve the construction of any residential uses. During construction, it is estimated there would be an average of 24 temporary onsite workers. It is anticipated that the construction workforce would be available from nearby areas. Construction of the proposed project would not affect the population of the City because the construction workforce is available from nearby areas. In addition, the project site is within commuting distance of the greater San Francisco Bay Area, so construction workers would not be expected to relocate. Therefore, temporary construction activities would not be expected to increase the demand for housing.

Operation of the proposed project would create new jobs and increase the demand for new employees. It is estimated the proposed project would employ approximately 30 daily employees and 45 temporary stevedores (65 total peak workers). The proposed project would provide new employment opportunities for City residents and would be consistent with the General Plan's projected employment growth and objectives of providing additional jobs to city residents. It is expected employees generated by the proposed project would already reside in or near the City and would not substantially increase the City's population. Furthermore, as the unemployment rate in Contra Costa County was 7.5 percent in January 2021 (EDD 2021), it is expected the proposed project's construction- and operation-related employment would be absorbed by the regional labor force and would not attract new workers to the City. The proposed project would not directly or indirectly induce the City's population, 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 POP-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis
The project site is vacant and developed with a one-story metal warehouse building, a security guard station, and an inactive rail spur. There are no existing residents or residential dwelling units 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 City is served by the Contra Costa County Fire Protection District (CCCFPD), which provides fire suppression, fire prevention, emergency medical services, rescue, ambulance transport, and public education programs to more than a million people across the 304-square-mile service area (CCCFPD 2018). The CCCFPD operates 25 fire stations and has 288 professional firefighters. The nearest fire station to the project site is Station No. 81 which is located approximately 2 miles west of the project site at 315 W. 10th Street.

In 2018, CCCFPD responded to 60,000 fire, rescue, and medical emergency calls (CCCFPD 2018). Minimum response times are established by the county, which requires that 90 percent of all calls be responded to on average between 10 and 11 minutes and 45 seconds. Additionally, the City's General Plan has a response time goal of 80 percent for all City emergencies within 5 minutes (City of Antioch 2003b). In 2018, CCFPD's average response time was 4 minutes and 38 seconds. CCCFPD is meeting the County and City General Plan requirements by responding to 95 to 97 percent of calls (CCCFPD 2018).

According to Chapter 3-7 of the Antioch Municipal Code, new development projects are required to pay fees for fire protection facilities as a condition of approval. Collection of these fees is the primary source of revenue to fund fire and emergency medical services. The development impact fees would be imposed and collected at the time the building permit for the new development is issued (City of Antioch 2020a).

Police Protection

The Antioch Police Department (APD) provides police services for the City. APD is located at 300 L. Street, approximately 2.5 miles west of the project site. The City is divided into six "beats" or patrol zones based on geographical area. The project site would be served by Beat 2 (northeastern area). APD currently has a sworn staff of 120 police officers (Antioch Herald 2020). In October 2020, the average response time by APD was 7 minutes and 35 seconds (Antioch Herald 2020). APD is meeting the City's General Plan objective of providing an average response time to emergency calls of between 7 and 8 minutes from the time the call is received to the time an officer arrives.

Schools

The City is served by the Antioch Unified School District, which provides kindergarten through high school education in the City. The project site and surrounding area are served by Kimball Elementary, Antioch Middle School, and Antioch High School (AUSD 2021). In the 2019-2020 school year, Kimball Elementary School had an enrollment of 474 students; Antioch Middle School had an enrollment of 874 students; and Antioch High School had an enrollment of 2,042 students (California Department of Education 2021).

Parks

The City Recreation Department and the Parks and Recreation Commission maintain the City's 34 local parks, recreational facilities, and open space areas (City of Antioch 2017). Additionally, the East Bay Regional Park District maintains the City's four regional parks. The nearest parks to the project site include the Antioch Youth Sports Complex, Jacobsen Park, and Almondridge Park. These three parks are located within approximately 1 mile of the project site. The City of Antioch General Plan has a set standard of 5 acres of parks and open space per 1,000 residents (City of Antioch 2003b).

3.15.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, the General Plan EIR, and the Antioch 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

Fire service is currently provided to the project site by the CCCFPD. The proposed project does not involve a residential component. Operation of the proposed project would likely have an average of 30 daily employees onsite. However, on days when vessels would arrive to the project site it is estimated there would be 35 temporary stevedores present onsite to unload the automobiles. As such, it is estimated the proposed project would generate up to 65 peak workers on days when vessels would arrive to the site. The addition of new employees at the project site could increase demand for fire protection services. As discussed in Section 3.14, Population and Housing, the proposed project would not affect the population of the City, because the

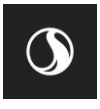
proposed project's operation-related employment is expected to be absorbed by the regional labor force and would not attract new workers to the City.

The proposed project would comply with the California Fire Code and include site-specific design features such as providing water for fire suppression, ensuring adequate emergency access to the project site, and requiring structures to be built with approved building materials. Conformance with the California Fire Code would reduce risks associated with fire hazards. The existing 30-foot-wide gated entrance on Wilbur Avenue would provide access in case of an emergency. Additionally, the proposed project would rehabilitate and reuse the existing fire water loop and hydrants on site to serve the wharf structure, vehicle processing building, and vehicle staging areas.

The CCCFPD conducted a preliminary review of site plans on March 31, 2021. The CCCFPD provided comments with a list of adopted standards that will be required to be followed for the implementation of the proposed project. The proposed project would meet all CCCFPD standards and requirements. The Applicant is required to submit final site plans to the CCCFPD for review and approval prior to start of construction. The proposed project would also be subject to Chapter 3-7 of the Antioch Municipal Code and required to pay fees for fire protection facilities as a condition of approval. Payment of the Fire Protection Facilities Fees would offset the cost of fire protection and emergency service demands associated with the proposed project. Therefore, the proposed project would not be anticipated to substantially increase CCCFPD response times to the project site, nor would it require the construction of new or physically altered fire protection facilities. The impact would be less than significant.

