DRAFT

INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

PG&E ANTIOCH SERVICE CENTER PROJECT

ANTIOCH, CALIFORNIA



LSA

September 2023

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PG&E ANTIOCH SERVICE CENTER PROJECT

ANTIOCH, CALIFORNIA

Submitted to:

City of Antioch
Community Development Department
200 H Street
Antioch, California 94531

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Project No. CAN2203

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September 2023

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G: CONSTRUCTION EQUIPMENT CALCULATIONS

LIST OF ABBREVIATIONS AND ACRONYMS

µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ADA	Americans with Disabilities Act
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APD	Antioch Police Department
APN	Assessor's Parcel Number
APSA	Aboveground Petroleum Storage Act
AUSD	Antioch Unified School District
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Basin Plan	Water Quality Control Plan
BMPs	Best Management Practices
CAL FIRE	California Department of Forestry and Fire Protection
Cal/EPA	California Environmental Protection Agency (
CalARP	California Accidental Release Prevention
CalEEMod	California Emission Estimator Model
CALGreen Code	California Green Building Standards Code
California Register	California Register of Historical Resources
Caltrans	California Department of Transportation
Canal	Contra Costa Canal
CARB	California Air Resources Board
CARP	Climate Action Resilience Plan

CBC	California Building Code
CCCFPD	Contra Costa County Fire Protection District
CCHSHM	Contra Costa County Health Services Department Hazardous Materials Program
CCR	California Code of Regulations
CCWD	Contra Costa Water District
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERS	California Environmental Reporting Systems
CGP	Construction General Permit
CGS	California Geological Survey
CH_4	methane
City	City of Antioch
Clean Air Plan	BAAQMD's 2017 Clean Air Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNG	compressed natural gas
CO	carbon monoxide
CO_2	carbon dioxide
County	County of Contra Costa
CUPA	Certified Unified Program Agency
CWA	Federal Clean Water Act
dB	decibel

dBA	A-weighted decibel
DDSD	Delta Diablo Sanitation District
DDT	dichlorodiphenyltrichloroethane
DIR	California Department of Industrial Relations
DNL	day-night level
DOC	California Department of Conservation
DOSH	Division of Occupational Safety and Health
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
ECC Subbasin	East Contra Costa Subbasin
EIR	Environmental Impact Report
EO	Executive Order
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gas
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GWh	gigawatt-hours
GWP	Global Warming Potential
HASP	Health and Safety Plan

HBMS	Hazardous Building Materials Survey
HCP	Habitat Conservation Plan
HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan
HFCs	hydrofluorocarbons
HMBP	Hazardous Materials Business Plan
hp	horsepower
HVAC	heating, ventilation, and air conditioning
in/sec	inches per second
IPaC	Information for Planning and Consultation
IS	Initial Study
ISO	Industrial Safety Ordinance
kWh	kilowatt-hours
L_{dn}	day-night average level
L_{eq}	equivalent continuous sound level
LID	Low Impact Development
L_{max}	maximum instantaneous sound level
LOS	level of service
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MEI	maximally exposed individual
mgd	million gallons per day
MLD	Most Likely Descendant
MRP	Municipal Regional Stormwater NPDES Permit
MRZ	Mineral Resource Zone

N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NO_2	nitrogen dioxide
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
OPR	Governor's Office of Planning and Research
OSHA	(U.S. Department of Labor) Occupational Safety and Health Administration
PAHs	polycyclic aromatic hydrocarbons
Pb	lead
PCBs	polychlorinated biphenyls
PD	Planned Development District
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PMAs	Projects and Management Actions
POTWs	publicly owned treatment works
PPV	peak particle velocity
PRC	Public Resources Code
project	PG&E Antioch Service Center Project
PV	photovoltaic

RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
RMS	root-mean-square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCP	Stormwater Control Plan
SDSs	Safety Data Sheets
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SLF	Sacred Lands File
SMP	Site Management Plan
SO_2	sulfur dioxide
SPRR	Southern Pacific Railroad
SR-4	State Route 4
SR-160	State Route 160
SRA	State Responsibility Area
TACs	toxic air contaminants
TMDLs	Total Maximum Daily Loads
UCMP	University of California Museum of Paleontology
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

UST	Underground Storage Tanks
UWMP	Urban Water Management Plan
VdB	vibration velocity decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
WTP	Water Treatment Plant

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1.0 PROJECT INFORMATION

1. **Project Title:**

   PG&E Antioch Service Center Project

2. **Lead Agency Name and Address:**

   City of Antioch Planning Division
   200 H Street
   Antioch, CA 94531

3. **Contact Person and Phone Number:**

   Zoe Merideth, Senior Planner
   (925) 779-6159

4. **Project Location:**

   The project site is located on 36.39 acres of the existing 56.15-acre PG&E Antioch Service Center at 2111 Hillcrest Avenue in the City of Antioch, Contra Costa County (Assessor's Parcel Number [APN] 051-160-002).

5. **Project Sponsor's Name and Address:**

   Pacific Gas and Electric Company (PG&E)
   2111 Hillcrest Avenue
   Antioch, CA `94509

6. **General Plan Designation:**

   Specific Plan Focus Area, Industrial/Utilities

7. **Zoning:**

   Planned Development District (PD)

8. **Description of Project:**

   The proposed project involves the replacement and demolition of four existing buildings within the existing PG&E Service Center (Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings). Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. See Chapter 2.0, Project Description, of this Initial Study, for a full project description.

9. **Surrounding Land Uses and Setting:**

   To the north, the project site is bounded by single-family homes divided between two developed subdivisions, the Meadowbrook and Hillsdale subdivisions. To the west, the project site is bounded by Hillcrest Avenue. The project site is bordered immediately to the south by vacant land and Southern Pacific Railroad (SPRR) property, State Route 4 (SR-4), and the Antioch

Bay Area Rapid Transit (BART) station. Additionally, the project site is bounded to the east by undeveloped vacant land.

10. **Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):**
    - City of Antioch – Environmental Review, Planned Development Rezone, Final Development Plan, Use Permit, and Design Review
    - Contra Costa County Fire Protection District – Review/Approve fire truck access and site fire flow design
    - City of Antioch Water Department – Connection to water system
    - City of Antioch Building Department – Issuance of Building Permits
    - City of Antioch Public Works Department – Issuance of Encroachment Permits, Connection to wastewater system
11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

    California Native American tribes traditionally and culturally affiliated with the project site and area were notified of the proposed project on May 18, 2023. The City did not receive any requests for consultation during the 30-day notification period. Therefore, the City considers the consultation process pursuant to Assembly Bill (AB) 52 to be concluded.

2.0 PROJECT DESCRIPTION

The following describes the proposed Pacific Gas and Electric Company (PG&E) Antioch Service Center (project) that is the subject of this Initial Study (IS) prepared pursuant to the California Environmental Quality Act (CEQA). PG&E (the project Applicant) proposes the redevelopment of the existing PG&E Antioch Service Center, including the replacement of the existing Fleet Maintenance building, Logistics Warehouse and Shops buildings, and Operations building, as well as associate improvements, as described in more detail below. The City of Antioch (City) is the lead agency for review of the proposed project under CEQA.

2.1 PROJECT SITE

The following section describes the project location, existing conditions, surrounding land uses, and regulatory setting.

2.1.1 Project Location

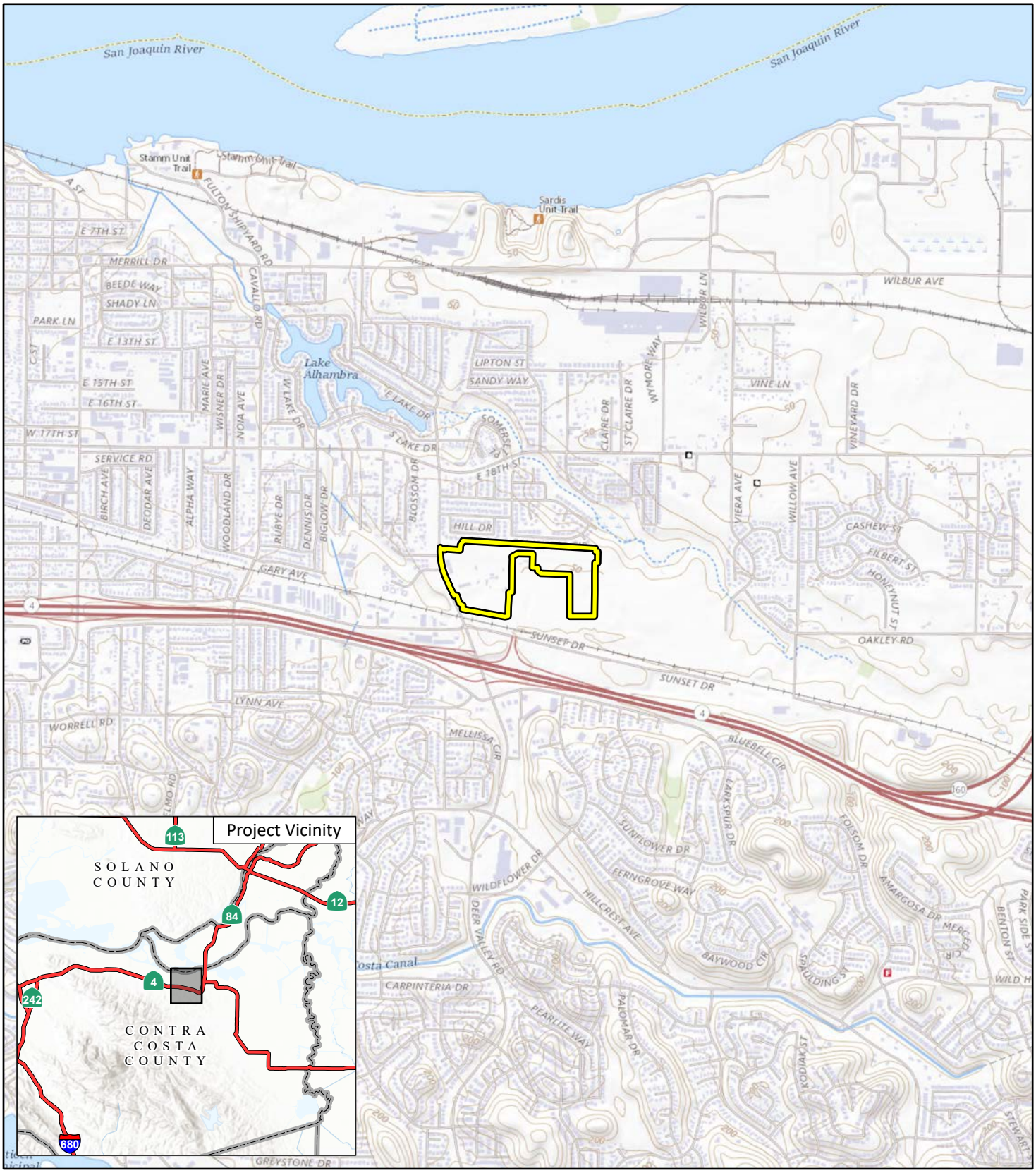
The project site is located on 36.39 acres of the existing 56.15-acre PG&E Antioch Service Center at 2111 Hillcrest Avenue in the City of Antioch, Contra Costa County (Assessor's Parcel Number [APN] 051-160-002). The Antioch Service Center site is bordered to the north by residential uses; to the east by vacant undeveloped land; to the south by vacant land, the Southern Pacific Railroad (SPRR) railroad property, and the Antioch Bay Area Rapid Transit (BART) station/arterial track; and to the west by Hillcrest Avenue.

Regional vehicular access to the project site is provided by State Route 4 (SR-4), located south of the project site. The closest on- and off-ramps to the project site are located along Hillcrest Avenue, approximately less than 0.25 mile to the south. Bus stops along Hillcrest Avenue provide transit service to the project site. The Antioch BART station is located immediately to the south of the project site, positioned between the project site and SR-4. Figure 2-1, Project Location and Regional Vicinity, shows the regional and local context of the project site. Figure 2-2, Aerial Photograph of Project Site and Surrounding Land Uses, depicts the details of the project site and surrounding land uses (see Section 2.1.3, below).

2.1.2 Existing Conditions

The project site is currently occupied by PG&E's Antioch Service Center, as shown in Figure 2-3, Existing Conditions. The project site is relatively flat and the topography slopes gently toward storm drain inlets throughout the site. Under existing conditions, the Operations building is located just south of the existing driveway entrance located at the northern end of the project site along the western border of the project site. The existing Fleet Maintenance building is located towards the southwestern corner of the project site. The existing Logistics Warehouse and Shops compound consists of various buildings that are located east of the Fleet Maintenance building near the center of the site. An assortment of smaller buildings are scattered throughout the project site, in between existing employee and fleet surface parking areas. The square footage of the existing structures on site total 22,844 square feet. The majority of the project site consists of gravel and undeveloped dirt.

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Project Location

FIGURE 2-1

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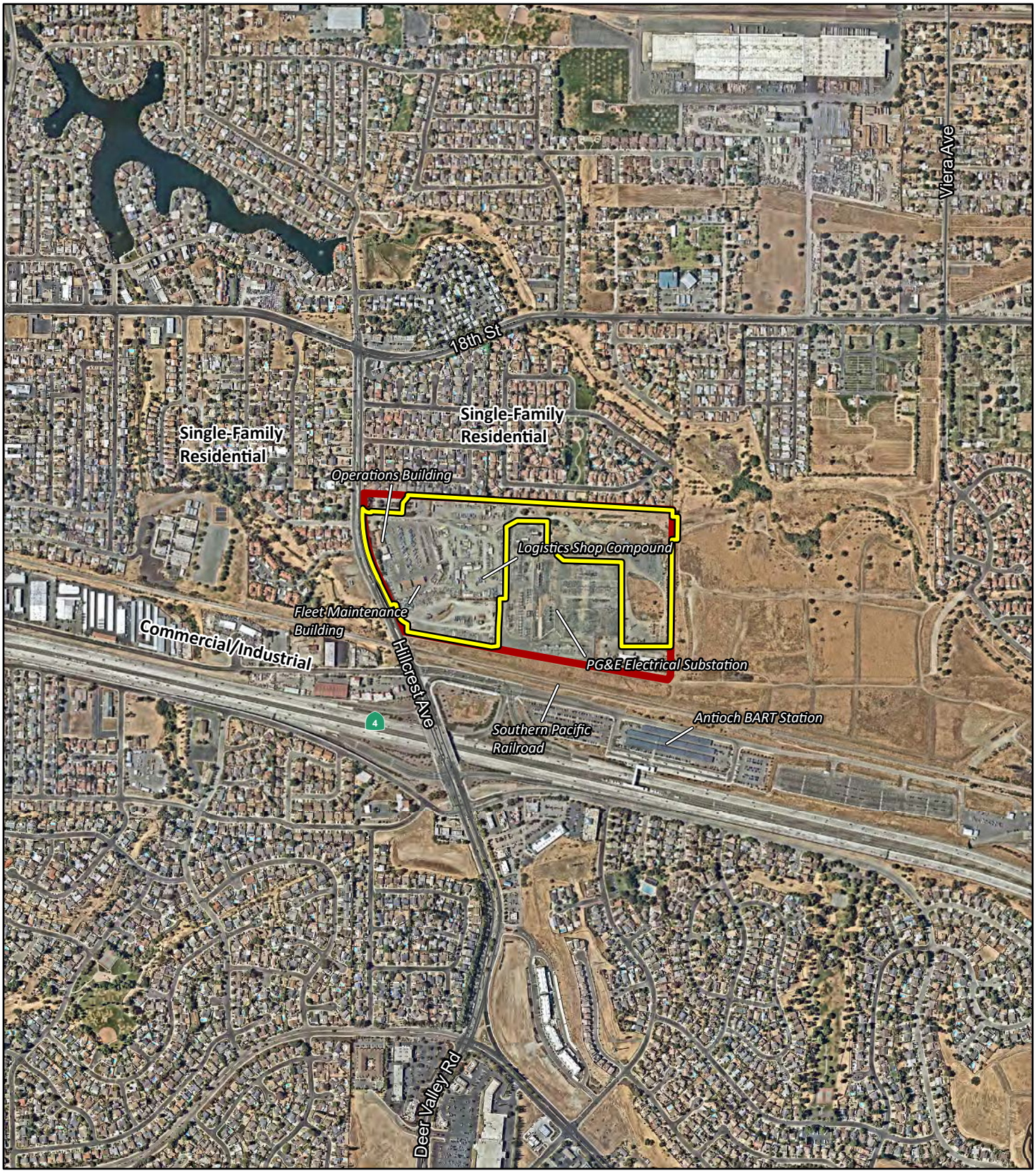
SOURCE: USGS The National Map (2017)

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PG&E Antioch Service Center

Project Location and Regional Vicinity

This page intentionally left blank



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Project Location

Parcel Boundary

FIGURE 2-2

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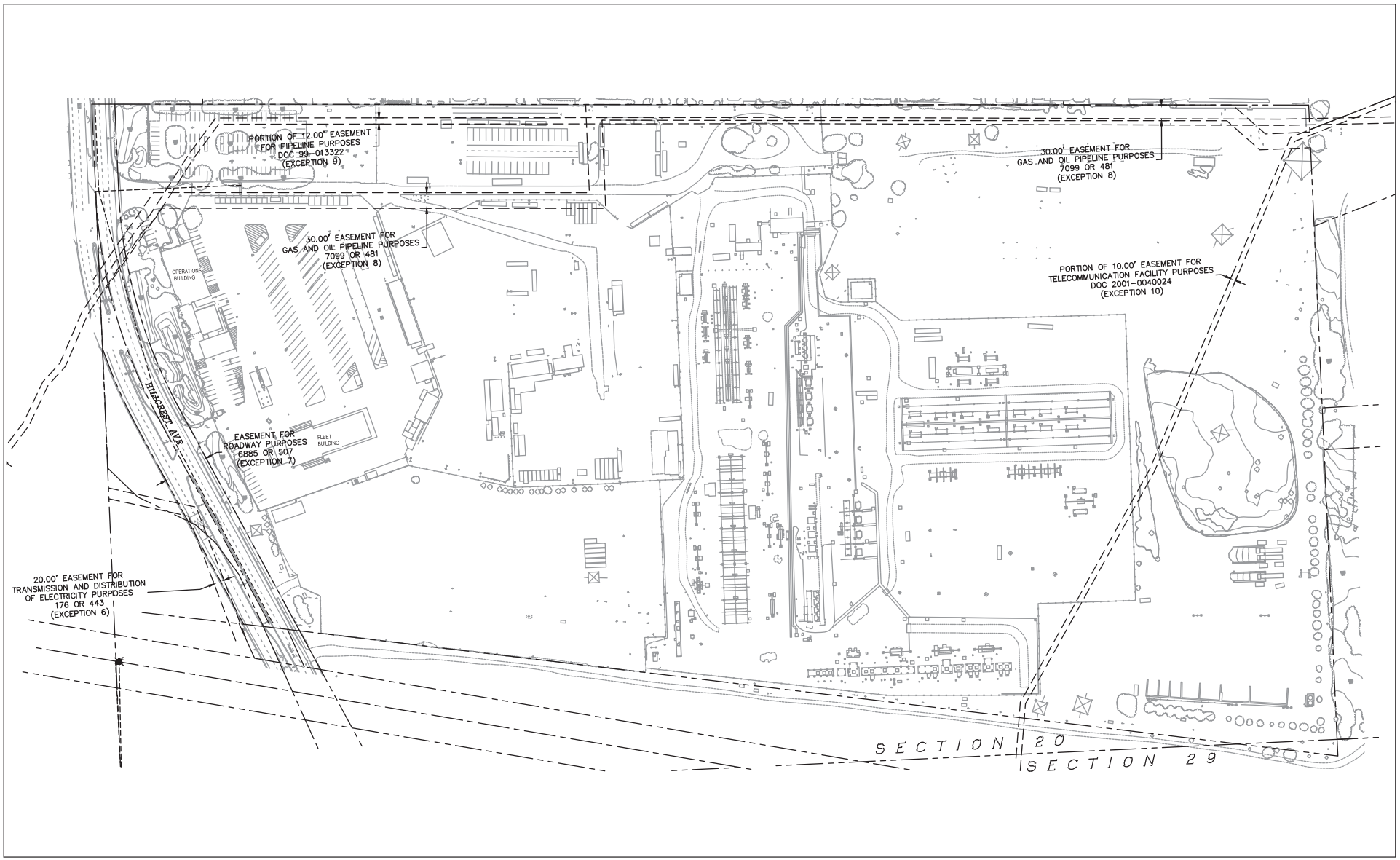
SOURCE: Nearmap (2022)

PG&E Antioch Service Center

Aerial Photograph of Project Site and Surrounding Land Uses

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FIGURE 2-3

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SOURCE: BKF Engineers, 4/17/2023

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Antioch PG&E Service Center

Existing Conditions

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As shown in Figure 2-3, the existing driveway entrance located at the northern end of the project site along the western border of the project site leads to a paved asphalt road which connects to the existing Operations and Fleet Maintenance buildings and associated parking lots. The northwestern employee parking lot forms a large loop along the eastern border of the project site. There are approximately 287 existing mature trees on the project site.

As shown in Figure 2-3, a 20-foot easement for the transmission and distributions of electricity generally runs through Hillcrest Avenue but does not directly intersect the project site. Running east to west, there is a 30-foot easement for gas and oil pipeline purposes, which runs almost directly under the existing entrance road and across the project site. A portion of a 12-foot easement for pipeline purposes runs directly under the existing employee parking lot in the northwest corner of the site and takes a sharp right turn to run along the northern border of the project site. A 10-foot easement for telecommunication facility purposes runs diagonal through the eastern portion of the project site.

2.1.2.1 Existing Operations

As part of existing operations, the existing PG&E Antioch Service Center currently employs approximately 330 permanent employees, of which 159 are field crew and 171 are standard employees. Field crew employees drive fleet vehicles and typically disperse out to worksites after an initial check-in. Of the 171 standard employees, approximately 110 work full-time on site (Monday through Friday 8:00 a.m. to 5:00 p.m.) and approximately 49 office employees work in a hybrid work mode. The Fleet Maintenance building has a total of 12 dedicated fleet service employees split into two separate work shifts of up to 6 staff each.

During the global COVID-19 pandemic, most of the office and administrative employees at the site began working from home. The facility is normally active Monday through Friday from 6:30 a.m. to 5:00 p.m., although those hours can be extended if needed. Peak times for the existing service center are early morning (typically between 6:30 a.m. to 8:30 a.m.), and again in the late afternoon (from 2:00 p.m. to 5:00 p.m.).

2.1.3 Surrounding Land Uses

To the north, the project site is bounded by single-family homes divided between two developed subdivisions, the Meadowbrook and Hillsdale subdivisions. To the west, the project site is bounded by Hillcrest Avenue. The project site is bordered immediately to the south by vacant land and SPRR property, SR-4, and the Antioch BART station. Additionally, the project site is bounded to the east by undeveloped vacant land (see Figure 2-2).

2.1.4 Circulation and Access

Existing access to the site is provided via three gated driveways off of Hillcrest Avenue, one of which is a two-lane driveway and two which are single lane. Access to the project site is restricted by entry and exit gates. The existing service center currently has few visitors, consisting primarily of vendors, deliveries, and other visiting PG&E staff.

2.1.5 Land Use and Zoning Designations

The City of Antioch General Plan map[1] designates the project site as the Hillcrest Station Area: Specific Plan Focus Area. The project site is located within the Hillcrest Station Area Specific Plan,[2] which designates the project site as an Industrial/Utilities land use.

The project site is zoned Planned Development District (PD) on the City of Antioch Zoning Map.[3] This zoning designation is intended to accommodate a wide range of residential, commercial, and industrial land uses which are mutually supportive and compatible with existing and proposed development on surrounding properties.

2.2 PROPOSED PROJECT

The proposed project involves the demolition and replacement of the following four existing buildings on site (Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings). Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. Individual components of the proposed project are discussed below.

2.2.1 Project Objectives and Benefits

Per the project Applicant, the proposed project is intended to achieve the following objectives:

1. To replace the aging and inadequately sized Fleet Maintenance building, Logistics Warehouse and Logistics Shops buildings, and Operations building;

2. To increase the efficiency of the existing service center, enhance environmental safety, and improve the employee workplace experience;

3. To enhance PG&E's ability to service and maintain the community's distribution grid; and

4. To ensure the well-being and vitality of PG&E's customers, employees, and the communities served.

2.2.2 Facilities

The proposed project consists of the construction of four new main structures (Logistics Warehouse building, Logistics Shops building, Fleet Maintenance building, and Operations building) to replace existing structures that would be demolished. Construction of additional non-occupied structures

[1] City of Antioch. 2023a. City of Antioch General Plan. Updated November 24, 2003. Website: https://www.antiochca.gov/fc/community-development/planning/Antioch_Adopted_General_Plan.pdf (accessed May 2023).

[2] City of Antioch. 2009. Hillcrest Station Area Specific Plan. Updated April 2009. Website: https://www.antiochca.gov/fc/community/transportation/Hillcrest-Station-Area-Specific-Plan.pdf (accessed May 2023).

[3] City of Antioch. 2023b. Zoning Map. Website: https://www.antiochca.gov/fc/public-works/gis/zoning-map.pdf (accessed May 2023).

including storage facilities are also proposed. The proposed project would result in a total combined building area of 203,500 square feet within the project site, for an increase of 180,656 square feet.

- **New Logistics Warehouse Building.** The new Logistics Warehouse building would replace/ expand the existing assemblage of buildings in the center of the project site east of the existing Fleet Maintenance building. The proposed building would be single story (26 feet tall) and include 36,000 square feet of enclosed warehouse space, and another 18,000 square feet of unconditioned covered storage for a total of approximately 54,000 square feet. The existing warehouse buildings would be demolished after the new building is operational.

- **New Logistics Shops Building**. The new Logistics Shops building would replace the existing, inadequate shop facilities located in the center of the project site east of the existing Fleet Maintenance building. The proposed building would be single story (26 feet), totaling 53,000 square feet. The building would function as an industrial building containing workshops, tool rooms, and building support spaces. This building would also have a low use intensity as it would serve and support field crews. The existing assemblage of shop buildings and temporary facilities would be demolished after the new building is operational.

- **New Fleet Maintenance Building**. The new Fleet Maintenance building would replace the existing maintenance facility/Fleet Maintenance building located in the southwestern corner of the project site. The proposed single-story (34-foot-tall) building would be approximately 20,000 square feet in size and would be dedicated to fleet storage and minor maintenance. The existing Fleet Maintenance building would be demolished immediately after the new building is operational.

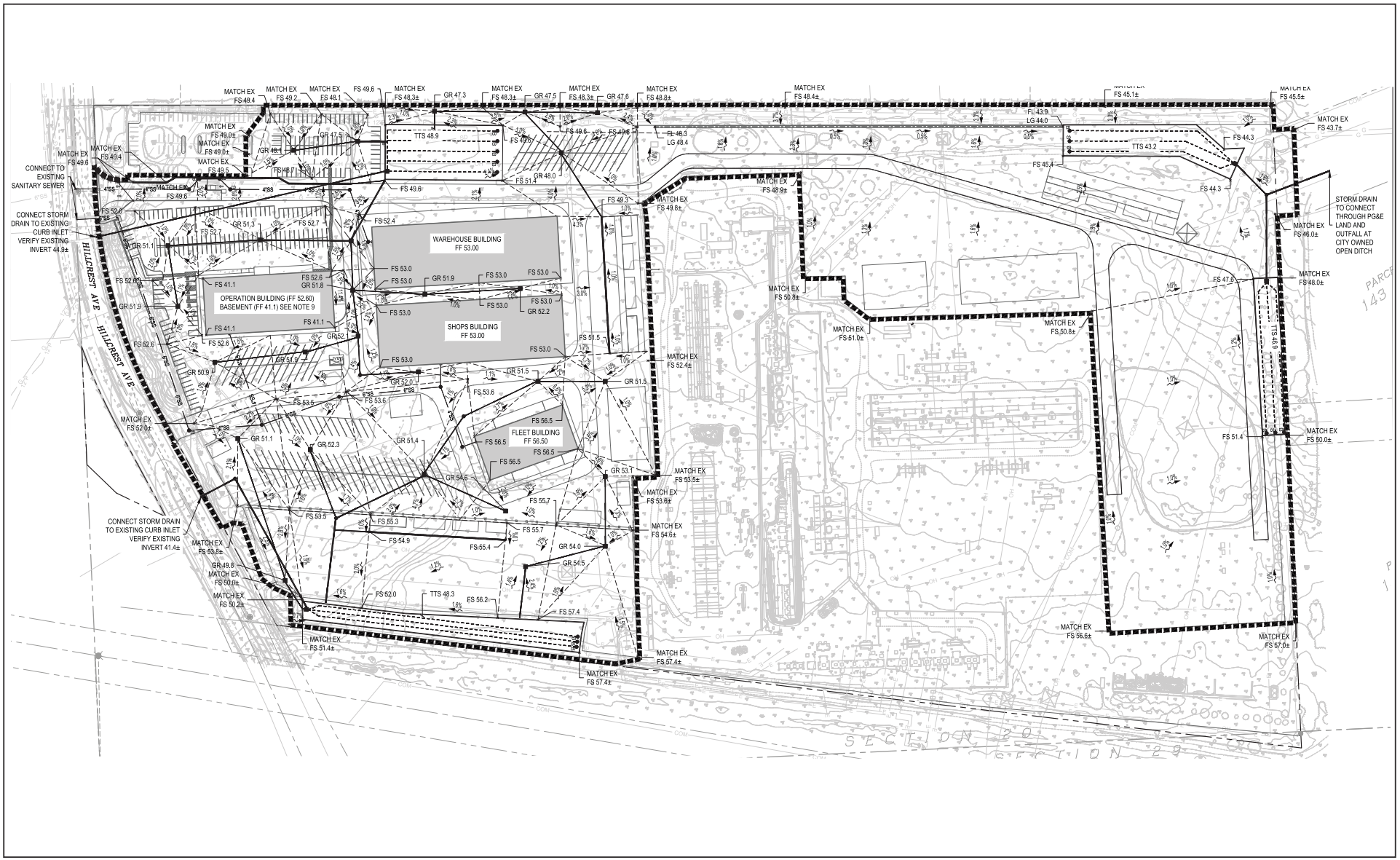
- **New Operations Building**. The new Operations building would replace the existing Operations building located along the northern area of the project site along Hillcrest Avenue (as shown in Figure 2-4, Proposed Site Improvements). The proposed two-story building would be approximately 51,500 square feet and 45 feet in height. The building would be sited over the proposed single-level, 27,000-square-foot underground parking area and would primarily be used for offices and meeting room uses.

The new Logistics Warehouse building, Logistics Shops building, Fleet Maintenance building, and Operations building as described above would total approximately 178,500 square feet. Additionally, the following storage facilities are proposed:

- **Storage Warehouses.** A single-story storage warehouse would be located east of the Fleet Maintenance building and would be approximately 10,293 square feet in size. Two additional warehouses, Storage Warehouse B and Storage Warehouse C, would be located in the eastern portion of the project site south of the northeast laydown yard and would be 9,600 square feet and 19,200 square feet in size, respectively.

- **Material Storage.** The single-story material storage building would be located southeast of the Fleet Maintenance building and would be approximately 1,800 square feet in size.

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FIGURE 2-4

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SOURCE: BKF Engineers

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Antioch PG&E Service Center

Proposed Site Improvements

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- **Covered Storage.** The covered (canopy) material storage pad would be located immediately to the west of the material storage building and would be approximately 1,944 square feet in size.

Other smaller support structures include power pole storage bins, a replacement emergency generator, a fleet fueling station with fully compliant double containment above ground fuel tank, a covered outdoor employee break area, a covered trash and recycling enclosure, and photovoltaic (PV) canopies over employee parking. In addition to the structures noted, the site would have internal vehicular circulation, separate employee and fleet parking, and paved surfaces for laydown/ material storage.

2.2.3 Lighting

The proposed project would include 22-foot-tall light pole fixtures throughout all proposed parking areas and paved areas, and surrounding the proposed buildings. All of the fixtures would include a motion/ambient sensor.

2.2.4 Landscaping

The majority of the existing landscaped area at both the entrance and exits of the project site along Hillcrest Avenue would remain in place. The proposed project would include approximately 94,834 square feet of landscaped area spread across the project site. A total of 83 existing trees would be removed as part of the project, including 2 protected trees. A total of 21 trees would be planted and 92 existing trees would be protected as part of the proposed project. All proposed landscaping would be very low or low in water demand. Additionally, the proposed project would include four landscaped bioretention basins with mow-free sod, which would be a total of approximately 82,236 square feet.

2.2.5 Access, Circulation, and Parking

As shown in Figure 2-3, existing vehicular access points would be maintained, and the site would have internal vehicular circulation. The northern and southern access points along Hillcrest Avenue would remain unchanged and function as entry only and exit only driveways (30 feet in width), respectively, with an existing rolling vehicular gate. The middle access point along the Hillcrest Avenue driveway (35 feet in width) would be maintained as a two-way driveway. The proposed project would include a new kiosk guard located at the southern driveway and would be improved with asphalt concrete.

The proposed project would provide the number of spaces required by the City of Antioch Municipal Code, including 362 employee/visitor parking spaces (does not include fleet parking), 8 of which would be compliant with the Americans with Disabilities Act (ADA) requirements, and 22 of which would be electric vehicle parking. The project Applicant plans to exceed code minimums for electric vehicle charging stations in the fleet parking area as they transition to more electric fleet vehicles. The proposed project would include one level of below grade parking beneath the proposed Operations building that would include 49 of the 362 proposed parking spaces and would be 27,000 square feet. Fleet parking would include a total of 127 spaces, 26 of which would be just south of the proposed Operations building, 34 of which would be directly east of the proposed northern bioretention basin, and 67 of which would be located directly west of the new Fleet

Maintenance building. The employee/visitor parking lot located directly north of the proposed Operations building would include all of the electric vehicle spaces and a PV canopy cover. A total of 6 bicycle parking spaces would be provided.

2.2.6 Utilities and Infrastructure

2.2.6.1 Water

The City maintains existing water lines within the vicinity of the project site, including a 10-inch line along Hillcrest Avenue, and waterlines within the project site. New 6-inch, 8-inch, and 10-inch fire water lines as well as 1.25-inch domestic water lines would be installed that would serve the proposed Operations building, Fleet Maintenance building, Logistics Shops building, and Logistics Warehouse building, which would connect to the existing main line within Hillcrest Avenue.

2.2.6.2 Wastewater

The City maintains existing sanitary sewer lines within the vicinity of the project site, including a 6-inch line along Hillcrest Avenue, and 4-inch lines within the project site. New 6-inch and 4-inch lines would be installed that would serve the proposed Operations building, Fleet Maintenance building, Shops building, and Logistics Warehouse building, and would connect to the existing 6-inch main within Hillcrest Avenue.

2.2.6.3 Stormwater

The following discussion relies on the Stormwater Control Plan prepared for the proposed project, which defines the project site as the 56.15-acre service center site, extending beyond the 36.39-acre project site. Therefore, the following analysis is applicable to an area greater (56.15 acres) than the defined project site (36.39 acres). The existing structures, paving, concrete, and other impervious surfaces account for approximately 19.04 acres of the 56.15-acre site. The remaining 37.11 acres on the project site are covered by pervious surface consisting primarily of gravel and dirt. Under existing conditions, storm water is collected in inlets throughout the project site that drain to existing 8-inch, 15-inch, and 24-inch storm drains on site that discharge into an existing storm drain line located in Hillcrest Avenue.

Upon construction of the proposed project, approximately 32.6 acres (58 percent) of the project site would be covered by impervious surfaces. The remaining surface area would remain as pervious surfaces, consisting of landscaped areas, bioretention basins, undeveloped dirt, and gravel. The proposed project would include inlets located in multiple locations across the project site to capture on-site runoff and direct runoff into four bioretention basins. The northern bioretention basin and associated storm drains would be constructed during Phase 2.A, and the southern bioretention basin and associated storm drains would be constructed during Phase 3. Two additional bioretention basins and associated storm drains would be constructed on the northeastern corner of the site in the future phase of construction. The bioretention basins would collect and treat storm water before discharging into an existing storm drain line that extends west to the City system. The proposed project would include two storm drain connections to existing curb inlets in Hillcrest Avenue and one connection through PG&E land in the northeastern corner of the project site.