Police Protection

Law enforcement services for the project site are provided by APD. The proposed project would not include a residential use that would induce population growth. The proposed project would likely have an average of 30 daily employees onsite and 35 temporary stevedores, resulting in an estimate of 65 peak employees on days when vessels would arrive to the project site. The addition of new employees could result in an increased demand for police protection services at the project site; however, APD is currently meeting the City's General Plan response time objective and responding to emergency calls within 7 minutes and 35 seconds (Antioch Herald 2020). Additionally, there is an existing onsite security guard station located at the site entrance that would monitor the project site, including vehicles entering and exiting the project site. Therefore, the proposed project would not be anticipated to substantially increase APD



response times to the project site, nor would it require the construction of new or physically altered police protection facilities. The impact would be less than significant.

Schools

The proposed project would involve construction of an automotive logistics and processing facility and structural improvements to the existing wharf. No residential uses are proposed, and therefore the proposed project would not directly increase the demand on school facilities. Furthermore, it is anticipated employees generated by the proposed project would already reside in or near the City and would not directly or indirectly increase demand for new or expanded school facilities. Therefore, the proposed project would have no impact on school facilities.

Parks

The proposed project does not involve a residential component and would not introduce a new population that would directly create additional demands on existing or planned park facilities. It is expected that employees generated by the proposed project would already reside in or near the City, and therefore would not directly or indirectly increase the use of nearby park facilities. As such, the proposed project would not significantly affect the City's parkland ratios and would not result in the need for new or expanded park facilities. No impact would occur.

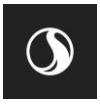
Other Public Facilities

As discussed, the proposed project would not generate a residential population that would substantially increase the demand for libraries or other public facilities. Additionally, it is expected employees generated by the proposed project would already reside in or near the City and would not directly or indirectly increase the demand on other public facilities. No impact would occur.

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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3.16 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?	☐	☐	☐	☒
c)	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 Recreation Department and the Parks and Recreation Commission maintain the City's 34 local parks, recreational facilities, and open space areas (City of Antioch 2017). Additionally, the East Bay Regional Park District maintains the City's four regional parks. More than 400 acres of parks and open space areas are in the City, 200 of which are developed, and the remaining 200 acres consist of land awaiting development or are areas managed for open space (City of Antioch 2017). The nearest parks to the project site include the Antioch Youth Sports Complex, Jacobsen Park, and Almondridge Park. These three parks are located within approximately 1 mile of the project site (City of Antioch 2021).

3.16.2 Methodology

The following analysis is based on data obtained from the City's Parks Directory, General Plan, and General Plan EIR.

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

The proposed project would involve development of a new automotive logistics and processing facility, and structural improvements to the existing wharf. It would not include a residential component that would directly increase the City's population growth. Operation of the proposed project would likely have an average of 30 daily employees onsite. However, on days when vessels would arrive to the project site it is estimated there would be 35 temporary stevedores present onsite to unload the automobiles. As such, on days when the vessels would arrive to the project site, it is estimated operation of the proposed project would generate up to 65 peak employees. It is expected project employees would already reside in or near the City and would not indirectly increase the use of any existing recreational facilities or the demand for new, or the expansion of existing recreational facilities. 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 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 new automotive logistics and processing facility on a 38.9-acre site, and structural improvements to the existing wharf. The scope of the proposed project would not include the construction or expansion of recreational facilities. The proposed project would connect to the San Joaquin River, which provides recreational opportunities. The project site itself does not provide public recreation access to the San Joaquin River. Access to the project site would be restricted to authorized personnel only. Construction and operational activities would involve the use of vessels, barges, and tugboats that could interfere with recreational activities in the San Joaquin River. The proposed project would provide

signage on the wharfside to restrict recreational uses from accessing and/or entering the project site via the San Joaquin River. As discussed in Section 3.17, Transportation, all vessel and tugboat traffic would also be subject to the requirements of the San Francisco Bay Harbor Safety Plan, which requires reporting and monitoring of vessel and barge traffic on Bay Area waterways to ensure vessels and tugboats are registered, operate at acceptable speeds, and use appropriate routes. Prior to construction, the Applicant would also issue a Notice to Mariners as required by Mitigation Measure TRANS-1. Once completed, the proposed wharf structure would primarily occur within the wharf's existing footprint, except for the new stern ramp. The new stern ramp would be constructed from the wharf to the shoreline and would not extend into the river channel which would interfere with existing shipping, boating, or recreation uses. Therefore, the proposed project would not result in an adverse physical effect on the environment related to recreation facilities. Impacts would be less than significant with implementation of Mitigation Measure TRANS-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measure TRANS-1 is required. Refer to Section 3.17, Transportation, for complete details pertaining to this mitigation measure.

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

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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 a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b)	Would the project 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

Roadway and Vessel Network

The project site would be accessible from Wilbur Avenue and the San Joaquin River. All trucks would arrive to the project site via SR-160 and westbound Wilbur Avenue as required by the City's designated truck routes (City of Antioch 2021). The trucks would enter and exit the facility using the 30-foot-wide gated entrance on the eastern end of the project site on Wilbur Avenue. All vessels, barges, and tugboats would arrive to the project site via the San Joaquin River and would dock at the wharf. Vessel traffic is subject to reporting requirements of the U.S. Coast Guard Sector San Francisco whose Vessel Traffic Service is responsible for vessel traffic and maritime safety and security in the project area.

Bicycle and Pedestrian Facilities

The project site is in an industrial part of the City. Currently there are no existing sidewalks along the project frontage or on either side of Wilbur Avenue, except for a short 0.5-mile segment on the north side of Wilbur Avenue east of the project site. As discussed in the City's General Plan EIR, many outlying areas are still rural in character, and do not have sidewalks (City of Antioch 2003b). Pedestrians walking on Wilbur Avenue currently use the roadway shoulders. There are no designated bicycle facilities around the project site.

Transit Services

The Eastern Contra Costa Transit Authority operates fixed-route and paratransit service under Tri Delta Transit and contracts with First Transit for the operation of buses. Tri Delta provides transit service near the project site. The nearest bus stop is located near the corner of Viera Avenue and East 18th Street, over a 0.5-mile away. The bus stop provides service for routes 383, 391, and 393. Route 303 provides weekday service from Blue Goose Park to the Antioch Bay Area Rapid Transit station. Route 391 provides weekday service from Brentwood Park and Ride to Pittsburg Center Station. Lastly, Route 393 provides weekend service from Brentwood Park and Ride to the Antioch Bay Area Rapid Transit station.

3.17.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the City's General Plan, General Plan EIR, and Antioch Municipal Code. Additionally, the analysis is based on the LOS traffic analysis screening and VMT screening prepared for the proposed project by Stantec on April 9, 2021 (Appendix F). The VMT analysis screening completed for the proposed project complies with the updated CEQA guidelines that incorporates the requirements of SB 743. Generally, SB 743 moves away from using delay-based LOS as the metric for identifying a project's significant impact and to instead use VMT.

3.17.3 Environmental Impact Analysis

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

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

Impact Analysis

The proposed project would generate traffic through the transport of workers, equipment, and materials to and from the project site. The construction of the proposed land and wharf improvements would occur concurrently, starting in September 2021 and ending in September 2022. There would be an average of 24 temporary onsite workers during construction. Construction activities associated with the land improvements would generally be anticipated to occur within the project site; however, work may extend into Wilbur Avenue to connect to existing utility lines, construct the new sewer line connection, and other necessary improvements. Any construction traffic, lane

closures, or street staging would require an approved TCP and an encroachment permit from the City.

All materials and construction activities related to the wharf improvements would be via the San Joaquin River. Construction equipment and materials would be placed on a derrick barge and materials barge, which would be transported via tugboats. During project construction, there would be an increase in barge and tugboat traffic in the project area. There are no traffic or transportation ordinances, plans or goals within the City's General Plan relevant to the barge traffic. All vessel and tugboat traffic would be subject to the requirements of the San Francisco Bay Harbor Safety Plan, which requires reporting and monitoring of vessel and barge traffic on Bay Area waterways to ensure vessels and tugboats are registered, operate at acceptable speeds, and use appropriate routes. Vessel inspections and regulation enforcement are conducted by the U.S. Coast Guard and CDFW to ensure that vessels and tugboats are registered and that operating personnel are trained and certified. Additionally, prior to construction of the proposed project the Applicant would issue a Notice to Mariners as required by Mitigation Measure TRANS-1.

On typical days, the proposed project would result in 30 full time employees. For full time employees, there is anticipated to be one employee shift that starts at 7:00 AM and ends at 3:30 PM, Monday through Friday. For the traffic study (Appendix F), it is estimated approximately 75 percent of the employees would arrive onsite prior to the start of the 7:00 AM shift, with the remainder conservatively estimated to arrive during the AM roadway peak hour. Similarly, the traffic study estimated approximately 75 percent of the employees would leave the site at the end of the 3:30 PM shift, with the remainder conservatively estimated to leave during the PM roadway peak hour. It is estimated that the proposed project would generate 3,000 to 3,800 truck trips per year. Operations are anticipated to include on average 10 to 12 trucks per day; however, the traffic study used an estimated "worst-case" of 18 trucks per day to account for fluctuation, between the hours of 8:00 AM to 4:00 PM, Monday through Friday.

In addition to employee and truck activity, deliveries and visitor trips would occur during the day. The number of visitor and delivery trips are estimated based on the size of the proposed new vehicle processing building (25,328 square feet) based on the Institute of Transportation Engineers trip generation rates for typical warehouse use. As shown in Table 3.17-1, approximately 4 trips would occur during AM peak hour (typically one hour between 7:00 AM and 9:00 AM), 5 trips would occur during the PM peak hour (typically one hour between 4:00 PM and 6:00 PM), and there would be 44 average daily trips.

On a non-typical day when vessels would arrive at the wharf (up to 25 times a year), a crew of stevedores (approximately 35 stevedores) would be onsite to unload the vessel. The crew is usually transported by vanpool, but on occasion may arrive in separate vehicles. For a conservative "worst-case" scenario, the traffic study assumed that the crew would arrive in separate vehicles. The stevedores would start their shift around 9:00 AM and end their shift around 3:00 PM. The traffic study estimated approximately 75 percent of the stevedores would arrive onsite prior to the start of their 9:00 AM shift, with the remainder conservatively estimated to arrive after 9:00 AM. Similarly, it is estimated approximately 75 percent of the stevedores would leave before 3:00 PM. On non-typical days, it is estimated that up to 65 total employees (full-time employees and crew of stevedores) would be onsite.

The project trip generation for both typical and non-typical days is provided in Table 3.17-1.

Table 3.17-1: Project Trip Generation

Description	AM Project Peak Hour (6:00AM-7:00AM)			AM Roadway Peak Hour			PM Project Peak Hour (3:00PM-4:00 PM)			PM Roadway Peak Hour			ADT
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Trip Rate													
Warehousing (ITE 150)[1]	na	na	na	0.13	0.04	0.17	na	na	na	0.05	0.14	0.19	1.74
Trip Generation													
FT Employees vehicles[2]	22	0	22	8	0	8	0	22	22	0	8	8	74[4]
Trucks[2]	0	0	0	6	1	7	0	3	3	0	6	6	36
Visitors/ Deliveries[1,3]	0	0	0	3	1	4	2	2	4	1	4	5	44
Total Typical Day	**22**	**0**	**22**	**17**	**2**	**19**	**2**	**27**	**29**	**1**	**18**	**19**	**154**
Stevedores[2,5] (occasional)	0	0	0	26	0	26	0	26	26	0	0	0	86[4]
Total Non-Typical Day[5]	**22**	**0**	**22**	**43**	**2**	**45**	**2**	**53**	**55**	**1**	**18**	**19**	**240**

na = not available, project trips estimated for these time periods based on expected operations
FT = full-time
[1] Warehouse (ITE 150) trip rate used to estimate ancillary site visitors and deliveries not related to heavy truck operations
[2] Based on number of employees, employee shift, and truck operations
[3] Based on 25.328 TSF new processing building
[4] Based on ITE (140) Manufacturing trip rate of 2.47 per employee
[5] Note that the crew of stevedores are usually transported to the site via vanpool. However, trips shown here assume a worse-case scenario where the crew of stevedores drive to project site separately.