2.2.6.4 Electricity and Gas

Electricity and gas service is provided to the project site by PG&E. The proposed project would include connections to the existing electricity and natural gas lines that run adjacent to the project site on Hillcrest Avenue.

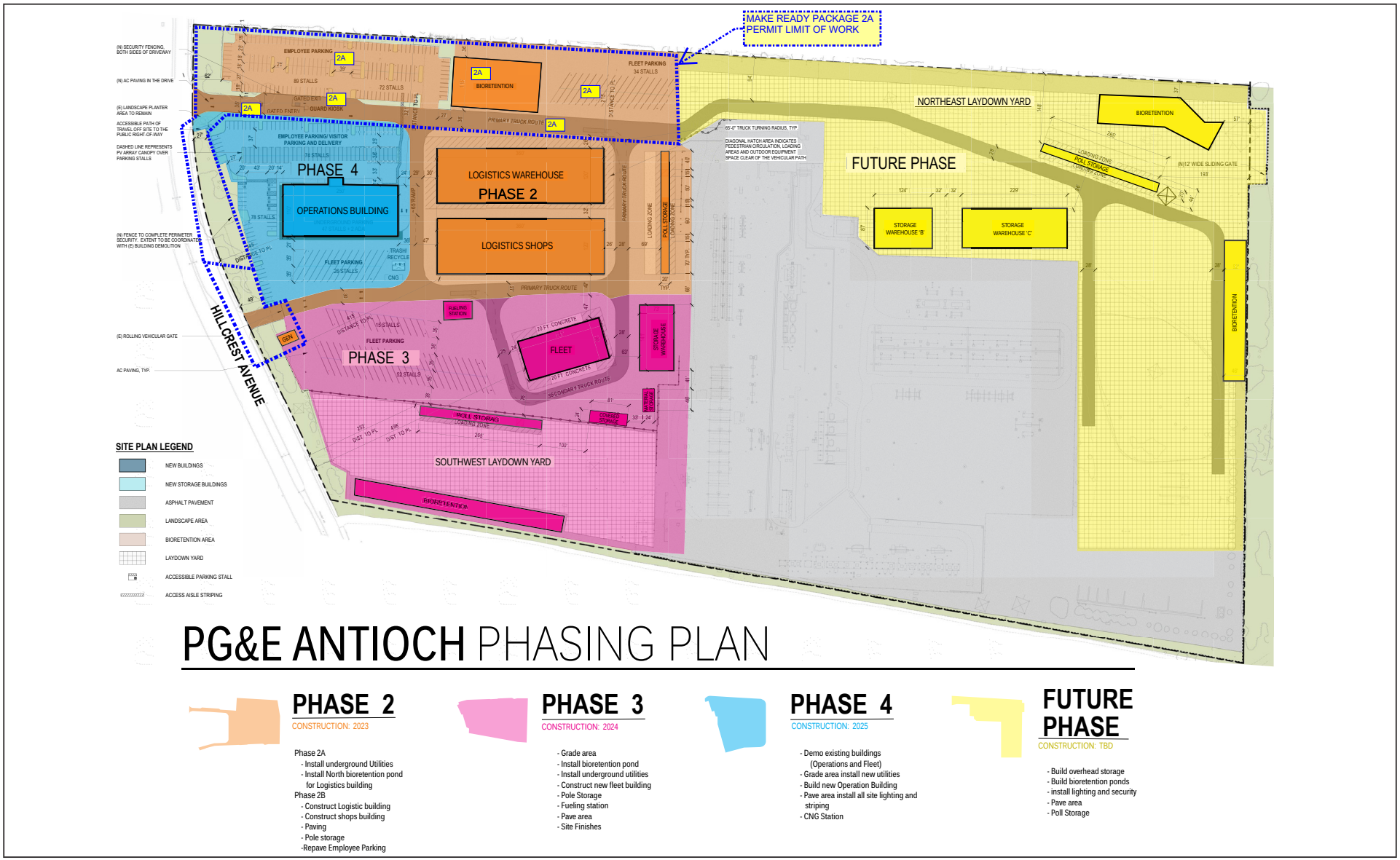
2.2.7 Construction and Demolition Phasing

The proposed project would result in the demolition of the existing Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Demolition and construction would be phased, in order to keep the facility operational during the implementation of the proposed project. Construction activities and site grading would result in a total volume of 111,434 cubic yards of cut material and a total of 33 acres of disturbed soil. Construction activities would require excavation to a depth of 11 feet for the underground parking and to a depth of 8 feet for the deepest utility trench. As shown in Figure 2-5, Construction Phasing, the project schedule is divided into the following five construction phases. Approximately one to four acres of land would be disturbed during any given phase:

- **Phase 2.A**. Phase 2.A includes improvements that are required prior to building construction such as the relocation of materials, temporary trailers, and equipment and utilities as necessary to be located on the northern area of the project site. Phase 2.A would include the installation of underground utilities connecting the project site to the utility main lines located in Hillcrest Avenue. Utilities infrastructure would be sized appropriately for the full build out of the proposed project and would be subbed and capped as appropriate for future phases. This phase would include installation of stormwater drainage infrastructure and a bioretention basin that would serve the northern portion of the service center (including the Logistics buildings). The existing employee parking lot located in the northwest corner would be improved and expanded. The new fleet parking lot located along the north side of the project site would be graded and paved. Additionally, Phase 2.A would include improving the paving along the existing main vehicular road loop and the new entry/exit gates. In either Phase 2.A or Phase 2.B, a new emergency generator and associated electrical yard would be installed. Building permits for Phase 2.A would be submitted in 2023, and construction is anticipated to begin in 2024.

- **Phase 2.B.** Phase 2.B would begin the construction process. No existing permanent structures would be disturbed or demolished. This phase would include the relocation of materials, temporary trailers, equipment, and utilities as necessary in the north and central areas of the project site. Construction of the new Logistics Warehouse and Logistic Shops buildings would require grading, construction of building pads, and the laying of building foundations and slabs. The majority of the proposed landscaping improvements would occur during Phase 2, including the north parking, bioretention areas, and entry drive improvements. Utilities to be installed during Phase 2.A would be extended appropriately for construction of Phase 2.B. Construction of the pole storage bins would require grading and construction of the building pad and slabs. Additionally Phase 2.B would include paving the areas around the Logistics Warehouse and Logistics Shops buildings, the new pole storage bins, and the proposed truck routes within this area. Building permits for Phase 2.B would be submitted in 2023, and construction is anticipated to begin in 2024.

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PG&E ANTIOCH PHASING PLAN

PHASE 2
CONSTRUCTION: 2023

Phase 2A
- Install underground Utilities
- Install North bioretention pond for Logistics building

Phase 2B
- Construct Logistic building
- Construct shops building
- Paving
- Pole storage
- Repave Employee Parking

PHASE 3
CONSTRUCTION: 2024

- Grade area
- Install bioretention pond
- Install underground utilities
- Construct new fleet building
- Pole Storage
- Fueling station
- Pave area
- Site Finishes

PHASE 4
CONSTRUCTION: 2025

- Demo existing buildings (Operations and Fleet)
- Grade area install new utilities
- Build new Operation Building
- Pave area install all site lighting and striping
- CNG Station

FUTURE PHASE
CONSTRUCTION: TBD

- Build overhead storage
- Build bioretention ponds
- install lighting and security
- Pave area
- Poll Storage

LSA

FIGURE 2-5

NOT TO SCALE

SOURCE: BKF Engineers

I:\CAN2203\G\Construction_Phasing.ai (1/6/2023)

Antioch PG&E Service Center

Construction Phasing

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- **Phase 3**. Phase 3 would include demolition of the existing Logistics Warehouse and Shops and construction of the new Fleet Maintenance building, the Covered Storage canopy, the new Material Storage building and the new Storage Warehouse building. Demolition of the existing Logistics Warehouse and Logistics Shops would not occur until the new Logistics Warehouse and Logistics Shops are operational. Areas around the new buildings would be paved, including temporary paving to continue access to the existing Fleet Maintenance building, the Operations building, and fleet parking areas. This phase would include installation of stormwater drainage infrastructure and a bioretention basin that would serve the southern portion of the service center. Minor landscaping improvements would occur during Phase 3 associated with the southern bioretention basin. Any modifications to the existing perimeter fence as necessary to accommodate revised grades along the southwest corner of the site would be completed. Construction of the new above ground fueling station would be included in Phase 3. Utility infrastructure would be appropriately extended from Phases 2.A and 2.B to serve development completed in Phase 3. Additionally, Phase 3 would include the grading and construction of pole storage bins.

- **Phase 4.** Phase 4 would complete the build out of the current service center area and would begin after Phase 3 is completed and fully operational for site functionality. Phase 4 would include the relocation of materials, equipment, and personnel from the existing Operations buildings (potentially to the old Fleet Maintenance building and/or other temporary swing space facilities). This phase includes grading and construction of the new Operations building and underground parking area and additional surface parking for employees and visitors and fleet parking. All relevant materials, equipment, and personnel would be relocated into the new Operations building. Upon completion of the new Operations building, the existing Operations building would be demolished. Phase 4 would include the demolition of the existing Fleet Maintenance building and associated utilities and accessory structures. Area surrounding the demolished Fleet Maintenance building would be graded and paved. All utility installation would be completed for the entire proposed project. Minor landscaping improvements would occur during Phase 4 consisting of perimeter parking lot landscape improvements. Additionally, Phase 4 includes the following improvements: relocation and replacement of the compressed natural gas (CNG) station, installation of PV canopies over select areas of employee parking, construction of new trash and recycling structures, and grading and paving of areas around the new Operations building that would include extending the sidewalk from the operations building through the proposed exit gate to the public sidewalk. Building permits for Phase 4 would be submitted in 2025, and construction is anticipated to begin in 2026.

- **Future Phase.** The Future Phase would complete build out of the eastern portion of the project site which would include a laydown yard, poll storage, two bioretention basins, and two storage warehouses. The Future Phase would entail fine grading, construction and compaction of building pads, construction of footings/slab on grade, trenching/tie in for underground utilities, assembly of pre-engineered metal buildings, and minor paving at doorways. Building permits would likely be submitted in 2028 and construction is anticipated to begin in 2029.

2.3 PROJECT APPROVALS

While the City is the CEQA lead agency for the proposed project, other agencies also have discretionary authority related to the project and approvals or serve as a responsible and/or trustee agency in connection to the proposed project. A list of these agencies and potential permits and approvals that may be required is provided in Table 2.A.

Table 2.A: Potential Permits and Approvals

Lead Agency	Permits/Approvals
City of Antioch	● Adoption of the Final IS/MND for the PG&E Antioch Service Center Project ● Planned Development Rezone ● Final Development Plan ● Use Permit ● Design Review
Contra Costa County Fire Protection District	● Review/Approve fire truck access and site fire flow design
City of Antioch Water Department	● Connection to water system
City of Antioch Building Division	● Issuance of Building Permits
City of Antioch Public Works Dept.	● Issuance of Encroachment Permits ● Connection to wastewater system

Source: LSA (2023).

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist in Chapter 3.0.

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

3.1 DETERMINATION

On the basis of this initial evaluation:

☐ 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 "Potentially Significant Impact" or "Potentially Significant Unless Mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

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

Signature _____ Date _____

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4.0 CEQA ENVIRONMENTAL CHECKLIST

4.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
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 a 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?	☐	☒	☐	☐

a. Would the project have a substantial effect on a scenic vista?

Scenic vistas are generally defined as publicly-accessible viewpoints that provide expansive or panoramic views of scenic resources. Important visual resources within the City of Antioch include views of Mt. Diablo, the ridgelines, and the San Joaquin River because they contribute to community identity, visual enjoyment, and a sense of Antioch's history. Additionally, the City's General Plan identifies the following important view corridors, which provide motorists with views of either the surrounding hills and ridgelines or the San Joaquin River: Somersville Road, Lone Tree Way, Hillcrest Avenue, State Route 4 (SR-4), State Route 160 (SR-160), James Donlon Boulevard, Deer Valley Road, and Empire Mine Road.

The San Joaquin River is not visible from the project area due to elevation differences, intervening development, and distance to the river. Views of the hills and Mt. Diablo to the southwest are generally available throughout the City, including from the private vantage points from within the project site. However, these views are largely obscured by existing development and trees. The only important view corridors in the nearby vicinity of the project site include Hillcrest Avenue, SR-4, and Deer Valley Road. All other identified important view corridors are over a mile from the project site and the project site is not visible from these corridors due to existing development, trees, and intervening topography. As noted in Chapter 2.0, Project Description, the new Operations building is the tallest proposed building at 45 feet in height, while the new Logistics Warehouse and Shops buildings would be 26 feet, and the new Fleet Maintenance building would be 34 feet. Existing uses adjacent to and within the project site are generally one- to two- stories in height. Therefore, portions of the proposed development would be taller than surrounding existing uses. Nevertheless, the proposed project would not significantly alter existing views of the hills to the southwest when

compared to existing conditions because views are already largely obscured under existing conditions. Additionally, the Hillcrest Station Area Specific Plan includes the following policies related to visual resources that would be applicable to the proposed project:

- **UD-12:** Site or design projects to consider their intrusion into important view-sheds towards Mount Diablo and the San Joaquin River.
- **UD-13:** Incorporate view opportunities towards Mount Diablo into site plans, such that views of Mount Diablo are available from both public streets and public open spaces at specified locations.
- **UD-19:** Design projects to minimize abrupt changes in scale and massing between the project and surrounding natural or man-made forms, such as hillsides, adjacent freeways, and low-lying wetlands. Where appropriate, step buildings up or down to be compatible with the scale of natural features.

With implementation of required policies from the Hillcrest Station Area Specific Plan, development of the proposed project would not substantially obscure any existing views of scenic vistas from surrounding public vantage points. Therefore, the proposed project would not result in a substantial adverse effect on a scenic vista, and this impact would be **less than significant**.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The nearest Officially Designated State Scenic Highway to the project site is SR-160. SR 160 begins in Sacramento County and ends in Antioch; however, the Officially Designated portion of SR-160 ends approximately 2.3 miles northeast of the project site in Rio Vista at the Contra Costa County line.[4] Given this distance and intervening development and topography, the proposed project would not be visible from SR-160. The Contra Costa County General Plan[5] designates SR-4 (from Hillcrest Avenue to SR-160), Hillcrest Avenue, and East 18th Street as a Connecting Highway and Connecting Roads that form the County Scenic Routes Plan. The project site is visible from SR-4 and Hillcrest Avenue; however, lands abutting Scenic Connectors are not subject to Scenic Corridor land use guidelines. Nevertheless, the proposed project would not substantially damage any scenic resources. There are no rock outcroppings or historic buildings on site and although implementation of the proposed project would result in the removal of 83 existing trees, these trees have not been designated as a scenic resource and new trees and landscaped areas would be included as part of the proposed project to improve the visual character of the site. As such, the proposed project would have **no impact** on scenic resources located within view of a State Scenic Highway.

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4 California Department of Transportation (Caltrans). 2018. *California State Scenic Highway System Map*. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed January 10, 2023).

5 Contra Costa County Department of Conservation and Development. 2010. *Contra Costa County General Plan 2005-2020.* July.

c. In non-urbanized areas, would the project 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 a 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?

The project site is located within an urbanized area. As noted in Chapter 2.0, Project Description, the project site is located within the Planned Development District (PD) zoning district, which is intended to accommodate a wide range of residential, commercial and industrial land uses which are mutually supportive and compatible with existing and proposed development on surrounding properties. For PD zoning, all height, area, and setback regulations are to be determined by the City Council through the planned development process. Additionally, the proposed project would be subject to Design Review, which would provide for the review of the physical improvements to the project site, including the overall building scale, massing, and design to ensure compatibility and compliance with City requirements governing scenic quality. Therefore, the proposed project would not conflict with any zoning or other regulations governing scenic quality, and this impact would be **less than significant**.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The project site is located in an urban area with a variety of existing light sources including streetlights, interior and exterior building lighting, and light associated with traffic on nearby roadways. It is not anticipated that nighttime lighting associated with the proposed project would differ significantly from the existing conditions at the project site and in the surrounding area. The City's Zoning Ordinance includes the following policies related to outdoor lighting that would be applicable to the proposed project:

- **Section 9-5.1714 - Lighting:** Outdoor parking area lighting fixture heights shall be determined by their relationship to surrounding uses, and lighting shall not shine directly onto an adjacent street or property. Minimum illumination at ground level shall be two foot-candles but shall not exceed one-half foot-candles in a residential district.

Additionally, the City's General Plan includes the following policies that would be applicable to the proposed project:

5.4.2 *Community Image and Design: General Design Policies*

o. Design onsite lighting to improve the visual identification of adjacent structures.

- Within commercial and industrial development, provide design features such as screened walls, landscaping, setbacks, and lighting restrictions between the boundaries of adjacent residential land use designations to reduce the impacts of light and glare.

- On-site lighting shall create a safe environment, adhering to established crime prevention standards, but shall not result in nuisance levels of light or glare on adjacent properties. Limit sources of lighting to the minimum required to ensure safe circulation and visibility.

p. Lighting should accommodate night use of streets and promote security while complying with the provision of a dark night sky. Streetscape areas that are used by pedestrians at night should be well lit. Within rural and open space areas, limit street lighting to intersections and other locations that are needed to maintain safe access (e.g., sharp curves).

To ensure that the proposed project complies with City requirements and the proposed project's final design avoids all excess light and glare, implementation of **Mitigation Measure AES-1** would be required.

Mitigation Measure AES-1 Outdoor lighting (building façade lighting, security lighting, and parking lot lighting) shall be designed to minimize glare and spillover to surrounding properties. The project design and building materials shall incorporate non-mirrored glass to minimize daylight glare. The proposed project lighting plan shall be reviewed and approved by the City of Antioch's Planning Division during Design Review and prior to issuance of a building permit.

With implementation of the design measures identified above, impacts pertaining to potentially significant light and glare issues would be reduced to **less than significant with mitigation incorporated**.

4.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land 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 forest land to non-forest use?	☐	☐	☐	☒

a. Would the project 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?