As shown in Table 3.17-1, on typical days the project's AM peak hour would occur between 6:00 AM and 7:00 AM when employees would be arriving at the project site in

their personal vehicle. The project's PM peak hour would occur between 3:00 PM and 4:00 PM when most employees would leave the project site in their personal vehicles. There would be a nominal volume of trips that occur in the AM and PM peak hours of the adjacent roadways when off-site traffic impacts would generally occur. Approximately 19 project trips are anticipated for the peak hour of the adjacent roadways. Overall, there would be 154 daily trips generated by the project for a typical weekday.

On a non-typical day when a crew of stevedores are utilized to help unload a vessel, the AM peak hour would remain the same at 22 trips, but the project trips in the AM peak hour of adjacent roadways would increase from 19 to 45. The PM peak hour would increase from 29 up to 53 trips, but the project trips in the PM peak hour of adjacent roadways would remain the same as a typical day at 19 trips. Overall, there would be 240 daily trips generated by the project for a non-typical weekday.

As described, there are no designated bicycle facilities around the project site and there are no public transit facilities adjacent to the project site. The proposed project would not block, remove, or create barriers for walking, bicycling, or transit utilization along the project site. During construction, project activities would be mostly confined to the project site with some off-site work occurring for utility infrastructure improvements. Any construction traffic, lane closures, or street staging would require an approved TCP and an encroachment permit from the City. As a result, the proposed project would not create hazards or barriers for pedestrians, bicyclists, or local transit service. Therefore, the construction and 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 with implementation of Mitigation Measure TRANS-1.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM TRANS-1: **Advanced Notice to Mariners.** All offshore operations shall be described in a Local Notice to Mariners to be submitted to the U.S. Coast Guard at least 15 days prior to mobilization and decommissioning activities. The Notice shall include:

- Type of operation

- Location of operation, including latitude and longitude and geographical position, if applicable
- Duration of operation, including start and completion dates (if these dates change, the U.S. Coast Guard needs to be notified)
- Vessels involved in the operation
- Very High Frequency-FM radio frequencies monitored by vessels on the scene
- Point of contact and 24-hour phone number
- Chart Number for the area of operation

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

Impact TRANS-2 Would the project 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 Governor's Office of Planning and Research (OPR) *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory* (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. At the time of this report, the City has not formally adopted VMT guidelines. In July 2020, the Contra Costa Transportation Authority (CCTA) released a draft VMT Analysis Methodology for Land Use Projects in Contra Costa but is in the process of developing VMT guidance. Therefore, this VMT analysis has been prepared in accordance with OPR's Technical Advisory guidance and CCTA's draft methodology.

OPR's Technical Advisory indicates that employment-generating projects located within a low VMT generating area can be presumed to have a less than significant impact.

VMT screening maps prepared by CCTA for this purpose are utilized for this analysis. Traffic analysis zone (TAZ) level VMT estimated were also obtained from CCTA.

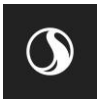
The traffic study used two methods for screening a low VMT area. The first method used TAZ level VMT estimates and is compared to the Contra Costa County regional level, which is the City's preferred approach. The second method used Citywide level VMT estimates and is compared to the Bay Area regional level, which is CCTA's recommended approach.

CCTA recommends that for the analysis of employment-generating projects, the cities and unincorporated portions of CCTA's five subregions with existing home-based work VMT per worker that is 15 percent below the existing regional average are presumed to have a less than significant impact for any development within those areas (CCTA 2020). According to CCTA, development projects may assume that the project's VMT output would be similar in nature to the existing Citywide average home-based work VMT per worker (CCTA 2020). The regional area is defined as the Bay Area region.

The project site is located in TAZ 30149 and the project is similar to the existing uses in the area; therefore, it is appropriate to assume that the proposed project would exhibit similar trip characteristics as exhibited by the existing TAZ. Table 3.17-2 summarizes the average home-based work VMT per worker for TAZ 30149 and the average home-based work VMT per worker for Contra Costa County. Table 3.17-2 also shows the City of Antioch and the average home-based work VMT per worker for the Bay Area region.

Table 3.17-2: Low VMT Area Summary

Analysis Metrics: Employment-Generating	VMT
Method 1	
Project TAZ 30149 home-based work VMT per worker	10.8
Contra Costa County Average home-based work VMT per worker	14.9
Contra Costa County Average home-based work VMT per worker minus 15%	12.7
Is project TAZ above or below the regional average minus 15%?	Below
Is the project in a low VMT area?	Yes
Method 2	
Citywide Average home-based work VMT per worker	10.9
Bay Area Average home-based work VMT per worker	15.6
Bay Area Average home-based work VMT per worker minus 15%	13.2



Analysis Metrics: Employment-Generating	VMT
Is Citywide average above or below the regional average minus 15%?	Below
Is project in a low VMT area?	Yes

VMT= vehicle miles traveled
Source: Appendix F

As shown in Table 3.17-2, the project TAZ home-based work VMT per worker is 10.8 and the countywide average home-based work VMT per worker with a 15 percent reduction is 12.7. Therefore, the proposed project is below the significance threshold and would not have a significant impact. Per CCTA methodology, the Citywide average home-based work VMT per worker of 10.9 is below the regional average home-based work VMT per worker significance threshold of 13.2. Therefore, the proposed project is in one of CCTA's cities that is considered a "low VMT area" and is presumed to have 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 major 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 into Wilbur Avenue to connect to existing utility lines, construct the new sewer line connection, and other necessary improvements. The proposed project includes preparation of a TCP that would include detours, emergency access, and appropriate traffic controls during construction. An encroachment permit would be obtained from the City for any staging/construction-vehicle parking on adjacent streets, if necessary. Therefore, project construction would not create a transportation hazard, and the impact would be less than significant.

Operation of the proposed project would not result in changes to a roadway that would create road hazards or alter design features developed to mitigate such hazards. Trucks and employee vehicles would access the project site primarily from the 30-foot-wide driveway on the eastern end of the project site, which would meet the City's design standards for minimum driveway width of 20 feet. The City and CCCFD would review all 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 adequate circulation and emergency access are 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. Access to the project site would be from the 30-foot-wide gated entrance on the eastern end of the project site on Wilbur Avenue, which would meet the City's design standards for minimum driveway width of 20 feet.

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, defined as the project site and a 0.5-mile radius around the project site, and evaluates potential impacts to these resources from the construction and operation of project facilities. 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

The proposed project is within the traditional tribal territory of the Bay Miwok, or *Saclan*, one of the five linguistic divisions of Eastern Miwok peoples (Levy 1978; Kroeber 1925; Map 1). Linguistic evidence suggests that the Eastern Miwok have inhabited the region for a long period of time, perhaps as early as the Middle Horizon of California prehistory (4,000 to 1,500 year before present) (Levy 1978; Breschini 1983). Around the time of European contact, the Bay Miwok occupied the eastern portions of Contra Costa County from Walnut Creek to the Sacramento-San Joaquin Delta (Levy 1978).

The foremost political unit of the Bay Miwok was the tribelet, an independent nation with defined geographical boundaries. Within their territory, each tribelet occupied one or more semi-permanent settlements and several seasonally occupied camps. Members of the tribelet moved between camps to fish, hunt, and gather resources as they became locally available (Levy 1978). The nearest ethnographically recorded village, *Julpun*, was located approximately 1.8 miles north-northeast of the project (Bennyhoff 1977); however, knowledge of individual tribelets and settlement locations is fragmentary due to rapid depopulation and relocation occurring throughout the 19th century (Levy 1978).

Within villages and camps, Miwok structures at lower elevations usually consisted of conical frames thatched with brush, grass, or tules (*Schoenoplectus acutus* and *californicus*). Larger semisubterranean and circular brush structures were also constructed for communal use at village sites, and granaries were built for the storage of gathered food, primarily acorns from several types of oak (Quercus spp.) (Levy 1978). The Miwok also collected buckeye (*Aesculus californica*), hazelnut (*Corylus cornuta*), and pine nuts from digger pine (*Pinus sabiniana*) and sugar pine (*Pinus lambertiana*). A wide variety of seeds were also collected when available. Important terrestrial animal foods included mule deer (*Oedocoileus hemionus*), tule elk (*Cervuus nannodes*), and pronghorn antelope (*Antilocapra americana*). Salmon and trout (*Oncorhynchus spp*.), sturgeon (*Acipenser transmontanus*), and lamprey (*Lampetra tridentata*) were also important food species for all divisions of the Eastern Miwok (Levy 1978) and would have been especially important for indigenous peoples in the vicinity of

the project due to local environmental conditions and the proximity of wetlands (Tang 2009).

After initial contacts with Spanish explorers, the Bay Miwok were among the first indigenous people to be gathered into the Spanish missions. Subsequent influxes of Euro-Americans drove many of the remaining native inhabitants to hide in the delta, and later conflicts ended with the confiscation of Miwok lands by the United States government. Miwok populations, estimated to have been around 19,500 in 1808, rapidly declined to around 670 by 1910 (Cook 1943).

3.18.2 Methodology

To identify tribal cultural resources, Stantec prepared a cultural resources assessment (Appendix C) and the City completed Native American outreach efforts and 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. A search of the Sacred Lands File for tribal cultural resources in the project site did not indicate the presence of Native American cultural resources in the project site.

AB 52 Consultation Results

On March 16, 2020, the City's consultant sent an email with a project description and a map depicting the project area to the NAHC requesting a review of the Sacred Lands File for Native American cultural resources that might be affected by the project. The NAHC responded on March 25, 2021 stating that the Sacred Lands File search yielded a negative result.

The NAHC provided a list of sixteen (16) Native American individuals and organizations to contact for additional information about sacred sites or tribal cultural resources in the project vicinity:

- Irene Zwierlein, Amah Mutsun Tribal Band of Mission San Juan Bautista
- Lloyd Mathiesen, Chicken Ranch Rancheria of Me-Wuk Indians
- Corrina Gould, Confederated Villages of Lisjan
- Donald Duncan, Guidiville Indian Rancheria
- Ann Marie Sayers, Indian Canyon Mutsun Band of Costanoan
- Kanyon Sayers-Roods, Indian Canyon Mutsun Band of Costanoan
- Monica Arellano, Muwekma Ohlone Indian Tribe of the SF Bay Area
- Charlene Nijmeh, Muwekma Ohlone Indian Tribe of the SF Bay Area

- Cosme Valdez, Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- Katherine Perez, North Valley Yokuts Tribe
- Timothy Perez, North Valley Yokuts Tribe
- Andrew Galvan, The Ohlone Indian Tribe
- Neil Peyron, Tule River Indian Tribe
- Dahlton Brown, Wilton Rancheria
- Jesus Tarango, Wilton Rancheria
- Steven Hutchason, Wilton Rancheria

The City also provided the names of six tribes that have previously requested notification under AB 52, five of which were also on the NAHC contact list:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- The Ohlone Indian Tribe
- Wilton Rancheria
- Ione Band of Miwok Indians

On April 8, 2021, the City mailed letters to tribes that have requested notification of City projects under AB 52 except the Ione Band of Miwok Indians due to an unintentional oversight. The notification letter was sent to the Ione Band on June 16, 2021. Outreach letters were also sent to the additional individual contacts provided by the NAHC. Follow up phone calls were made on May 5 and 6 and June 29, 2021.

Three tribes responded to the outreach effort. Kanyon Sayers-Roods of the Indian Canyon Mutsun Band of Costanoan responded to the initial notification letters and requested additional information and a meeting with the City Planner. City Planner, Zoe Merideth, and Stantec archaeologist, Leven Kraushaar, met with Ms. Sayers-Roods by video conference call on April 28, 2021 to discuss Ms. Sayers-Roods' concerns. Ms. Sayers-Roods expressed the Tribe's interest in honoring Truth in History through the provision of interpretive materials and in protecting and providing access to the natural environment. Ms. Sayers-Roods initially recommended tribal monitoring due to the proximity of the San Joaquin River, which, as an important part of the natural environment may suggest an increased likelihood of encountering cultural resources. Following discussions with the City regarding the lack of feasibility or necessity in monitoring proposed construction activity near or below the waterline and the reduced sensitivity of heavily disturbed soils and imported fill material identified within the project site, the City informed the Tribe that monitoring was not recommended and provided

alternative mitigation measures for the Tribe's review. Those alternative mitigation measures included cultural awareness training and inadvertent discovery protocols, which have been incorporated into the project as Mitigation Measures CUL-1 and CUL-2. The Tribe had no further comments in response to the alternative measures and the outreach was concluded.