The project site is currently occupied by PG&E's Antioch Service Center, which includes various structures, paved asphalt roadways and parking lots, undeveloped areas consisting of gravel and dirt, and mature trees. The project site is classified as "Urban and Built-Up Land" and "Other Land" by the State Department of Conservation and is not occupied by agricultural uses.[6] Therefore, the

[6] California Department of Conservation (DOC). 2016. Division of Land Use Resource Protection. California Important Farmland Finder. Website: https://maps.conservation.ca.gov/dlrp/ciff/ (accessed January 9, 2023).

proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to another use, and **no impact** would occur.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

As noted in Chapter 2.0, Project Description, the project site is located within the Planned Development District (PD) zoning district, which is intended to accommodate a wide range of residential, commercial, and industrial land uses which are mutually supportive and compatible with existing and proposed development on surrounding properties. The project site is currently occupied by PG&E's Antioch Service Center, which includes various structures, paved asphalt roadways and parking lots, undeveloped areas consisting of gravel and dirt, and mature trees. Additionally, the project site is located in an urban area and is not subject to an existing Williamson Act Contract. Therefore, development of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and **no impact** would occur.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The property is currently occupied by PG&E's Antioch Service Center, which includes various structures, paved asphalt roadways and parking lots, undeveloped areas consisting of gravel and dirt, and mature trees. As previously discussed, the project site is zoned as Planned Development District (PD) and is therefore not zoned for forest or timberland uses or timberland production. No parcels adjacent to or near the project site are zoned for forest land, timberland, or timberland production. The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland, nor would it result in the loss of forest land or conversion of forest land to non-forest uses. As such, **no impact** to forest land or timberland would occur.

d. Would the project result in the loss of forest land or conversion of forestland to non-forest use?

Please refer to Section 4.2.c. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest uses. Therefore, **no impact** would occur.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Please refer to Sections 4.2.a. and 4.2.c. The project site is located in an urban environment and would not involve other changes in the existing environment which, due to their location or nature, could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, **no impact** would occur.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

The project site is located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In the City of Antioch, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal $PM_{2.5}$ 24-hour standard.

4.3.1 Impact Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (Clean Air Plan),[7] which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest heath risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the 2017 Clean Air Plan can be determined if the project: (1) supports the goals of

[7] Bay Area Air Quality Management District (BAAQMD). 2017. *Clean Air Plan*. April 19.

the Clean Air Plan; (2) includes applicable control measures from the Clean Air Plan; and (3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Clean Air Plan Goals. The primary goals of the Bay Area Clean Air Plan are to attain air quality standards; reduce population exposure and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed below under Section 4.3.b, implementation of the proposed project would result in less than significant operation-period emissions and, with implementation of **Mitigation Measure AIR-1**, the project would result in less than significant construction-period emissions. Therefore, the project would not conflict with the Clean Air Plan goals.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-Greenhouse Gas (GHG) Pollutants Measures.

Stationary Source Control Measures. The Stationary Source Measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by BAAQMD Permit and Inspection programs. Since the project would not include any stationary sources, the Stationary Source Measures of the Clean Air Plan are not applicable to the proposed project.

Transportation Control Measures. The BAAQMD identifies Transportation Control Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, toxic air contaminants (TACs), and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The proposed project involves the demolition and replacement of four existing buildings on site and would also include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The proposed project would not include features that would change (improve or degrade) the existing transit system, bicycle and pedestrian facilities, or roadways within the City of Antioch. In addition, the proposed project would not result in additional daily trips when compared to the existing conditions. As such, there would be no new mobile emissions associated with the proposed project. Since the proposed project is not expected to result in the generation of vehicle trips or vehicle miles traveled (VMT), the proposed project would not conflict with the BAAQMD's initiatives to reduce vehicle trips and VMT and would increase the use of alternate means of transportation.

Energy Control Measures. The Clean Air Plan also includes Energy Control Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the

amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the Energy Control Measures of the Clean Air Plan are not applicable to the proposed project.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. The proposed project would be required to comply with the latest California Green Building Standards Code (CALGreen Code) standards. However, the Building Control Measures of the Clean Air Plan are not applicable to the proposed project.

Agriculture Control Measures. The Agriculture Control Measures are designed to primarily reduce emissions of methane. Since the project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the proposed project.

Natural and Working Lands Control Measures. The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to enact ordinances that promote urban-tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the proposed project.

Waste Management Control Measures. The Waste Management Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the proposed project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the proposed project.

Super-GHG Control Measures. The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the proposed project.

Clean Air Plan Implementation. As discussed above, the proposed project would implement the applicable measures outlined in the Clean Air Plan. Therefore, the project would not disrupt or

hinder implementation of the applicable air quality plan, and this impact would be **less than significant**.

b. Would the project 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?

The BAAQMD is currently designated as a non-attainment area for State and national ozone standards and national particulate matter ambient air quality standards. The BAAQMD non-attainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

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 following analysis assesses the potential construction- and operation-related air quality impacts and CO impacts of the proposed project.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrogen oxide (NO_x), reactive organic gases (ROG), directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Site preparation and project construction would involve demolition, grading, paving, and other activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_X, ROG, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using the California Emissions Estimator Model (CalEEMod) version 2022.1, consistent with BAAQMD recommendations. Construction of the proposed project is anticipated to begin in 2024 and would occur over phases, each being approximately 14 months long, ending in 2029, which was included in CalEEMod. Construction activities would include the demolition of the four existing buildings and all surface pavements on the project site, including approximately 22,844 square feet of building material, which was also included in CalEEMod. The project would require the export of approximately 111,434 cubic yards of soil, which was also included in CalEEMod. In addition, this analysis assumes the use of Tier 2 construction equipment (the minimum engine standard required by the California Air Resources Board [CARB]). Other construction details are not yet known; therefore, default assumptions (e.g., construction fleet activities and construction trips) from CalEEMod were used. Construction-related emissions are presented in Table 4.A. CalEEMod output sheets are included in Appendix A.

Table 4.A: Project Construction Emissions (in Pounds Per Day)

Project Construction	ROG	NO_x	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	2.0	15.9	0.5	1.0	0.5	0.3
BAAQMD Thresholds	**54.0**	**54.0**	**54.0**	**BMP**	**82.0**	**BMP**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (July 2023).
BAAQMD = Bay Area Air Quality Management District
BMP = best management practices
NO_x = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases

As shown in Table 4.A, construction emissions associated with the project would be less than significant for ROG, NO_x, $PM_{2.5}$, and PM_{10} exhaust emissions. The BAAQMD requires the implementation of the BAAQMD Basic Construction Mitigation Measures (best management practices) to reduce construction fugitive dust impacts to a less than significant level as outlined in **Mitigation Measure AIR-1**.

Mitigation Measure AIR-1 In order to meet the Bay Area Air Quality Management District (BAAQMD) fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented:

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

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly-visible sign shall be posted with the telephone number and person to contact at City of Antioch regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

As shown in Table 4.A construction emissions associated with the project would be less than significant for ROG, NO_x, $PM_{2.5}$, and PM_{10} exhaust emissions. The BAAQMD requires the implementation of the BAAQMD Basic Construction Mitigation Measures (best management practices) to reduce construction fugitive dust impacts to a less than significant level as outlined in **Mitigation Measure AIR-1**. Therefore, construction of the proposed project would not 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 standards, and impacts would be **less than significant with mitigation incorporated**.

Operational Emissions. Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g., use of the diesel emergency backup generator) related to the proposed project.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other particulate matter emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. As discussed in Section 4.17, Transportation, the proposed project would not result in additional daily trips when compared to the existing conditions. As such, there would be no new mobile emissions associated with the proposed project.

Energy source emissions result from activities in buildings for which natural gas is used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. However, the proposed project would include all new electric buildings and would not utilize natural gas for the operation of the proposed project. Therefore, the proposed project would not result in energy source emissions.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of landscaping equipment. In addition, the proposed project would generate stationary source emissions associated with use of a 2,000 horsepower (hp) diesel emergency backup generator, which is estimated to run approximately 24 hours per year.

Emission estimates for operation of the project were calculated using CalEEMod. Model results are shown in Table 4.B. CalEEMod output sheets are included in Appendix A.

The results shown in Table 4.B indicate the project would not exceed the significance criteria for daily or annual ROG, NO_X, PM_{10} or $PM_{2.5}$ emissions. Therefore, operation of the proposed project would not 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 standards. Impacts would be **less than significant**.

Localized CO Impacts. Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The BAAQMD 2017 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed transportation projects. A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the project.

The screening methodology provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less than significant impact to localized CO concentrations 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, and the regional transportation plan and local congestion management agency plans.

Table 4.B: Project Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Pounds Per Day				
Mobile Source Emissions	0.0	0.0	0.0	0.0
Area Source Emissions	6.7	0.1	<0.1	<0.1
Energy Source Emissions	0.0	0.0	0.0	0.0
Stationary Source Emissions	0.3	1.5	0.1	0.1
Total Emissions	**7.0**	**1.6**	**0.1**	**0.1**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	**No**	**No**	**No**	**No**
Tons Per Year				
Mobile Source Emissions	0.0	0.0	0.0	0.0
Area Source Emissions	1.1	<0.1	<0.1	<0.1
Energy Source Emissions	0.0	0.0	0.0	0.0
Stationary Source Emissions	<0.1	0.2	<0.1	<0.1
Total Emissions	**1.1**	**0.2**	**<0.1**	**<0.1**
BAAQMD Thresholds	10.0	10.0	15.0	10.0
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: LSA (July 2023).
BAAQMD = Bay Area Air Quality Management District
NO_x = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project 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, or below-grade roadway).

Implementation of the proposed project would not conflict with the policies or programs of the Contra Costa Transportation Authority. As identified in Section 4.17, Transportation, the proposed project would not generate any new AM or PM peak hour trips; therefore, the project's contribution to peak hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. As such, the proposed project would not result in localized CO concentrations that exceed State or federal standards, and impacts would be **less than significant**.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 micrograms per cubic meter ($\mu g/m^3$).

The proposed project site is located in a suburban area in close proximity to existing residential uses that could be exposed to diesel emission exhaust during the construction period. Residential uses are located to the west of the project site at approximately 170 feet and north of the project site at approximately 10 feet. The nearest worker receptors are located to the east of the project site at approximately 119 feet and the school receptors are located to the west of the project site at approximately 1,020 feet. To estimate the potential cancer risk from project construction equipment exhaust (including diesel particulate matter), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location (i.e., a nearby residential land use). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using The California Air Resources Board (CARB) exposure methodology, with the air dispersion modeling performed using the United States Environmental Protection Agency (USEPA) dispersion model AERMOD (American Meteorological Society/Environmental Protection Agency Regulatory Model). The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and site-specific meteorological data. Table 4.C, below, identifies the results of the analysis utilizing the standard Tier 2 construction equipment. Model snapshots of the sources are provided in Appendix B.

Table 4.C: Unmitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Residential Receptor	30.39	0.021	0.000	0.103
Worker Receptor	2.57	0.057	0.000	0.283
School Receptor	0.75	0.001	0.000	0.006
Threshold	**10.0**	**1.0**	**1.0**	**0.30**

Source: LSA (July 2023).
$\mu g/m^3$ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

As shown in Table 4.C, the maximum cancer risk for the residential receptor maximally exposed individual (MEI) would be 30.39 in one million, which would exceed the BAAQMD cancer risk of 10 in one million, and would result in a potentially significant impact without mitigation. The worker receptor risk would be 2.57 in one million and the school receptor risk would be 0.75 in one million, which is lower than the 10 in one million threshold. The chronic hazard index would be 0.021 for the sensitive receptor MEI, 0.057 for the worker receptor MEI, and 0.001 for the school receptor MEI, which would not exceed the threshold of 1.0. In addition, the acute hazard index would be nominal (0.000), which would also not exceed the threshold of 1.0. The results of the analysis indicate that the $PM_{2.5}$ concentration would be 0.103 $\mu g/m^3$ for the sensitive receptor MEI, 0.283 for the worker receptor MEI, and 0.006 for the school receptor MEI, which would not exceed the BAAQMD

significance threshold of 0.30 µg/m^3. As indicated above, the sensitive receptor MEI cancer risk of 30.39 in one million would exceed BAAQMD thresholds. Therefore, implementation of **Mitigation Measure AIR-2** would be required to reduce substantial pollutant concentrations during project construction.

Mitigation Measure AIR-2 During construction of the proposed project, the project contractor shall ensure all off-road diesel-powered construction equipment of 50 horsepower or more used for the project construction at a minimum meets the California Air Resources Board Tier 2 emissions standards equipped with Level 3 diesel particulate filters or the equivalent.

Table 4.D identifies the results of the analysis with implementation of **Mitigation Measure AIR-2**.

Table 4.D: Mitigated Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual $PM_{2.5}$ Concentration (µg/m^3)
Sensitive Receptor	5.74	0.004	0.000	0.022
Worker Receptor	0.39	0.012	0.000	0.060
School Receptor	0.13	<0.001	0.000	0.001
Threshold	**10.0**	**1.0**	**1.0**	**0.30**

Source: LSA (July 2023).
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
µg/m^3 = micrograms per cubic meter

As shown in Table 4.D, the mitigated cancer risk at the MEI would be 5.74 in one million, which would not exceed the BAAQMD cancer risk of 10 in one million. Therefore, with implementation of **Mitigation Measure AIR-2**, construction of the proposed project would not exceed BAAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

Once the proposed project is constructed, the proposed project would not be a source of substantial emissions. Therefore, implementation of the proposed project would not result in new sources of TACs. Therefore, the project would not expose sensitive receptors to substantial levels of TACs, and this impact would be **less than significant with mitigation incorporated**.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. This impact would be **less than significant**.

4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

4.4.1 Impact Analysis

4.4.1.1 Environmental Setting

LSA conducted a biological resources survey for the proposed project to assess the site for compliance with the CEQA review process. The following discussion of the biological resources within the project site and vicinity is based on a reconnaissance-level field survey, review of relevant documents prepared for the project, and review of online biological resources databases.

Methods. The project site is developed with the existing PG&E electrical substation and associated service station facilities and is characterized by paved and gravel areas with areas of ornamental and ruderal vegetation. The project site is surrounded by residential development to the north and west, the Southern Pacific Railroad and commercial development to the south, and undeveloped property to the east.

A list of sensitive wildlife and plant species potentially occurring within the project site was compiled to evaluate the potential impacts resulting from project construction. Sources used to compile the

list include the California Natural Diversity Database (CNDDB)[8] and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) list[9]. The species lists obtained from the CNDDB and USFWS were reviewed to determine which species could potentially occur in the project area. Individual lists are included in Appendix C.

An LSA biologist conducted a general biological survey within the project site on March 9, 2023. Managed, disturbed, or developed areas were classified according to their dominant plant species. The names of the plant species are consistent with *The Jepson Manual: Vascular Plants of California*, Second Edition.[10]

Results. Two habitat types were identified in the project site: ruderal/disturbed and developed. No natural communities or aquatic resources occur in the project site.

Ruderal/disturbed areas include areas adjacent to roadways, and a fenced equipment storage/ laydown area on the east side of the project site. Representative species observed in these areas include tumbleweed (*kali* spp.), yellow star-thistle (*Centaurea solstitialis*), milk thistle (*Silybum marianum*), and common velvet grass (*Holcus lanatus*).

Developed areas include established roadways, sidewalks, parking areas, PG&E buildings, and the active electrical substation. These areas are characterized paved roads and gravel areas with little to no vegetation. The majority of vegetation within the project site consists of non-native trees planted as ornamental landscaping along the roadways and parking areas.

The special-status species lists obtained from the CNDDB and USFWS were reviewed to determine which species could potentially occur within the project site. These lists (Appendix C) include numerous species representing a variety of habitat types. The determination of whether a species could potentially occur within the project site was based on the availability of suitable habitat within the species' known range, as well as known occurrences of the species in or adjacent to the project site according to the CNDDB. No special-status plants or suitable habitat for special-status plants were observed in the project site during the reconnaissance survey. As a result, special-status plant species are considered absent from the project site.

Based on the review of the species lists in Appendix C and existing potential habitat and field survey observations, western burrowing owl (*Athene cunicularia*) and nesting birds and have the potential to occur in the project site.

Western burrowing owl is a State species of special concern that occurs in warm valleys, open grasslands, deserts, and scrublands associated with agriculture and urban areas that support populations of California ground squirrels (*Otospermophilus beecheyi*). Burrowing owls nest below

[8] California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database, commercial version dated June 2023. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento.

[9] United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). June 26, 2023

[10] Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley.

ground, utilizing abandoned burrows of other species, most commonly ground squirrel burrows, and feed on insects and small mammals. Burrowing owls may also use man-made structures such as debris piles, culverts, and cement piles for cover. The project site is highly disturbed. No small mammal burrows were observed within the project site during LSA's reconnaissance survey; however, potential surrogate burrows were observed (e.g., exposed pipes in the laydown areas), and the closest CNDDB occurrence for this species is located approximately 200 feet south of the substation. While no sign of western burrowing owl was observed during the reconnaissance survey, there is still potential for this species to occur based on the existing and adjacent habitat. Other birds protected under the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513 may nest on or adjacent to the project site within existing vegetation. Ground nesting birds, such as killdeer (*Charadrius vociferus*), may nest within the vegetated and unvegetated areas of the project site.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The project site is characterized by developed and disturbed habitat and does not contain natural habitat. Non-native trees and shrubs do exist on the site. A field survey was conducted within the project site on March 9, 2023, to determine the presence of special-status species and/or suitable habitat. No special-status species were detected during the survey; however, the following birds were detected: killdeer, common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottus*), mourning dove (*Zenaida macroura*), goldfinch (likely *Spinus lawrencei*), and other common songbirds such as sparrows (*Melospiza* spp.). There were no observations of western burrowing owl or indication of burrowing owls being present, such as tracks, whitewash, pellets, feathers, or carrion. While no small mammal burrows were observed within the project site during the field survey, surrogate burrows (i.e., exposed pipes), which provide limited potential habitat for burrowing owl, were observed. Based on the in-field findings and the nearby CNDDB occurrence located approximately 200 feet south of the substation, potential burrowing owl foraging habitat may be present.