The determination of feasibility and necessity was made through a review of archaeological sensitivity by qualified archaeologists at Stantec which determined that monitoring was not warranted. This was based on a lack of nearby precontact resources, soils analysis, and the modified nature of the soils (fill/disturbed) and the continually modified shoreline. Monitoring of work at the shoreline or water level was not considered necessary and can be unsafe. Project work would include the demolition of treated timber structures such as wooden piles and planking, concrete repair, installation of new steel and concrete piles, concrete deck installation, new walkways, installation of new breasting and mooring dolphins, and construction of a stern ramp to roll-on/roll-off new automobiles. Further, pile driving equipment, tugboats, and a barge would be used. None of these activities would be conducive to successful archaeological or tribal monitoring, and resources—even if present—would not be visible. Mitigation Measure CUL-1 provides steps should a discovery occur, although a discover is considered unlikely.

Chairperson Lloyd Mathiesen of the Chicken Ranch Rancheria of Me-Wuk Indians was reached by telephone on May 6, 2021. Mr. Mathiesen stated that the proposed project is outside of the Tribe's territory and suggested consulting other local tribes, including the Ohlone or Coast Miwok.

In response to a follow-up telephone call placed on May 6, 2021, Kerri Vera of the Tule River Indian Tribe requested additional project information, including a description of cultural resources identification efforts and findings. This information was transmitted to Ms. Vera by email on May 10, 2021.The other tribes contacted either did not respond or did not have any concerns with the proposed project. A correspondence record can be found in Appendix C.

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 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?

Impact Analysis

The archival records search performed as part of the cultural resources analysis did not identify any prehistoric or tribal cultural resources within or immediately adjacent to the project area. A tribal cultural resource is defined to include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe, (Pub. Resources Code, § 21074, subd. [a]). No tribal cultural resources were identified through consultation with local tribal representatives. Thus, the proposed project is not expected to impact any known or potential tribal cultural resources.

However, subsurface construction activities such as trenching, and grading associated with the proposed project could potentially damage or destroy previously undiscovered unique tribal cultural resources. In the event undiscovered unique tribal cultural resources are identified, the proposed project would be required to implement Mitigation Measures CUL-1, CUL-2, and CUL-3. These mitigation measures would require implementation of standard inadvertent discovery procedures and worker awareness training to reduce potential impacts to previously undiscovered subsurface unique tribal cultural resources. Therefore, impacts on tribal cultural resources would be less than significant with implementation of Mitigation Measures CUL-1 through CUL-3.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

Mitigation Measures CUL-1, CUL-2, and CUL-3 are required. Refer to Section 3.5, Cultural Resources, for complete details pertaining to these mitigation measures.

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation.

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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 construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental impacts?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, State, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Environmental Setting

Wastewater Collection/Treatment

The City maintains and owns the local sewage collection system and is responsible for the collection and conveyance of wastewater to the Delta Diablo Wastewater Treatment Plant (WWTP). The City's sanitary sewer system includes approximately 292 miles of gravity sewer mains. The City's sanitary sewer system is currently designed to accommodate an average dry weather flow of 11.8 mgd. The Delta Diablo WWTP has a dry weather permitted capacity of 16.5 mgd and the current average dry weather flow to the treatment plant, which includes wastewater from the City of Pittsburg, is 13.2 mgd. The Delta Diablo WWTP operates under a Waste Discharge Requirement and a NPDES Permit issued by the RWQCB (City of Antioch 2016).

Stormwater Management

Stormwater collection in the City is overseen by the Contra Costa County Flood Control and Water Conservation District (Flood Control District). The City has over 110 miles of trunk lines to collect stormwater (City of Antioch 2003b). These trunk lines are independent from the wastewater collection system. The stormwater trunk lines discharge to channels owned and maintained by both the City of Antioch and the Flood Control District. The Flood Control District releases stormwater from the channels to the San Joaquin River and is the holder of a NPDES permit. Contra Costa County Clean Water Program staff monitors the quality of the released water to comply with the specifications of the NPDES permit. The Central Valley RWQCB regulates stormwater discharged from the City.

As shown in Figure 8, there is an outfall on the west side of the project site discharging from the stormwater detention facility directly into the river. The outfall on the project site previously was permitted through a facility Waste Discharge permit under NPDES for the Gaylord Facility and a renewal was filed in 2002. Given the closure of the facility a new NPDES permit will need to be secured by the Applicant. Compliance with NPDES is mandatory as a regulatory measure, thus prior to operations, the Applicant will be required to undergo new permitting for this outfall and provide compliance to the City and the California State Lands Commission as a condition of approval under their respective permitting/lease agreement. Compliance with NPDES will ensure that the proposed project implements appropriate measures to be protective of water quality.

Water Supply

The City receives water from two sources. The Contra Costa Water District (CCWD) supplies the City with raw water obtained from the Sacramento-San Joaquin Delta and delivers it to Antioch via the Contra Costa Canal. In addition to CCWD water, the City has water rights to divert water directly from the San Joaquin River which is pumped through the City's own pumping plant (City of Antioch 2003b). Water from both sources is stored in the Municipal Reservoir and treated at the Antioch Water Treatment Plant. There are six primary water pressure zones in the City and the project site lies within Zone II. Zone II serves primarily residential and commercial users and also serves some industrial users along the eastern end of Wilbur Avenue (City of Antioch 2016). According to the City's UWMP, the CCWD's water supply reliability goal is to meet 100 percent of demand in normal years and at least 85 percent of demand during a drought. The single dry year supply would be the same as normal year demand; and multiple dry year supply would reduce by 15 percent (City of Antioch 2016).

Solid Waste

Solid waste services are currently provided at the project site by Republic Services, which is the only authorized hauler of waste for the City of Antioch (City of Antioch 2020d). Solid waste and recyclables from the City are taken to the Contra Costa Transfer and Recovery Station. The Keller Canyon Landfill is 1,399 acres, 244 of which make up the actual current disposal acreage (CalRecycle 2020a). The landfill is permitted to accept 3,500 tons of waste per day and has a total estimated permitted capacity of approximately 75 million cubic yards. The remaining capacity at the landfill is currently 63 million cubic yards (CalRecycle 2020a).