Implementation of the proposed project may have direct or indirect adverse effect on potential western burrowing owl. Permanent impacts could occur as a result of project construction activities associated with demolition and replacement of the four buildings; temporary impacts would occur as a result of project access and staging during construction. The only suitable burrows for western burrowing owl observed in the project site were surrogate burrows; however, burrowing owls are migratory and despite the limited burrow habitat present in the project site could potentially move on to the site prior to the start of construction. Western burrowing owl is considered to have a low potential to occur in the project site. As such, **Mitigation Measure BIO-1** would be required to reduce impacts to western burrowing owl prior to commencement of construction.

Mitigation Measure BIO-1 Take avoidance preconstruction surveys for western burrowing owl shall be conducted by a qualified biologist in accordance with the California Department of Fish and Wildlife's (CDFW) 2012 Staff Report on Burrowing Owl Mitigation. Surveys shall encompass the

project site and a 150-meter buffer zone, as outlined in the CDFW 2012 Staff Report, and include burrow surrogates such as culverts, piles of concrete or rubble, and other non-natural features, in addition to burrows and mounds. If lawful access cannot be achieved to adjacent areas, surveys shall be performed with binoculars or a spotting scope. The first survey shall occur within 14 days prior to the start of project activities, and the second preconstruction survey focusing on previously identified habitat shall be conducted within 24 hours prior to ground disturbance. If no burrowing owls are detected, no further mitigation is required.

If active burrowing owls are detected, the following additional measures shall be implemented:

- Project implementation shall seasonally and spatially avoid negative impacts and disturbances that could result in the take of burrowing owls, nest or eggs.
- If burrowing owls and their habitat can be protected in place or adjacent to a construction site, buffer zones, visual screens or other measures shall be used to minimize disturbance impacts while project activities are occurring. A qualified biologist shall establish buffer zones and monitor construction activities following the guidance described in the CDFW 2012 Staff Report.
- If owls must be moved away from the project site during the nonbreeding season (September 1 to January 31), passive relocation techniques (e.g., installing one- way doors at burrow entrances) shall be used instead of trapping, as described in the CDFW guidelines. A passive relocation plan shall be prepared for approval by CDFW.
- When destruction of occupied burrows is unavoidable during the nonbreeding season, a mitigation plan shall be prepared for approval by CDFW. The mitigation plan may include, but would not be limited to, the enhancement of unsuitable burrows (enlarged or cleared of debris) or the creation of new burrows (by installing artificial burrows) on protected lands, as approved by CDFW. Newly created burrows shall follow guidelines established by CDFW.

With implementation of the measure identified above, potential impacts to burrowing owls would be **less than significant with mitigation incorporated.**

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The biological resources field survey conducted on March 9, 2023, did not identify any riparian or other sensitive natural communities within the project site. The project site is characterized by developed and ruderal areas with some shrubs and ornamental trees. As such, implementation of the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS, and **no impact** would occur.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The biological resources field survey did not identify any State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.). The project site is characterized by developed and ruderal areas with some shrubs and ornamental trees. As such, implementation of the proposed project, directly or indirectly, would not adversely affect any on-site State or federally protected wetlands, and **no impact** would occur.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is developed except for some ruderal areas and ornamental trees and shrubs that support wildlife species typically associated with urban areas. Because the project site is located within a developed area that is surrounded by residential, commercial, and industrial uses, there are no major wildlife movement corridors that pass through the project site. Project implementation would not interfere with wildlife movement along East Antioch Creek to the east of the project site.

Ornamental trees and shrubs have the potential to support nests of common native bird species. Ruderal areas on the east side of the project site provides potential nesting habitat for ground nesting species such as killdeer. Removal of or disturbance to active nests during the nesting season (February 1 to August 31) could result in "take" and is prohibited under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code.

Based on the intensity of background noise and human activity in the area and on the site, the potential for nesting bird activity is limited. While no active/occupied nests were detected within the project site during the biological field survey, the survey was conducted early in the nesting season and the chance of finding nesting birds on the project site prior to construction cannot be discounted. As such, **Mitigation Measure BIO-2** would be required to reduce impacts to nesting birds prior to commencement of construction.

Mitigation Measure BIO-2 If construction activities are scheduled during the nesting season (February 1 through August 31), the project applicant shall retain a qualified biologist to conduct a pre-construction survey of all suitable nesting habitat (i.e., field, trees) within 250 feet of the project site (where accessible). The pre-construction survey shall be conducted no more than 7 days prior to the start of work. If the survey indicates the presence of nesting birds, protective buffer zones should be established around the nests as follows: for raptor nests, the size of the buffer zone should be a 250-foot radius centered on the nest; for other birds, the size of the buffer zone should be a 50- to 100-foot radius centered on the nest. In some cases, these buffers may be increased or decreased depending on the bird species and the level of disturbance that will occur near the nest.

If there is a pause in construction activities of 7 days or more during the nesting season, an additional nesting bird survey shall be conducted to ensure that there are no new nests that require buffering.

With implementation of the measure identified above, potential impacts to nesting birds would be **less than significant with mitigation incorporated.**

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Article 12, Tree Preservation and Regulation, of the Antioch Code of Ordinances describes the tree preservation and removal requirements for parcels within Antioch. The City prefers that trees within the City are preserved and, as feasible, incorporated into proposed development projects. However, in some instances, the City permits tree removal in conjunction with property development as specified in Section 9-5.1203, Tree Removal Permit Applications; Developed Property. This section of the Code of Ordinances allows for project applicants to request removal of trees and the decision of that removal to occur during the regular development application process.

In order for the proposed project to be in compliance with the City's Tree Ordinance, a report listing the number of trees, species, tree size, and a sketch showing tree locations must be prepared for the Department of Parks, Leisure and Community Services. As described in Sections 2.1.2 and 2.2.4, there are approximately 287 mature trees on the project site. A total of 83 existing trees would be removed as part of the project, including 2 protected trees. A total of 21 trees would be planted and 92 existing trees would be protected as part of the proposed project.

The project Applicant would be required to request tree removal from the City and would follow the City's Tree Ordinance to remove any of the trees from the project site. The proposed project would not conflict with the City's tree preservation policy, nor would it conflict with any local policies or ordinance protecting biological resources. This impact would be **less than significant.**

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Antioch is located within the inventory area of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP). Although the project site is located within the inventory area of the East Contra Costa County HCP/NCCP, the City is not a signatory of the HCP/NCCP and, thus, the proposed project is not subject to the requirements of the HCP/NCCP. The City is in the process of developing a separate HCP/NCCP, which has not been implemented. Therefore, the project site is not located within an area associated with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local/regional/State habitat conservation plan. Implementation of the proposed project would not conflict with habitat conservation plans, as the project site is not subject to such plans. **No impact** would occur.

4.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

The Archaeological Resources Assessment[11] and Historical Resource Evaluation[12] prepared for the proposed project and included in Appendices D and E, respectively provide the basis for the information and analysis provided in this section. Background research for cultural resources was conducted for the project site and surrounding area through a records search from the Northwest Information Center (NWIC) and the Sacred Lands File (SLF) from the Native American Heritage Commission (NAHC). Background research also included a review of aerial photographs and historic-period maps to assess the potential for subsurface archaeological deposits at the project site. On-site field surveys were conducted on May 23, 2023, for historic built environment resources and on June 8, 2023, to determine if archaeological cultural resources were present on the project site.

4.5.1 Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources [California Register]), it generally must be 50 years or older. Under CEQA, historical resources can include precontact (i.e., Native American) archaeological deposits, historic-period archaeological deposits, historic buildings, and historic districts. To identify historical resources on the project site, the following tasks were completed: (1) a records search was conducted at the NWIC of the California Historical Resources Information System and the SLF from the NAHC; and (2) field surveys were conducted on the site on May 23, 2023, and June 8, 2023.

Data from a records search conducted by the Northwest Information Center (NWIC No. 22-1367) indicate there were 20 cultural resource studies within 0.5 mile, 8 of which included portions of the project area. No archaeological resources were identified within the project area by those studies, and no archaeological resources were recorded within 0.5 mile of the project area. The project area

[11] LSA Associates. 2023a. *Archaeological Resources Assessment for the Pacific Gas and Electric Antioch Service Center Improvements Project, 2111 Hillcrest Avenue, Antioch, Contra Costa County, California* (LSA Project No. CAN2203). June 16.

[12] LSA Associates. 2023b. *Historical Resource Evaluation of a segment of the Contra Costa-Moraga Transmission Line (P-07-004688), Pacific Gas and Electric Service Center, 2111 Hillcrest Avenue, City of Antioch, Contra Costa County, California* (LSA Project No.: CAN2203). June 13.

contains a PG&E facility that has been in operation since the 1920's, and the project site has been almost entirely paved over or covered in gravel. During the field survey completed on June 8, 2023, a very sparse scatter of modern glass fragments and debris were discovered in addition to a 2-meter-long segment of deteriorated railroad track. The modern debris fragments and short segment of railroad track have no potential to provide information regarding the history of the facility and do not warrant any further investigation. As further discussed in the Historical Resource Evaluation completed for the proposed project, an approximately 1,250-foot segment of the Contra Costa-Moraga Transmission Line within the project site was evaluated for eligibility for inclusion in the California Register using the evaluative criteria of the California Register. However, this segment of the Contra Costa-Moraga Transmission Line was found to be ineligible for inclusion in the California Register under any level of significance either individually or as part of an identified historic district due to a lack of historical significance and therefore is not considered a historical resource for the purposes of CEQA.

No historical resources pursuant to Section 15064.5 of the *State CEQA Guidelines* were identified on the project site through the conducted field surveys or background research. Although no archaeological deposits that qualify as historical resources are known to be present at the project site, the potential for such resources cannot be discounted. If significant archaeological deposits were unearthed during project construction, a substantial adverse change in the significance of a historical resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired pursuant to *State CEQA Guidelines* Section 15064.5(b)(1). **Mitigation Measure CUL-1** would reduce potential impacts to unknown archaeological historical resources that may be found on site during project construction activities.

Mitigation Measure CUL-1 Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the *Secretary of the Interior's Professional Qualifications Standards for Archeology* contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the Applicant shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recordation of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods and findings shall be prepared and submitted to the City of Antioch for review, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate curation facility and used for public interpretive

displays, as appropriate and in coordination with a local Native American tribal representative.

The Applicant shall inform its contractor(s) of the sensitivity of the project area for archaeological deposits and shall verify that the following directive has been included in the appropriate contract documents:

"The subsurface of the construction site may be sensitive for Native American archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist contacted to assess the situation, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include shellfish remains; bones; flakes of, and tools made from, obsidian, chert, and basalt; and mortars and pestles. Contractor acknowledges and understands that excavation or removal of archaeological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5."

With implementation **Mitigation Measure CUL-1** identified above, impacts to unknown archaeological historical resources would be **less than significant with mitigation incorporated.**

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Pursuant to *State CEQA Guidelines* Section 15064.5(c)(1), "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource." Those archaeological sites that do not qualify as historical resources shall be assessed to determine if they qualify as "unique archaeological resources" pursuant to California Public Resource Code Section 21083.2. Based on the research conducted for the proposed project, no archaeological resources are known to exist on the project site. Unknown archaeological deposits identified during project construction would be treated by the City and the Applicant—in consultation with a qualified archaeologist meeting the *Secretary of the Interior's Professional Qualifications Standards for Archeology*—in accordance with **Mitigation Measure CUL-1**. With implementation of this mitigation measure, the project's potential impacts on archaeological resources would be **less than significant**.

c. Would the project disturb any humans remains, including those interred outside of formal cemeteries?

There are no known human remains at the project site. In the event that human remains are identified during project construction, these remains would be treated in accordance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code (PRC), as appropriate.

Section 7050.5 of the California Health and Safety Code states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the California NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Section 5097.98 of the PRC states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the MLD) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site. With these regulations in place, **no impact** on human remains is anticipated.

4.6 ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in a 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?	☐	☐	☒	☐

4.6.1 Impact Analysis

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

The proposed project would result in a small increase in the operational demand for electricity (approximately 30 percent). The discussion and analysis provided below is based on data included in the California Emission Estimator Model (CalEEMod) output, which is included in Appendix A.

Construction-Period Energy Use. The proposed project would require demolition, grading, site preparation, building, paving, and architectural coating activities during construction. Construction of the proposed project would require energy for the manufacture and transportation of construction materials, preparation of the site for grading activities, and construction of the proposed buildings. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. In order to increase energy efficiency on the site during project construction, the idling times for construction vehicles would be restricted to 5 minutes or less and construction workers would be required to shut off idle equipment, as required by **Mitigation Measure AIR-1**, as detailed in Section 4.3, Air Quality. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Therefore, construction energy impacts would be **less than significant**.

Operational Energy Use. Operational energy usage is typically associated with natural gas use, electricity consumption, and fuel used for vehicle trips. Energy consumption was estimated for the project using default energy intensities by land use type in CalEEMod. As described in Chapter 2.0, Project Description, the proposed project would involve the demolition and replacement of four existing buildings on site. The proposed new buildings would be all electric buildings and would not utilize natural gas. In addition, the proposed project would not result in additional daily trips when compared to the existing conditions. Therefore, there would be no new natural gas or fuel demand associated with the proposed project. As such, energy use consumed by the proposed project would be associated with electricity consumption associated with the four proposed buildings and

associated improvements. Based on CalEEMod, the estimated potential increased electricity demand associated with the proposed project would be 3,255,734 kilowatt-hours (kWh) per year. In 2021, California consumed approximately 280,738 gigawatt-hours (GWh) or 280,738,376,720 kWh.[13] Of this total, Contra Costa County consumed 8,287 GWh or 8,287,147,160 kWh.[14] Therefore, electricity demand associated with the proposed project would be less than 0.1 percent of Contra Costa County's total electricity demand.

In addition, proposed new development would be constructed using energy efficient modern building materials and construction practices, and the proposed project also would use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). The expected energy consumption during construction and operation of the proposed project would be consistent with typical usage rates for commercial/industrial uses.

PG&E is the private utility that would supply the proposed project's electricity and natural gas services. In 2021, a total of 50 percent of PG&E's delivered electricity came from renewable sources, including solar, wind, geothermal, small hydroelectric, and various forms of bioenergy.[15] PG&E reached California's 2020 renewable energy goal in 2017, and is positioned to meet the State's 60 percent by 2030 renewable energy mandate set forth in Senate Bill (SB) 100. In addition, PG&E plans to continue to provide reliable service to its customers and upgrade its distribution systems as necessary to meet future demand.

Therefore, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation. Construction and operation period impacts related to consumption of energy resources would be **less than significant**.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

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13 California Energy Commission (CEC). 2022. Energy Consumption Data Management Service. Electricity Consumption by County. Website: www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed July 2023).

14 Ibid.

15 PG&E. 2021. *Exploring Clean Energy Solutions*. https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page?WT.mc_id=Vanity_cleanenergy (accessed July 2023).

The most recently adopted CEC energy report is the 2023 Integrated Energy Policy Report. The 2023 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The 2023 Integrated Energy Policy Report covers a broad range of topics, including implementation of SB 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to Senate Bill 1383), updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency.

As indicated above, energy usage on the project site during construction would be temporary in nature. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the CEC 2023 Integrated Energy Policy Report. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and this impact would be **less than significant**.

4.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
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 waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

The information presented in this section is based on data and findings provided in the August 2017 Geotechnical Report[16] and Addendum[17] prepared for the project site, and geologic reports and maps by the United States Geological Survey (USGS), California Geological Survey (CGS), and others, as available.

The California Supreme Court concluded in its California Building Industry Association (*CBIA) v. Bay Area Air Quality Management District (BAAQMD)* decision that "CEQA generally does not require an analysis of how existing environmental conditions will affect a project's future users or residents." With this ruling, CEQA no longer considers the impact of the environment on a project (such as the impact of existing seismic hazards on new project occupants) to be an environmental impact, unless the project could exacerbate an existing environmental hazard. The proposed project would not change existing seismic hazards and, therefore, would not exacerbate existing hazards related to surface fault rupture and seismic ground shaking. As such, the following discussions of seismic

16 Blackburn Consulting. 2017a. *Geotechnical Report, PG&E Antioch Service Center, Antioch, California*. August.

17 Blackburn Consulting. 2017b. *Geotechnical Report Addendum, PG&E Antioch Service Center – Phase 1, Antioch, California.* August.

hazards related to surface fault rupture and seismic ground shaking are provided for informational purposes only.

4.7.1 Impact Analysis

a. Would the project 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?

Alquist-Priolo Fault Zones. Fault rupture is generally expected to occur along active fault traces that have exhibited signs of recent geological movement (i.e., within the last 11,000 years). Alquist-Priolo Earthquake Fault Zones delineate areas around active faults with potential surface fault rupture hazards that would require specific geological investigations prior to approval of certain kinds of development within the delineated area. There are no mapped faults within or adjacent to the project site, and the project site is not located within an Alquist-Priolo Zone.[18] The nearest mapped fault to the project site is the Concord Fault, which is located approximately 14 miles west of the project site. Therefore, the proposed project would not directly or indirectly cause substantial adverse effects related to fault rupture, and there would be **no impact**.

Strong Seismic Ground Shaking. The project site is located in the City of Antioch, in the San Francisco Bay Area. This region is susceptible to intense seismic activity from the numerous active faults in the area. Due to the location of the project site in a seismically active area, strong seismic ground shaking at the project site is highly probable during the life of the project. The intensity of ground shaking would depend on the characteristics of the fault, distance from the fault, the earthquake magnitude and duration, and site-specific geologic conditions.

The City requires projects to comply with the 2023 California Building Code (CBC) (Title 24, California Code of Regulations),[19] which provides for stringent construction requirements on projects in areas of high seismic risk based on numerous inter-related factors. It is acknowledged that seismic hazards cannot be completely eliminated, even with implementation of advanced building practices. However, the seismic design standards of the CBC are intended to prevent catastrophic structural failure in the most severe earthquakes currently anticipated. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic ground shaking and there would be **no impact.**

Seismic-related Ground Failure. Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. During ground shaking, these soils lose strength and acquire “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained

[18] California Department of Conservation, California Geologic Survey (DOC CGS). *Earthquake Zones of Required Investigation.* Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed June 22, 2023).

[19] City of Antioch. Municipal Code, Title 8, Chapter 1.

sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (i.e., silt and clay) may also liquefy. According to the Geotechnical Report completed for the proposed project, mapping by USGS shows the site has a low susceptibility to liquefaction. Additionally, the soil profile at the project site consists of stiff to hard clays and dense sands that are not liquefiable. Therefore, the potential for damaging liquefaction at the project site is low and there would be **no impact.**

Landslides. A landslide generally occurs on relatively steep slopes and/or on slopes underlain by weak materials. The project site is relatively flat with elevations that range from approximately 45 to 50 feet. According to the Geotechnical Report completed for the proposed project, land sliding or failure of natural slopes is not expected at the project site due to the relatively low topographic relief. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides and there would be **no impact.**

b. Would the project result in substantial soil erosion or the loss of topsoil?

Topsoil is defined as the upper part of the soil profile that is relatively rich in humus and is technically known as the A-horizon of the soil profile.[20] Grading and earthmoving during project construction has the potential to result in erosion and loss of topsoil. Exposed soils could be entrained in stormwater runoff and transported off the project site. However, this impact would be reduced to a less than significant level through compliance with **Mitigation Measure HYD-1**, as detailed in Section 4.10, Hydrology and Water Quality, which requires the preparation of a SWPPP. Although designed primarily to protect stormwater quality, the SWPPP would incorporate Best Management Practices (BMPs) to minimize impacts related to erosion to a **less than significant level with mitigation incorporated**.

c. Would the project 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?

As previously discussed in Section 4.7.a, the site would not be subject to landslides or liquefaction. Additionally, the Geotechnical Report indicates that soils with a significant potential for compressibility under light to moderate structural loads were not encountered at the project site. Furthermore, as discussed in Section 4.7.a, the proposed project would be required to comply with the CBC, which would ensure that potential risks to people and structures as a result of unstable soils would be **less than significant.**

d. Would the project 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?

The Geotechnical Report indicated that laboratory tests including Expansion Index and Plasticity Index which, along with site observations, determined that the native surface soils have a low

[20] California State Mining and Geology Board. 2014. Surface Mining Reclamation Act Regulations. California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

potential for expansion. Therefore, the proposed project would not create substantial direct or indirect risks to life or property due to expansive soils, and impacts would be **less than significant.**

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Development of the proposed project would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would have **no impact** related to septic tanks or alternative wastewater disposal systems.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no known paleontological resources or unique geologic features within or near the project site. However, according to a search of the University of California Museum of Paleontology (UCMP) at the University of California, Berkeley, there are 2,578 known localities that have produced 20,220 specimens within Contra Costa County.[21] Therefore, the possibility of accidental discovery of paleontological resources during project construction cannot be discounted. As such, implementation of **Mitigation Measure GEO-1**, described below, would reduce potential impacts to paleontological resources to a **less than significant level with mitigation incorporated**.

Mitigation Measure GEO-1 Should paleontological resources be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. For purposes of this mitigation, a "qualified paleontologist" shall be an individual with the following qualifications: (1) a graduate degree in paleontology or geology and/or a person with a demonstrated publication record in peer-reviewed paleontological journals; (2) at least two years of professional experience related to paleontology; (3) proficiency in recognizing fossils in the field and determining their significance; (4) expertise in local geology, stratigraphy, and biostratigraphy; and (5) experience collecting vertebrate fossils in the field. If the paleontological resources are found to be significant and project activities cannot avoid them, measures shall be implemented to ensure that the project does not cause a substantial adverse change in the significance of the paleontological resource. Measures may include monitoring, recording the fossil locality, data recovery and analysis, a final report, and accessioning the fossil material and technical report to a paleontological repository. Upon completion of

[21] University of California Museum of Paleontology (UCMP). *Databases.* Website: https://ucmp.berkeley.edu/collections/databases/ (accessed June 2023).

the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City of Antioch for review. If paleontological materials are recovered, this report also shall be submitted to a paleontological repository such as the University of California Museum of Paleontology, along with significant paleontological materials. Public educational outreach may also be appropriate.

The project Applicant shall inform its contractor(s) of the sensitivity of the project site for paleontological resources and shall verify that the following directive has been included in the appropriate contract documents:

"The subsurface of the construction site may be sensitive for fossils. If fossils are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Fossils can include plants and animals, and such trace fossil evidence of past life as tracks or plant imprints. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Contractor acknowledges and understands that excavation or removal of paleontological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5."

4.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

4.8.1 Impact Analysis

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Bay Area Air Quality Management District's (BAAQMD) 2022 CEQA Guidelines[22] identifies applicable GHG significance thresholds. The BAAQMD recommends these thresholds of significance for use in determining whether a proposed project will have a significant impact related to climate change. These thresholds are applied in the evaluation of a project based on the potential effect on California's efforts to meet the State's long-term climate goals. Applying this approach, the BAAQMD identifies and provides supporting documentation, outlining the requirements for new land use development projects necessary to achieve California's long-term climate goal of carbon neutrality by 2045. Based on their analysis, the BAAQMD found that new land use development projects need to incorporate design elements to contribute the "fair share" towards implementing the goal of carbon neutrality by 2045. If a project is designed and built to incorporate the identified design elements, then it will contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. The BAAQMD determined that if a project does not incorporate these design elements, then it should be found to make a significant climate impact because it will hinder California's efforts to address climate change.

According to the BAAQMD, a project would have a less than significant impact related to GHG emissions if it would:

a. Include, at a minimum, the following project design elements:

    1. Buildings

        a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).

        b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

    2. Transportation

        a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:

[22] Bay Area Air Quality Management District (BAAQMD). 2022. *California Environmental Quality Act Air Quality Guidelines*. April 20.

1. Residential projects: 15 percent below the existing VMT per capita;

2. Office projects: 15 percent below the existing VMT per employee; and

3. Retail projects: no net increase in existing VMT.

b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

b. Or be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

The City of Antioch adopted the Climate Action Resilience Plan (CARP) on May 12, 2020[23]. However, the CARP does not meet the BAAQMD requirements for a Qualified GHG Reduction Strategy designed to streamline environmental review of future development projects in the City consistent with *State CEQA Guidelines* Section 15183.5(b) and the BAAQMD CEQA Air Quality Guidelines. Therefore, this section evaluates the proposed project's consistency with the BAAQMD's project design element thresholds.

Natural Gas Usage. According to the BAAQMD, a less than significant GHG impact would occur if the project does not include natural gas appliances or natural gas plumbing. Electricity and gas service is currently provided to the project site by Pacific Gas & Electric Company. The proposed project would not include the use of natural gas; therefore, the proposed project would be consistent with this design element.

Energy Usage. The project must not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under Section 21100(b)(3) and Section 15126.2(b) of the *State CEQA Guidelines*. Energy use consumed by the proposed project would be associated with electricity consumption and fuel used for vehicle trips associated with the project. Energy consumption was estimated for the project using default energy intensities by land use type in the California Emissions Estimator Model (CalEEMod) output, which is included in Appendix A.

As discussed in Section 4.6, Energy, the estimated potential increased electricity demand associated with the proposed project would be less than 0.1 percent of Contra Costa County's total electricity demand.

In addition, the proposed project would not result in additional daily trips when compared to the existing conditions. As such, there would be no additional fuel demand associated with the proposed project.

As such, based on this analysis, as required under *State CEQA Guidelines* Section 21100(b)(3) and Section 15126.2(b), the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy and energy

[23] City of Antioch. 2020. *Climate Action and Resilience Plan.* May 12. Website: https://www.antiochca.gov/fc/environment/climate/carp/Final-CARP.pdf (accessed July 2023).

efficiency measures into the building design, equipment use, and transportation. As such, the proposed project would be consistent with this design element.

Vehicle Miles Traveled. To meet the BAAQMD's VMT threshold, the project must achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA*.[24] As discussed in Section 4.17, Transportation, the proposed project would have a less than significant VMT impact. As such, the proposed project would be consistent with this design element.

Electric Vehicle Requirements. This criterion requires that the project achieve compliance with off-street electric vehicle requirements in the most recently adopted version of the California Green Building Standards Code (CALGreen Code) Tier 2 measures. The proposed project would include 22 electric vehicle parking spaces and would exceed code minimums for electric vehicle charging stations in the fleet parking area as they transition to more electric fleet vehicles; therefore, the proposed project would be consistent with this design element.

As demonstrated above, the proposed project would be consistent with the BAAQMD's project design elements related to natural gas, energy, and VMT. Therefore, the proposed project would be consistent with the BAAQMD's GHG emission thresholds. As such, the proposed project would not generate significant GHG emissions that would have a significant effect on the environment and this impact would be **less than significant**.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

City of Antioch Climate Action Resilience Plan. As identified above, the City of Antioch adopted the CARP on May 12, 2020[25]. The CARP contains goals and implementing actions that work to conserve resources, prepare for the future, and increase the "livability" of the City of Antioch. In addition, the CARP aligns with federal and state guidelines, and various City plans to best position the City to access funding opportunities to increase the livability of the City over the next five years. The CARP's primary strategies to accomplish short and long-term livability are based on resilience, sustainability, and equity. The CARP contains goals and proposed actions to achieve emission reductions and; therefore, a qualitative analysis of the proposed project's consistency with these policies and strategies is provided. These implementing actions and other strategies include measures in transportation, transportation electrification, energy, and waste. The following measures are applicable to the proposed project:

- Strategically expand electric vehicle (EV) charging stations.
- Encourage fuel switching to from natural gas to electricity.

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[24] Governor's Office of Planning and Research (OPR). 2018. *Technical Advisory on Evaluation Transportation Impacts in CEQA.* December.

[25] City of Antioch. 2020. *Climate Action and Resilience Plan.* May 12. Website: https://www.antiochca.gov/fc/environment/climate/carp/Final-CARP.pdf (accessed July 2023).

- Expand outreach to business owners and contractors about electrification and its benefits.
- Expand awareness and reach of commercial composting program.
- Provide clearer community outreach into what can be put in landfill, recycling, and compost.

The proposed project involves the demolition and replacement of the four existing buildings onsite. The proposed project would not result in additional daily trips when compared to the existing conditions. In addition, the project includes 22 electric vehicle parking spaces and would exceed code minimums for electric vehicle charging stations in the fleet parking area as they transition to more electric fleet vehicles; therefore, the proposed project would support the applicable transportation measures. In addition, the proposed new buildings would be all-electric and would not include the use of natural gas. The proposed project would also be consistent with County Solid Waste and State waste reduction requirements. As such, the proposed project would be consistent with the applicable CARP measures.

CARB Scoping Plan. The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, Executive Order N-79-20 requires all new passenger vehicles sold in California to be zero-emission by 2035, and all other fleets to transition to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficiency measures are intended to maximize energy-efficient building and appliance standards; pursue additional efficiency efforts, including new technologies and new policy and implementation mechanisms; and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified above, the proposed project would comply with current CALGreen Code standards regarding energy conservation and green building.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would be required to comply with current CALGreen Code standards, which include a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would be required to comply with the California Model Water Efficient Landscape Ordinance.

The goal of transportation and motor vehicle measures is to increase zero-emission vehicles and decrease VMT. As discussed above, the proposed project would not result in additional daily trips when compared to the existing conditions. In addition, the proposed project would include 22

electric vehicle parking spaces and would exceed code minimums for electric vehicle charging stations in the fleet parking area as they transition to more electric fleet vehicles.

Overall, the proposed project would incorporate various conservation and efficiency measures, consistent with the State's GHG emissions reduction goals.

Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the GHG emissions. This impact would be **less than significant**.

4.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 2 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?	☐	☐	☐	☒

4.9.1 Impact Analysis

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed project involves the redevelopment of the existing PG&E Antioch Service Center, including the replacement of the existing Fleet Maintenance building, Logistics Warehouse and Shops buildings, and Operations building. Hazardous materials that are currently stored on the site in reportable quantities include electrolyte/sulfuric acid and diesel fuel.[26] Operation of the proposed project involves routine transport, use, and/or disposal of hazardous materials. Hazardous materials (e.g., oil, grease, fuels, paint) would be transported and used on-site during proposed construction activities. The routine transport, use, or disposal of these hazardous materials could pose a potential hazard to construction workers and future employees working at the project site as they would be handling the hazardous materials and could therefore be exposed through inhalation of vapors,

[26] California Department of Toxic Substances Control (DTSC). 2021. *Facilities from the California Environmental Reporting Systems (CERS).* Website: https://lsa.maps.arcgis.com/home/item.html?id=52f1ca9a13d848daaee8f6232ea39aed (accessed June 29, 2023).

direct contact with skin, or accidental ingestion. The routine transport, use, or disposal of these hazardous materials would not pose a significant hazard to the public or environment unless the hazardous materials were accidentally spilled or released into the environment, as discussed in Section 4.9.b below.

The project site would be subject to existing regulatory programs for hazardous materials. The Contra Costa County Health Services Department Hazardous Materials Program (CCHSHM) is designated as the Certified Unified Program Agency (CUPA) for the City of Antioch, and coordinates the regulation of hazardous materials and hazardous wastes in the City of Antioch through the following programs:

- Aboveground Petroleum Storage Act (APSA)
- Hazardous Materials Business Plan (HMBP)
- California Accidental Release Prevention (CalARP)
- Green Business Program
- Hazardous Waste Generator
- Industrial Safety Ordinance (ISO)
- Underground Storage Tanks (UST)

The role of a CUPA is to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities associated with the regulation of hazardous materials and hazardous wastes. Businesses that store or use hazardous materials in the City limits of Antioch are required to submit chemical and facility information on the California Environmental Reporting Systems (CERS), which is a statewide web-based system to support CUPAs in electronically collecting and reporting various hazardous materials-related data as mandated by the California Health and Safety Code and 2008 legislation (Assembly Bill [AB] 2286). Chapter 6.95 of Division 20 of the California Health and Safety Code requires that an HMBP must be submitted to the local CUPA if on-site hazardous materials exceed in aggregate any of the following: 55 gallons for liquids; 500 pounds for solids; or 200 cubic feet of gases at standard temperature and pressure. HMBPs are required to be submitted electronically to the CERS and must include facility information, a Hazardous Materials Inventory Statement, an Emergency Response Plan, and an Emergency Response Training Plan. The HMBP has to be re-certified for completeness and accuracy every year, or updated and revised, as necessary.

Worker health and safety is regulated at the federal level by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). OSHA regulations include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). The Federal Occupational Safety and Health Act of 1970 authorizes states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Department of Industrial Relations (DIR). The DIR includes the Division of Occupational Safety and Health (DOSH), which acts to protect workers from safety hazards through its California OSHA (Cal/OSHA) program. Cal/OSHA regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. California standards for workers dealing with hazardous materials are contained in California Code of Regulations (CCR) Title 8 and include

practices for all industries (General Industrial Safety Orders), and specific practices for construction, and other industries. The routine transport, use, and disposal of hazardous materials at the project site during operation and construction activities would be required to comply with a project Health and Safety Plan (HASP) prepared in accordance with CCR Title 8, which would mitigate potential health hazards for workers related to the routine transport, use, or disposal of hazardous materials to a less than significant level.

As detailed in Section 4.10, Hydrology and Water Quality, because the proposed project would result in soil disturbance greater than 1 acre, management of hazardous materials during construction activities would be subject to the requirements of the Stormwater Construction General Permit (CGP), which requires preparation and implementation of a SWPPP that includes hazardous materials storage requirements. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

The transportation of hazardous materials is subject to United States Department of Transportation (USDOT), Resource Conservation and Recovery Act (RCRA), and State regulations. In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The USDOT developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The California Highway Patrol, the California Department of Transportation (Caltrans), and the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

Construction of the proposed project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that may be classified as hazardous waste. Hazardous wastes would be required to be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by USDOT, RCRA, and state regulations.

Compliance with the existing hazardous materials regulations and programs described above, including requirements for HMBPs and Risk Management Plans (RMPs) for facilities handling significant quantities of hazardous materials, OSHA and Cal/OSHA regulations, CCR Title 8; the CGP; and USDOT, RCRA, and State regulations, would ensure that the proposed project would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials by ensuring that these materials are properly handled during construction and operation of the proposed project and therefore, would be considered **less than significant**.

b. Would the project 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?

There are two main ways that the public and/or the environment could be affected by the release of hazardous materials from the project site into the environment, including: (1) exposing workers and/or the public to potentially contaminated soil and groundwater during construction and/or operation of the project; or (2) exposing workers and/or the public to hazardous building materials (e.g., lead paint, asbestos) during demolition of existing structures.

As previously discussed, hazardous materials are stored on the project site and as discussed below in Section 4.9.d, past releases of hazardous materials have occurred at and adjacent to the project site. The public and/or the environment could be affected the past releases of hazardous materials by exposing the environment, workers, and/or the public to potentially contaminated soil, soil vapor, and/or groundwater during construction of the project. Implementation of **Mitigation Measure HAZ-1** would address the potential for subsurface impacts from hazardous materials to significantly impact human health or the environment.

Mitigation Measure HAZ-1 Prior to any groundbreaking activities, a Site Management Plan (SMP) shall be prepared which summarizes the known environmental conditions on the project site and recommends appropriate site management procedures based on the site-specific information and proposed redevelopment activities. The SMP shall include procedures for evaluating, handling, storing, testing and disposing of soil and groundwater generated during project excavation and grading activities. Materials generated from excavation and grading activities on the project site and materials that may be imported to the site shall be tested for potential contaminants prior to use as fill on-site. Fill testing shall be performed by a qualified environmental professional and demonstrated to meet the appropriate threshold criteria (e.g., ESLs). The results of the fill testing shall be submitted to the City of Antioch (City) and the San Francisco Bay Regional Water Quality Control Board (RWQCB) for review and approval prior importing or re-use of the material. The SMP shall include a contingency plan that shall be implemented if previously unidentified potentially contaminated material or regulated features (e.g., underground storage tanks [USTs]) are encountered during construction activities. The contingency plan shall include provisions that require notification of the City, RWQCB, or any other regulatory agencies with jurisdiction, when potentially contaminated material is encountered. Physical signs of potentially contaminated materials include staining/discoloration, oily sheen or free phase products, odors, the presence of rubble/debris/refuse, or the presence of buried features that may contain hazardous materials (e.g., drums,

buckets, sumps, vaults, or pipelines). The contingency plan shall include guidelines for the collection of soil and/or groundwater samples by a qualified environmental professional prior to further work in the newly discovered affected area. The samples shall be submitted for laboratory analysis by a state-certified laboratory under chain-of-custody procedures. The analytical methods shall be selected by the environmental professional. The analytical results of the sampling shall be reviewed by the qualified environmental professional and submitted to the appropriate regulatory agency, if appropriate. The environmental professional shall provide recommendations, as applicable, regarding soil/waste management, worker health and safety training, and regulatory agency notifications, in accordance with local, state, and federal requirements. Work shall not resume in the area(s) affected until these recommendations have been implemented under oversight by the City, the RWQCB, or any other regulatory agencies with jurisdiction, as appropriate.