Electric Power, Natural Gas, and Telecommunications

PG&E provides electricity and natural gas services to the City. AT&T and Comcast would provide telecommunication services to the project site.

3.19.2 Methodology

The following analysis is based on a review of documents pertaining to the project site, including the General Plan, the General Plan EIR, and the City's 2015 UWMP.

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 does not currently receive potable water from the City but is served by an existing water main for fire protection. The project proposes to rehabilitate and reuse the existing fire water loop and hydrants onsite to serve the wharf structure, vehicle processing building, and vehicle staging area. The proposed project would also

construct a new potable water main to serve the vehicle processing building. The fire water main and potable water main would connect to the existing 12-inch water main in Wilbur Avenue. All water distribution improvements would be constructed in accordance with the current version of the City's Construction Details. It is estimated that the new vehicle processing building would demand approximately 500 gpd of water. Based on the City's 2015 UWMP, the future water supply would be adequate to offset future water demands from planned development during normal, single-dry, and multi-dry years through 2040 (City of Antioch 2016). Therefore, the proposed project would be adequately served by the City's existing infrastructure and would not require the construction of new water treatment facilities or expansion of existing facilities. Impacts would be less than significant.

Wastewater Treatment

The project site is currently not connected to the City's public sewer system. As discussed in Section 2.1.3, Utility Improvements, the City would condition the proposed project to construct a new 15-inch sewer main to serve the project. Should the new sewer main run the length of the project frontage, the new sewer main would be a maximum length of approximately 0.3-mile (1,584 feet) to connect to the existing 15-inch sewer main located within Wilbur Avenue, east of Viera Avenue. The new 15-inch sewer main within Wilbur Avenue would be used by the proposed project to connect a new sanitary sewer lateral of approximately 600 linear feet and a sanitary sewer manhole to serve the new vehicle processing building. All sewer distribution improvements would be constructed and designed in accordance with the current version of the City's Construction Details.

It is estimated that the proposed vehicle processing building would generate approximately 500 gpd of wastewater. The Delta Diablo WWTF has an average dry weather flow of 13.5 mgd and has a maximum capacity of 19.5 mgd (Delta Diablo 2017). Wastewater generated from the proposed project would represent less than 0.01 percent of the 13.5 mgd that is currently being treated. Therefore, the wastewater generated by the proposed project would not result in a substantial increase in the amount of wastewater currently being treated and would be accommodated by the existing capacity of the WWTP. 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 project site is currently served by several existing storm drain inlets onsite that are connected via a piped storm drain system. Stormwater generally flows northwest to an onsite stormwater detention facility, which is connected to stormwater outfall pipe that discharges into the San Joaquin River. The proposed project would construct a new storm drain line and stormwater inlet in the central portion of the project site to tie into the existing onsite storm drain system. All other existing onsite stormwater infrastructure would be maintained.

The project site contains approximately 31.3 acres of impervious paved surface and approximately 7.6 acres of pervious surface. The proposed project would not create new impervious surface. The proposed project would be subject to the requirements of the Contra Costa County C.3 Stormwater Standards in Chapter 6-9, Stormwater Management and Discharge Control, of the Antioch Municipal Code. In accordance with these requirements, the proposed project would construct two new bioretention areas in the eastern and western portions of the project site totaling approximately 12,200 square feet. The new bioretention areas would manage stormwater drainage for approximately 6.83 acres of the project site and would exceed the City requirements. Therefore, impacts associated with the construction of stormwater facilities would be less than significant.

Electric Power and Natural Gas

PG&E would provide electricity and natural gas services to the project site. The proposed project would connect to existing overhead utilities along Wilbur Avenue. Additionally, the proposed project would construct a new gas service line of approximately 800 linear feet to tie into the existing gas line in Wilbur Avenue.

Although the proposed project would demand additional electricity and natural gas, the City's 2017 General Plan Update found that buildout of the General Plan would not exceed the demand for electricity and natural gas estimated in its 2003 General Plan. The proposed vehicle processing facility would also include energy conservation features to meet the state's Title 24 Energy Efficiency standards. All electrical and natural gas improvements for the proposed project would occur in accordance with PG&E standards. Therefore, the proposed project would not require the relocation or construction of new or expanded electrical and natural gas facilities and impacts would be less than significant.

Telecommunications

AT&T and Comcast would provide telecommunication services to the proposed project. The proposed project would connect to the existing overhead utilities along Wilbur Avenue and would not result in the relocation or construction of new or expanded telecommunication facilities. 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.

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
The proposed project would connect to the City's municipal water supply system. The 2015 UWMP calculates the City's past, current, and projected water use and water supply through 2040. The CCWD's goal is to meet 100 percent of demand in normal years and at least 85 percent of demand during drought conditions. The remaining 15 percent would be met by a combination of short-term water purchases and a voluntary short-term conservation program. According to the UWMP, the future water supply would be adequate to offset future water demands from planned development during normal, single-dry, and multi-dry years through 2040 (City of Antioch 2016). It is estimated that the new vehicle processing building would demand approximately 500 gpd of water. By 2040, the 2015 UWMP estimates that total potable water demand for the City would be 7,504 million gallons per year which equals approximately 20.6 mgd (City of Antioch 2016). The proposed project would represent a less than 0.01 percent increase in the total water demand to the City. Additionally, the proposed project would be required to comply with the water conservation requirements codified in Chapter 6-10 of the Antioch Municipal Code. Therefore, 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 not connected to the City's sewer system. The City would condition the proposed project to construct a new 15-inch sewer main to serve the project. Should the new sewer main run the length of the project frontage, the new sewer main would be a maximum length of approximately 0.3-mile (1,584 feet) to connect to the existing 15-inch sewer main located within Wilbur Avenue, east of Viera Avenue. The new 15-inch sewer main within Wilbur Avenue would be used by the proposed project to connect a new sanitary sewer lateral of approximately 600 linear feet and a sanitary sewer manhole to serve the new vehicle processing building. Wastewater generated by the proposed project would be treated at the Delta Diablo WWTP, which has a permitted capacity of 19.5 mgd and currently has an average daily wastewater flow of 13.5 mgd (Delta Diablo 2017). It is estimated that wastewater generated by the proposed vehicle processing building would be approximately 500 gpd. Wastewater generated by the proposed project would represent less than 0.01 percent of the 13.5 mgd that is currently being treated and would not result in a need for expanded capacity. Therefore, the Delta Diablo WWTP 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 and recyclables from the city are taken to the Contra Costa Transfer and Recovery Station in Martinez, which is then transferred to the Keller Canyon Landfill in the City of Pittsburg. The landfill is permitted to accept 3,500 tons of waste per day and has a total estimated permitted capacity of approximately 75 million cubic yards. The remaining capacity at the landfill is currently 63 million cubic yards (CalRecycle 2019a).

According to CalRecycle's Disposal Rate Calculator, Antioch had an annual employee disposal rate of 16.9 pounds per person per day which is below the target rate of 22.1 pounds per person per day (CalRecycle 2019b). The proposed project is estimated to have an average of 30 daily employees onsite with the project generating 65 peak employees on days when vessel would arrive to the site. Assuming the proposed project would result in 65 employees, the proposed project would generate approximately 1,099 pounds of solid waste per day or 0.55 tons per day. The Keller Canyon Landfill is permitted to accept 3,500 tons of waste per day. Therefore, the addition of 1099 pounds of solid waste per day (0.55 tons per day) would represent less than 0.02 percent of the permitted capacity. Additionally, 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 statutes and regulations related to solid waste?

Impact Analysis

The proposed project would be served by curbside solid waste and recycling services. Solid waste disposal must follow the requirements of the contracted waste hauler and disposal facility, which follows local, state, and federal statutes and regulations related

to the collection and disposal of solid waste. Additionally, the proposed project would be required to comply with Chapter 6-3 of the City's Municipal Code. Section 6-3 Construction and Demolition Recycling Ordinance requires construction projects to divert 65 percent of construction waste materials away from landfills (City of Antioch 2020a). In accordance with the City's Construction and Demolition Recycling Ordinance, the proposed project would be required to prepare a Waste Management Plan that identifies the types of construction and demolition debris materials that would be generated for disposal and recycling. As such, the proposed project would comply with all applicable local, state, and federal statutes and regulations related to solid waste. 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 of potential wildland fire hazard exist within the southern and unincorporated portions of the City, including rural, hilly terrain as well as the areas adjacent to or covered by natural grassland or brush (City of Antioch 2003b). The project site is in the northeast portion of the City and is currently vacant. It is developed with a metal warehouse building, a security guard station, an inactive rail spur, and surface parking. It is also connected to a 770-foot-long wharf located on the southern bank of the San Joaquin River. Land uses surrounding the project site include a mix of industrial, commercial, and residential uses. CAL FIRE does not identify the City in a local or state very high fire hazard severity zone (CAL FIRE 2020). Additionally, the U.S. Forest Service Wildfire Hazard Potential map classifies the project site as “non-burnable” and the potential for wildfire to occur in the surrounding area as “very low” to “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, CAL FIRE's Fire Hazard Severity Zone Maps, 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 local or state very high fire hazard severity zone (CAL FIRE 2009). The Contra Costa County Emergency Operations Plan does not identify specific emergency evacuation routes. However, operation of the proposed project would not result in the permanent modification to any of the surrounding roadways that would impair the Contra Costa County Emergency Operations Plan. Construction activities would generally be anticipated to occur within the project site; however, work may extend into Wilbur Avenue to connect to existing utility lines, construct the new sewer line connection, and other necessary improvements. Any construction traffic, lane closures, or street staging would require an approved TCP and an encroachment permit from the City. The TCP would identify all detours, appropriate traffic controls, and ensure 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 and the surrounding area are relatively flat and in an urban area surrounded by existing buildings, roadways, and associated infrastructure. The project site is not in a local or state very high fire hazard severity zone (CAL FIRE 2020). Additionally, the U.S. Forest Service Wildfire Hazard Potential map classifies the project site as “non-burnable” and the potential for wildfire to occur in the surrounding area as “very low” to “low” (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 local or state very high fire hazard severity zone (CAL FIRE 2020). The project site is in an industrial part of the city and surrounded by a mix of industrial, commercial, and residential uses. The proposed project would involve the development of an automotive logistics and processing facility consisting of the construction of a pre-engineered metal vehicle processing building of approximately 25,328 square feet, grading, paving, new utility connections, and stormwater improvements. Additionally, the proposed project would involve structural upgrades to the existing wharf located on the southern bank of the San Joaquin River.

During operation, the existing 30-foot-wide gated entrance on Wilbur Avenue would provide primary access to the site, including emergency access. The 30-foot-wide gated entrance, which would meet the City's design standards for minimum driveway width of 20 feet. All utilities would be undergrounded and would connect to existing infrastructure in the vicinity of the project site. Additionally, the proposed project would rehabilitate and reuse the existing fire water loop and hydrants on site to serve the wharf structure, vehicle processing building, and vehicle staging areas. The proposed project would be required to comply with all applicable building and safety codes, including the California Building Code 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 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 local or state very high fire hazard severity zone (CAL FIRE 2020). The project site and surrounding area are relatively flat and not in an area subject to landslides or flooding. Therefore, 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?	☐	☒	☐	☐

Impact 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 IS/MND, 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. As discussed in Section 3.4, Biological Resources, with the implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, CUL-1, CUL-2, and CUL-3 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.

Impact 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)?**

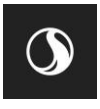
Impact Analysis

As described in the impact analysis in Sections 3.1 through 3.20 of this IS/MND, any potentially significant impacts of the proposed project would be reduced to a less than significant level following incorporation of the mitigation measures listed herein. 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.

Impact 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/or noise are resources that could cause potential effects through which the 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. All other resource areas would either have no impact, less than significant impact, or less than significant impact with mitigation incorporated. Therefore, the proposed project would not have environmental impacts which would cause substantial adverse impacts on human beings.



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