The structures proposed for demolition and replacement at the project site were constructed around 1980. Based on the age of the structures on the project site, hazardous building materials including asbestos-containing materials, lead-based paint, and polychlorinated biphenyls-containing materials and electrical equipment may be present. Therefore, demolition of these structures could result in the release of hazardous materials into the environment. Implementation of **Mitigation Measure HAZ-2**, described below, would ensure that this impact would be reduced to a less than significant level.

Mitigation Measure HAZ-2 Prior to the issuance of any demolition permits for existing structures on the project site, a comprehensive Hazardous Building Materials Survey (HBMS) for the project site shall be prepared and signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials, lead-based paint, polychlorinated biphenyls-containing materials and electrical equipment, and any other hazardous building materials. The HBMS and abatement specifications shall be submitted to and approved by the City prior to the start of abatement activities. The HBMS shall include abatement specifications for the stabilization and/or removal of the identified hazardous building materials in accordance with all applicable laws and regulations. The demolition contractor(s) shall implement the abatement specifications and submit to the City evidence of completion of abatement activities prior to demolition of the existing structures.

Implementation of **Mitigation Measures HAZ-1 and HAZ-2** would require the preparation of an SMP and HBMS, both of which would require the development and implementation of specific procedures to ensure hazardous materials on the project site would be handled properly.

Implementation of these mitigation measures would ensure that the proposed project would not result in significant impacts to human health, or the environment, associated with accidental releases of hazardous materials. Impacts would be **less than significant with mitigation incorporated**.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The project site is located approximately 200 feet east of the Imagination Academy Preschool, 0.15 mile southeast of the Little Angels Country School, and 0.2 mile east of the Bidwell Continuation High School. The proposed project would be required to comply with all regulations listed in Section 4.9.a, including requirements for HMBPs and RMPs for facilities handling significant quantities of hazardous materials, OSHA and Cal/OSHA regulations, CCR Title 8; the CGP; and USDOT, RCRA, and State regulations, which would ensure that the proposed project would not create a significant hazard to the public. Additionally, implementation of **Mitigation Measures HAZ-1 and HAZ-2** would be required, which require the preparation of an SMP and an HBMS, both of which would require the development and implementation of specific procedures to ensure hazardous materials on the project site would be handled properly. Compliance with these regulations would ensure that the project 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, and impacts would be **less than significant with mitigation incorporated**.

d. Would the project 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?

The project site is included on the State Water Resources Control Board (SWRCB) GeoTracker database.[27] The project site is listed as a Leaking Underground Storage Tank (LUST) Cleanup Site with potential contaminants of concern including "waste oil/motor/hydraulic/lubricating" and includes soil as a potential media of concern. The case was opened on August 31, 1992, and was closed on November 4, 1992, and the current status is "Completed – Case Closed".[28] Additionally, there is an open Cleanup Program Site listed adjacent to the project site due to a sleeve repair failure on August 5, 2018, that resulted in the release of diesel fuel under the median of Hillcrest Avenue. Diesel fuel seeped up through the asphalt street and flowed along the stormwater gutter to a storm drain and subsequently discharged onto undeveloped land owned by PG&E. The potential

[27] State Water Resources Control Board (SWRCB). 2023b. *GeoTracker.* Website: https://geotracker.waterboards.ca.gov/search?PAGE=16&CMD=search&business_name=&main_street_number=&main_street_name=&city=&zip=&county=&branch=&status=&site_type=LUFT&cleanup_type=&npl=&reporttype=&reporttitle=PROJECT+SEARCH+RESULTS&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&permitted=&corrective_action=&spec_prog=&national_priority_list=&senate=&assembly=&critical_pol=&business_type=&case_type=&gwbasin=&display_results=&pub=&watershed=&ORDERBY=city&excludenc=False&next=Next+50 (accessed June 29, 2023).

[28] State Water Resources Control Board (SWRCB). 2023c. *Geotracker. PG&E Antioch Service Center (T0601300787).* Website: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300787 (accessed June 29, 2023).

contaminants of concern include benzene, gasoline, and total petroleum hydrocarbons and the potential media of concern includes an aquifer used for drinking water supply, soil, and soil vapor. The current status of the case is "Open – Site Assessment as of 11/27/2018".[29]

The proposed project would be required to comply with all regulations listed in Section 4.9.a, including requirements for HMBPs and RMPs for facilities handling significant quantities of hazardous materials, OSHA and Cal/OSHA regulations, CCR Title 8; the CGP; and USDOT, RCRA, and State regulations, which would ensure that the proposed project would not create a significant hazard to the public. Additionally, implementation of **Mitigation Measures HAZ-1 and HAZ-2** would be required, which require the preparation of an SMP and an HBMS, both of which would require the development and implementation of specific procedures to ensure hazardous materials on the project site would be handled properly. Compliance with these regulations would ensure that the project would not create a significant hazard to the public or the environment, and impacts would be **less than significant with mitigation incorporated**.

e. Would the project be located within an airport land use plan or, where such a plan has not been adopted, within 2 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?

There are no airports within 2 miles of the proposed project, nor is the proposed project located within an airport land use plan. The project site is not within the noise contours of any airport. The closest airport to the project site is the Rio Vista Municipal Airport, located approximately 13.5 miles to the northeast. As such, implementation of the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area in association with airports. **No impact** would occur.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The improvements that would occur as part of the project are site-specific and do not include any improvements to off-site areas (e.g., roadway improvements, intersection improvements). The proposed project would not reduce the number of traffic lanes on any adjacent streets and would not alter the existing street grid, and; therefore, it would not alter or obstruct emergency evacuation routes or response plan. The project site would be accessible to emergency vehicles in the event a hazardous event occurs on the site. Overall, the proposed project does not include any features that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; therefore, this impact would be **less than significant**.

[29] State Water Resources Control Board (SWRCB). 2023d. *Geotracker. KEMP Hillcrest Release (T10000012348).* Website: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000012348 (accessed June 29, 2023).

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project site is located in an urban area and is not within or adjacent to a wildland fire hazard area.[30] Therefore, the proposed project would not expose people or structures to a significant loss, injury or death involving wildland fires, and there would be **no impact**.

30 California Department of Forestry and Fire Protection (CAL FIRE). Fire and Resource Assessment Program, FHSZ Viewer. Website: https://egis.fire.ca.gov/FHSZ/ (accessed June 23, 2023).

4.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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 offsite;	☐	☒	☐	☐
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?	☐	☒	☐	☐

The following section relies on information provided in the Stormwater Control Plan[31] and Geotechnical Report[32] and Addendum[33] prepared for the proposed project.

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards regulate water quality of surface water and groundwater bodies throughout California. In the Bay Area, including the project site, the San Francisco Bay Regional Water Quality Control Board (Water Board) is responsible for implementation of the Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses for waterways and water bodies within the region. Section 303(d) of the Federal Clean Water Act (CWA) requires that states identify water bodies including bays, rivers, streams, creeks, and coastal areas that do not meet water quality standards and the pollutants that are causing the impairment. Total Maximum Daily Loads (TMDLs) describe the

31 BKF Engineers. 2021. *Stormwater Control Plan for PG&E Antioch Service Center Site Improvements.* December.

32 Blackburn Consulting. 2017a. Op. cit.

33 Blackburn Consulting. 2017b. Op. cit.

maximum amount of a pollutant that a water body can receive while still meeting established water quality standards. A TMDL requires that all sources of pollution and all aspects of a watershed's drainage system be reviewed and set forth action plans that examine factors and sources adversely affecting water quality and identify specific plans to improve overall water quality and reduce pollutant discharges into impaired water bodies. Storm water from the project site discharges to existing storm drain inlets throughout the site, which discharge to an existing storm drain line on Hillcrest Avenue, which discharges to the Delta Waterways (western portion) which flows into the Sacramento San Joaquin Delta, which flows into Suisun Bay. The State Water Resources Control Board Surface Water Quality Assessment 2020–2022 Integrated Report for Clean Water Act Sections 303(d) and 305(b) lists Delta Waterways (western portion) as an impaired waterbody for arsenic, chlordane, chlorpyrifos, dichlorodiphenyltrichloroethane (DDT), diazinon, dieldrin, electrical conductivity, group a pesticides, invasive species, mercury, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), total DDT (sum of 4,4'- and 2,4'- isomers of DDT, DDE, and DDD), and toxicity. Sacramento San Joaquin Delta is listed as an impaired water body for chlordane, DDT, dieldrin, dioxin compounds (including 2,3,7,8-TCDD), furan compounds, invasive species, mercury, PCBs, PCBs (dioxin-like), and selenium. Suisun Bay is listed as an impaired water body for chlordane, DDT, dieldrin, dioxin compounds (including 2,3,7,8-TCDD), furan compounds, invasive species, mercury, PCBs, PCBs (dioxin-like), and selenium.[34]

Runoff water quality is regulated by the NPDES Program (established through the federal CWA). The NPDES program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with NPDES permits is mandated by State and federal statutes and regulations. Locally, the NPDES Program is administered by the Water Board. According to the water quality control plans of the Water Board, any construction activities, including grading, that would result in the disturbance of 1 acre or more would require compliance with SWRCB's CGP,[35] which requires preparation of a SWPPP and implementation of Construction Best Management Practices (BMPs) during construction activities. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

The proposed project would be subject to the California Regional Water Quality Control Board San Francisco Bay Region's Municipal Regional Stormwater NPDES Permit (MRP), which went into effect on July 1, 2022, by Order R2-2022-0018, NPDES Permit No. CAS612008. The MRP covers stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and the cities of Fairfield, Suisun City, Vallejo, and the Vallejo Flood & Wastewater District, which have joined together to form the Solano Stormwater Alliance (Solano Permittees). Provision C.3 of the MRP requires new development and redevelopment projects that would replace more than 5,000 square feet of existing impervious surfaces to include post-construction stormwater control in project designs. Under the Provision C.3 requirements, the preparation and

[34] State Water Resources Control Board (SWRCB). 2023a. *2020-2022 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)*. Website: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html (accessed July 2023).

[35] NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002).

submittal of a Stormwater Control Plan (SCP) would be required. The purpose of an SCP is to detail the design elements and implementation measures necessary to meet the post-construction stormwater control requirements of the MRP. In particular, SCPs must include Low Impact Development (LID) design measures, which reduce water quality impacts by preserving and recreating natural landscape features, minimizing imperviousness, and using storm water as a resource, rather than a waste product. Additionally, the preparation of a Stormwater Facility Operation and Maintenance Plan is required to ensure that stormwater control measures are inspected, maintained, and funded for the life of the project.

Construction. The proposed project involves the demolition and replacement of the following four existing buildings on site: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via stormwater runoff into receiving waters.

Because construction of the proposed project would disturb greater than one acre of soil, the project is subject to the requirements of the CGP, which requires preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of construction BMPs during construction activities as detailed in **Mitigation Measure HYD-1**. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

Mitigation Measure HYD-1 The Project Applicant shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the State Water Resources Control Board (SWRCB) via the Stormwater Multiple Application and Report Tracking System (SMARTs). The Project Applicant shall provide the Waste Discharge Identification Number (WDID) to the Planning Manager of the City of Antioch or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be

initiated until a WDID is received from the SWRCB and is provided to the City, or designee.

A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared by a Qualified SWPPP Developer in accordance with the requirements of the Construction General Permit. These include: BMPs for erosion and sediment control, site management/ housekeeping/waste management, management of non-stormwater discharges, run-on and runoff controls, and BMP inspection/maintenance/repair activities. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association's Stormwater Best Management Handbook: Construction.

The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/maintenance/repair activities.

Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTs.

Exploratory borings conducted on the project site during preparation of the Geotechnical Report completed for the proposed project encountered groundwater at a depth of 51 feet below ground surface. However, groundwater and perched water levels can fluctuate due to tides, changes in precipitation, irrigation, pumping of wells, and other factors. With review of groundwater level data from nearby wells, the Geotechnical Report concluded that groundwater levels in the project area are at a depth of about 35 feet. The proposed project would require excavation to a depth of 11 feet for the underground parking and to a depth of 8 feet for the deepest utility trench. Therefore, it is not anticipated that groundwater dewatering would be required during construction of the proposed project.

Adherence with the CGP, including implementation of the required SWPPP and construction BMPs would ensure construction impacts related to surface water quality standards, waste discharge requirements, and surface water quality would be **less than significant with mitigation incorporated**.

Operation. Pollutants of concern from long-term operations include pathogens (bacteria/viruses), metals, nutrients, motor vehicle lubricants, coolants, disc brake dust, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease. The City of Antioch is under the purview of the MRP. Therefore, the proposed project would be subject to the requirements of Provision C.3 of the MRP because the project would replace more than 5,000 square feet of existing impervious surfaces. As detailed in **Mitigation Measure HYD-2**, the

preparation and implementation of a Final SCP, including a Stormwater Facility Operation and Maintenance Plan, would be required. As discussed in Chapter 2.0, Project Description, the proposed project would include four landscaped bioretention basins with mow-free sod that would be used for stormwater control and treatment to reduce pollutants of concern in stormwater prior to release into the storm drain system and city owned open channel to the east of the site. Compliance with **Mitigation Measure HYD-2** and the requirements of the MRP would ensure that operation-period impacts to surface water quality standards, waste discharge requirements, and surface water quality would be less than significant.

Mitigation Measure HYD-2 Prior to the issuance of any permits for ground-disturbing activities, the project Applicant shall submit a Final Stormwater Control Plan (SCP) to the City of Antioch Planning Division for review and approval in compliance with Section C.3 of the San Francisco Bay Regional Water Quality Control Board's Municipal Regional Stormwater NPDES Permit (MRP) requirements. The Final SCP would act as the overall program document designed to provide measures to mitigate potential water quality impacts associated with the operation of the proposed project. The Final SCP shall be prepared in accordance with the requirements and guidelines set forth in the Contra Costa County Clean Water Program Stormwater C.3 Guidebook.[36] At a minimum, the Final SCP for the project shall include:

- An inventory and accounting of existing and proposed impervious areas.
- Low Impact Development (LID) design details incorporated into the project. Specific LID design may include, but is not limited to, using pervious pavements and green roofs, dispersing runoff to landscaped areas, and/or routing runoff to rain gardens, cisterns, swales, and other small-scale facilities distributed throughout the site.
- Measures to address potential stormwater contaminants. These may include measures to cover or control potential sources of stormwater pollutants at the project site.
- A Draft Stormwater Facility Operation and Maintenance Plan for the project site, which will include periodic inspection and maintenance of the storm drainage system. Persons responsible for performing and funding the requirements of this plan shall

[36] Contra Costa Clean Water Program. 2022. *Stormwater C.3 Guidebook, Stormwater Quality Requirements for Development Applications.* December 23.

be identified. This plan must be finalized prior to issuance of building permits for the project.

Overall, because the proposed project would be required to comply with existing regulations including the CGP and the MRP, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be **less than significant with mitigation incorporated**.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The project site is located within the East Contra Costa (ECC) Subbasin, a subbasin of the larger San Joaquin Valley groundwater basin. [37] The ECC Subbasin covers a 168-square-mile area in the eastern portion of Contra Costa County. The ECC Subbasin is bounded on the north, east, and south by the Contra Costa County line, which is contiguous with the San Joaquin River (north) and Old River (east). In the west, the Subbasin is bounded by marine sediments of the Coast Range. The Subbasin is located on the southwestern part of the Sacramento-San Joaquin Delta, and land use in the Subbasin is mainly agricultural (41 percent), followed by urban (about 23 percent), then by water and native vegetation (both about 14 percent). Groundwater levels in the ECC Subbasin are stable indicating that the Subbasin has been managed within its sustainable yield. The cumulative change in groundwater storage was unchanged between 1997 and 2018 despite three drought periods.[38]

Construction. As discussed in Section 4.10.a above, the Geotechnical Report completed for the proposed project determined that groundwater levels in the project area are at a depth of about 35 feet below ground surface. The proposed project would require excavation to a depth of 11 feet for the underground parking and to a depth of 8 feet for the deepest utility trench. Therefore, it is not anticipated that groundwater dewatering would be required during construction of the proposed project. Therefore, construction of the proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.**Operation.** Water service for the proposed project would be provided by the City of Antioch, which has two main water supply sources: surface water from the Sacramento/San Joaquin Rivers Delta and purchased water from Contra Costa Water District's (CCWD) Contra Costa Canal. Because the City does not use groundwater for municipal water supply, water use during operation of the proposed project would not affect groundwater supplies.

Development of the proposed project would result in an increase in impervious surfaces on the project site from approximately 19.04 acres to 32.6 acres, which could decrease opportunities for infiltration and groundwater recharge. However, according to the Stormwater Control Plan Report[39] completed for the proposed project, soils at the project site are considered impermeable with little

37 California Department of Water Resources (DWR). 2018. *Groundwater Basin Boundary Assessment Tool.* Website: https://gis.water.ca.gov/app/bbat/ (accessed January 10, 2023).

38 East Contra Costa Groundwater Sustainability Agency Working Group. 2021. *East Contra Costa Subbasin Groundwater Sustainability Plan.* October.

39 BKF Engineers. 2021. Op. cit.

to no infiltration ability and the project site is not a source of significant groundwater recharge under existing conditions. Therefore, the increase in impervious surface area that would result from the development of the proposed project would not significantly decrease groundwater supplies or interfere with groundwater recharge in a manner that may impede sustainable groundwater management.

For the reasons listed above, impacts related to the decrease of groundwater supplies or interference with groundwater recharge would be **less than significant**.

c. Would the project 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;

During construction activities, more than one acre of soil would be disturbed. Soil would be exposed and drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As required by **Mitigation Measure HYD-1**, the CGP requires the preparation of a SWPPP to identify construction BMPs to be implemented as part of the proposed project to reduce impacts on water quality during construction, including those impacts associated with soil erosion and siltation. With compliance with the requirements in the CGP and implementation of construction BMPs, construction impacts related to on- or off-site erosion or siltation would be **less than significant with mitigation incorporated.**

After the completion of project construction, development of the proposed project would result in an increase in impervious surfaces on the project site from approximately 19.04 acres to 32.6 acres which would result in a net increase in stormwater runoff that could lead to downstream erosion in receiving waters. However, as discussed above, the four landscaped bioretention basins included in the project's design in compliance with **Mitigation Measure HYD-2** and the MRP would control the volume and rate of stormwater runoff, which would reduce the potential for substantial erosion or siltation on- or off- site. Due to the incorporation of bioretention basins and the implementation of LID techniques as required by the MRP, operational impacts related to on- or off-site erosion would be **less than significant with mitigation incorporated**.

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

Development of the proposed project would result in an increase in impervious surfaces on the project site from approximately 19.04 acres to 32.6 acres which could have the potential to increase the volume and rate of stormwater runoff discharged on- and off-site. However, as previously discussed, the four landscaped bioretention basins included in the project's design in compliance with **Mitigation Measure HYD-2** and the MRP would be used for stormwater control and treatment. The proposed drainage facilities and BMPs needed to accommodate stormwater runoff would be appropriately sized to capture and retain stormwater runoff before releasing stormwater at a

controlled rate into the existing storm drain line or city owned open channel so that on or off-site flooding would not occur. Therefore, due to the incorporation of bioretention space and the implementation of LID techniques as required by the MRP, the proposed project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off site. Impacts would be **less than significant with mitigation incorporated.**

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

Stormwater Drainage System Capacity. Under existing conditions, storm water is collected in inlets throughout the project site that drain to existing on-site 8-inch, 15-inch, and 24-inch storm drains, which discharge into an existing storm drain line located in Hillcrest Avenue. The proposed project would include inlets located in multiple locations across the project site to capture onsite runoff and direct runoff into four bioretention basins. The bioretention basins would collect and treat storm water before discharging into an existing storm drain line that extends west to the City system or to an existing city owned open channel to the east of the site. The proposed project would include two storm drain connections to existing curb inlets in Hillcrest Avenue and one connection through PG&E land in the northeastern corner of the project site. As detailed in **Mitigation Measure HYD-2**, the proposed project would be required to comply with the MRP and would include the incorporation of LID design features including bioretention areas that would be used for stormwater control and treatment. The proposed drainage facilities and BMPs needed to accommodate stormwater runoff would be appropriately sized such that drainage facility capacity would not be exceeded during a design storm. Therefore, the proposed project would not result in an exceedance of planned or existing stormwater drainage systems. Impacts would be **less than significant with mitigation incorporated**.

Polluted Runoff. As discussed in Section 4.10.a, pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals, and each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. Drainage patterns would be temporarily altered during grading and other construction activities, and construction-related pollutants could be spilled, leaked, or transported via storm runoff into adjacent drainages and downstream receiving waters. However, as previously discussed and as detailed in **Mitigation Measure HYD-1**, the proposed project would be required to comply with the requirements set forth by the CGP and SWPPP, which would specify BMPs to be implemented to control the discharge of pollutants in stormwater runoff as a result of construction activities. Therefore, construction-related impacts would be **less than significant with mitigation incorporated**.

Expected pollutants of concern from long-term operations include pathogens (bacteria/viruses), metals, nutrients, motor vehicle lubricants, coolants, disc brake dust, toxic organic compounds, pesticides/herbicides, sediments/total suspended solids, trash and debris, and oil and grease. As previously discussed, and as detailed in **Mitigation Measure HYD-2**, compliance with the MRP and the implementation of LID techniques, including bioretention basins that would be used for stormwater treatment, would ensure that no substantial sources of polluted runoff would be discharged from the project site. Operation-related impacts would be **less than significant with mitigation incorporated**.

iv. Impede or redirect flood flows?

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Numbers 06013C0331F and 06013C0143G, effective June 16, 2009, and September 30, 2015, respectively, the project site is located within an area of minimal flood hazard (Zone X).[40] There are no existing natural drainage features on the project site; therefore, the proposed project would not impede or redirect flood flows from any natural drainage features. Furthermore, the proposed project would not substantially alter existing on-site drainage patterns. The project site is generally flat and in the existing condition, stormwater runoff flows both towards the east and west. Although the proposed project would result in an increase in impervious surfaces on the project site from approximately 19.04 acres to 32.6 acres, it would not alter the existing drainage patterns. Additionally, as previously discussed, in compliance with **Mitigation Measure HYD-2** and the MRP, the proposed project would include four landscaped bioretention basins that would be used for stormwater control and treatment that would capture the stormwater flow and release it to the drainage system at a volume and rate that would not exceed capacity. Due to the incorporation of bioretention space and the implementation of LID techniques as required by the MRP, impacts would be **less than significant with mitigation incorporated**.

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Tsunami. Tsunamis are ocean waves caused by an underwater earthquake, landslide, or volcanic eruption. Because the delta and San Joaquin River connect to Suisun Bay, which connects to the San Francisco Bay, which connects to the Pacific Ocean, low-lying portions of the City of Antioch adjacent to the San Joaquin River could be affected by a tsunami. However, projected wave height and tsunami run-up is expected to be small in the interior portions of the San Francisco Bay and the Delta.[41] The project site is located approximately one mile from the San Joaquin River at an elevation of approximately 50 feet. Therefore, the proposed project is not at risk of inundation due to a tsunami, and **no impact** would occur.

Seiches. Seiches are waves that are created in an enclosed body of water such as a bay, lake, or harbor and go up and down or oscillate and do not progress forward like standard ocean waves. Lake Alhambra is the nearest enclosed body of water to the project site, located approximately 0.3 mile to the northwest. Antioch Municipal Reservoir and Contra Loma Reservoir are located approximately 1.9 and 2.5 miles southwest of the project site, respectively. However, impacts from seiches are highly localized to adjacent areas; therefore, due to distance, the project site would not be at risk of inundation if a seiche were occur within any of these waterbodies, and **no impact** would occur.

[40] Federal Emergency Management Agency (FEMA). 2009 and 2015. Flood Insurance Rate Map (FIRM) Numbers 06013C0331F and 06013C0143G, effective June 16 and September 30. Website: https://msc.fema.gov/portal/search?AddressQuery=2111%20hillcrest%20avenue%2C%20antioch%2C%20ca#searchresultsanchor (accessed January 11, 2023).

[41] City of Antioch. 2003. *Antioch General Plan Update EIR.* July.

Dam Inundation. The project site is not located within a mapped dam failure inundation area.[42] Therefore, the project site is not at risk of inundation due to dam failure, and **no impact** would occur.

Flooding. According to the FEMA FIRM Numbers 06013C0331F and 06013C0143G, effective June 16, 2009, and September 30, 2015, respectively, the project site is located within an area of minimal flood hazard (Zone X).[43] Therefore, the project is not at risk of inundation due to flooding, and **no impact** would occur.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

In the Bay Area, including the project site, the Water Board is responsible for implementation of the Basin Plan, which establishes beneficial water uses for waterways and water bodies within the region. As previously discussed, the proposed project would comply with existing NPDES permit requirements, including the CGP and MRP, and would implement construction and operational BMPs to reduce pollutants of concern in stormwater runoff as detailed in **Mitigation Measures HYD-1 and HYD-2**. Compliance with these regulatory requirements would ensure that the proposed project would not degrade or alter water quality, causing the receiving waters to exceed the water quality objectives, or impair the beneficial use of receiving waters. As such, the proposed project would not result in water quality impacts that would conflict with the Basin Plan. Construction and operational impacts related to a conflict with the Basin Plan would be **less than significant with mitigation incorporated.**

The Sustainable Groundwater Management Act (SGMA), which was enacted in September 2014, requires governments and water agencies of high- and medium-priority basins to halt overdraft of groundwater basins. The SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs), which are required to adopt Groundwater Sustainability Plans to manage the sustainability of the groundwater basins. California Department of Water Resources (DWR) designates the ECC Subbasin as a medium priority basin, and seven GSAs were identified for the ECC Subbasin. GSAs include the Cities of Antioch and Brentwood, Contra Costa County, Byron Bethany Irrigation District, East Contra Costa Irrigation District, Diablo Water District, and the Town of Discovery Bay. The GSAs along with partners, worked collaboratively to prepare a single Groundwater Sustainability Plan (GSP) for the Subbasin that was finalized in October 2021. The GSP indicates that groundwater levels in the ECC Subbasin are stable and the cumulative change in groundwater storage was unchanged between 1997 and 2018 despite three drought periods. Additionally, groundwater quality is generally favorable with respect to primary drinking water quality constituents. However, naturally elevated mineral content may pose localized restrictions for domestic (e.g., hardness) and agricultural (crop sensitivity) uses.[44]

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42 California Department of Water Resources (DWR). 2015. Division of Safety of Dams. *Dam Breach Inundation Map Web Publisher.* Website: https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2 (accessed January 11, 2023).

43 FEMA. 2009 and 2015. Op. cit.

44 East Contra Costa Groundwater Sustainability Agency Working Group. 2021. Op. cit.

The sustainability goal for the ECC Subbasin GSP is to manage the groundwater Subbasin to:

- Protect and maintain safe and reliable sources of groundwater for all beneficial uses and users.
- Ensure current and future groundwater demands account for changing groundwater conditions due to climate change.
- Establish and protect sustainable yield for the Subbasin by achieving measurable objectives set forth in this GSP in accordance with implementation and planning periods.
- Avoid undesirable results defined in the GSP in accordance with SGMA.

Projects and Management Actions (PMAs) were developed to achieve the ECC Subbasin sustainability goal by 2042 and avoid undesirable results during and beyond the GSP planning and implementation horizon. Because the ECC Subbasin is currently and projected to be sustainable (i.e., no onset of undesirable results), PMAs are not expected to be essential for sustainability. Seven projects are included in the GSP representing a variety of project types to increase water supply availability and reliability including infrastructure to provide in-lieu recharge, improve water quality, and increase use of recycled wastewater.

As previously discussed in Section 4.10.b, it is not anticipated that groundwater dewatering would be required during construction of the proposed project. Therefore, construction of the proposed project would not conflict with or obstruct implementation of the GSP. Development of the proposed project would result in an increase in impervious surfaces on the project site from approximately 19.04 acres to 32.6 acres, which would decrease opportunities for infiltration and groundwater recharge. However, according to the Stormwater Control Plan[45] completed for the proposed project, soils at the project site are considered impermeable with little to no infiltration ability and the project site is not a source of significant groundwater recharge under existing conditions. As previously discussed, and as detailed in **Mitigation Measure HYD-2**, compliance with the MRP, the implementation of LID techniques, and the incorporation of operational BMPs to target pollutants of concern would ensure that the proposed project would not discharge substantial sources of polluted runoff from the project site. Additionally, operation of the proposed project would not require the consumption of groundwater for potable water. For these reasons, the proposed project would not conflict with or obstruct the implementation of a sustainable groundwater management plan. Construction and operational impacts related to conflict with, or obstruction of water quality control plans or sustainable groundwater management plans would be **less than significant with mitigation incorporated**.

[45] BKF Engineers. 2021. Op. cit.

4.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒

a. Would the project physically divide an established community?

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying area. For instance, the construction of an interstate highway through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside the community.

The project site is located in an urban area in the City of Antioch and is surrounded by residential uses to the north, undeveloped vacant land to the east, Southern Pacific Railroad (SPRR) property and a Bay Area Rapid Transit (BART) station/arterial to the south, and Hillcrest Avenue and residential uses to the west. The proposed project would not require the construction of any new infrastructure that would divide an established community and would not remove any means of access. The proposed improvements would be limited to within the project site boundary. The proposed project would not result in a physical division of an established community or adversely affect the continuity of land uses in the vicinity. Therefore, there would be **no impact**.

b. Would the project 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?

The proposed project involves the demolition and replacement of the following four existing buildings onsite: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The project site would continue to be used as a PG&E service center and would not result in any changes to the existing on-site land use.

The City of Antioch General Plan map designates the project site as the Hillcrest Station Area: Specific Plan Focus Area and the Hillcrest Station Area Specific Plan area designates the project site as an Industrial/Utilities land use designation, which is consistent with the existing and proposed land use at the project site.

The City of Antioch Zoning Map designates the project site as Planned Development District (PD). This land use is intended to accommodate a wide range of residential, commercial and industrial land uses which are mutually supportive and compatible with existing and proposed development on surrounding properties. For PD zoning, all height, area, and setback regulations are to be determined by City Council through the planned development process. In addition, the proposed project would require building permits, a planned development rezone, design review and approval of a use permit.

The project does not propose to change the General Plan land use designation or the current zoning for the project site and would be consistent with the City's General Plan and Zoning Ordinance. Additionally, the proposed land use would be consistent with existing conditions. Therefore, the proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and there would be **no impact**.

4.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

There are no areas near the project site or on the project site that have previously been used for mineral resource extraction. Furthermore, the project site is classified as Mineral Resource Zone-1 (MRZ-1)[46] by the Department of Conservation (DOC), which is defined as an area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. Therefore, implementation of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State, and there would be **no impact**.

b. Would the project 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?

Please refer to Section 4.12.a. The project site is classified as MRZ-1, and the proposed project would not result in the loss of availability of any known locally important mineral resource recovery site. Therefore, **no impact** related to the availability of a mineral resources recovery site would occur.

[46] California Department of Conservation, California Geologic Survey (DOC CGS). SR-146-Plates 2.2 and 2.25. https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc (accessed July 2023).

4.13 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
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 2 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?	☐	☐	☒	☐

Characteristics of Noise. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a ten-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements which better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on dBA. L_{dn}, sometimes denoted as DNL, represents the time varying noise over a 24-hour period, with a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours of 7:00 p.m. to 10:00 p.m.

Characteristics of Vibration. Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible. Typically, there is more adverse reaction to effects associated with the shaking of a building. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet.[47] When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, both the construction of the project could result in ground-borne vibration that may be damaging.

Ground-borne vibration has the potential to damage buildings. Although it is very rare for typical construction activities to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings. Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The PPV is used to characterize potential for damage.

Regulatory Framework. The City addresses noise in Chapter 11.0 Environmental Hazards of the General Plan[48] and in Sections 5-17.04 and 5-17.05 of the City's Municipal Code.[49] The General Plan Section 11.6.1 establishes standards for exterior noise levels appropriate to planned land uses throughout the City, as described below:

- Residential Single Family: 60 dBA CNEL within rear yards; Multi-Family: 60 dBA CNEL within interior open space;
- Schools – Classrooms: 65 dBA CNEL; Play and sports areas: 70 dBA CNEL;
- Hospitals, Libraries: 60 dBA CNEL;

47 California Department of Transportation (Caltrans). 2013. *Caltrans Transportation and Construction Vibration Guidance Manual*. September.
48 City of Antioch. 2003. *City of Antioch General Plan*. November 24.
49 City of Antioch. 2022. *City of Antioch Municipal Code*. October 11.

- Commercial/Industrial: 70 dBA CNEL at the front setback.

Additionally, the following Implementation Policies from the City's General Plan would be applicable to the proposed project:

- Noise Compatible Land Use and Circulation Patterns:

    a. Implementation of the noise objective contained in Section 11.6.1 and the policies contained in Section 11.6.2 of the Environmental Hazards Element shall be based on noise data contained in Section 4.9 of the General Plan EIR, unless a noise analysis conducted pursuant to the City's development and environmental review process provides more up-to-date and accurate noise projections, as determined by the City.

    b. Maintain a pattern of land uses that separate 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.

    c. Minimize motor vehicle noise in residential areas through proper route location and sensitive roadway design.

        - Provide planned industrial areas with truck access routes separated from residential areas to the maximum feasible extent.

        - Where needed, provide traffic calming devices to slow traffic speed within residential neighborhoods.

- Noise Analysis and Mitigation

    a. 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.

    b. 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 dBA) increase in noise in areas where General Plan noise objectives are already exceeded as the result of existing development.

    c. 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 addition 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 use, such as parking areas, and noise tolerant structures, such as garages, between the noise source and sensitive receptor.
- Cluster office, commercial, or multi- family residential structures to reduce noise levels within interior open space areas.
- Provide double glazed and double paned windows on the side of the structure facing a major noise source, and place entries away from the noise source to the extent possible.

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

- Noise barriers must have sufficient mass to reduce noise transmission and high enough to shield the receptor from the noise source.
- To be effective, the barrier needs to be constructed without cracks or openings.
- The barrier must interrupt the line of sight between the noise source and noise receptor.
- The effects of noise "flanking" the noise barrier should be minimized by bending the end of the barrier back from the noise source.
- Require appropriate landscaping treatment to be provided in conjunction with noise barriers to mitigate their potential aesthetic impacts.

e. Continue enforcement of California Noise Insulation Standards (Title 25, Section 1092, California Administrative Code).

- Temporary Construction:

a. 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.

b. Require proposed development adjacent to occupied noise sensitive land uses to implement a 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.

c. 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.

d. 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.

e. 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 any other restrictions imposed by the City.

Sections 5-17.04 and 5-17.05 of the City's Municipal Code prohibits construction activities during the hours specified below:

- Prior to 7:00 a.m. and after 6:00 p.m. on weekdays;

- Prior to 8:00 a.m. and after 5:00 p.m. on weekdays within 300 feet of occupied dwelling space; and

- Prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from occupied dwelling, on weekends and holidays.

Because the City does not have construction noise level limits, construction noise was assessed using criteria from the Federal Transit Administration's (FTA) T*ransit Noise and Vibration Impact Assessment Manual.*[50] The FTA model is a widely used criteria that is often used for vibration in the case where local jurisdictions have not established their own standards. Table 4.E shows the FTA's Detailed Analysist Construction Noise Criteria based on the composite noise levels per construction phase.

Table 4.E: Detailed Assessment Construction Noise Criteria

Land Use	Daytime 1-hour L_{eq} (dBA)	Nighttime 1-hour L_{eq} (dBA)
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
dBA = A-weighted decibels
FTA = Federal Transit Administration
L_{eq} = equivalent continuous sound level

Vibration standards included in the FTA's *Transit Noise and Vibration Impact Assessment Manual*[51] are used in this analysis. The criteria for environmental impact from ground-borne vibration are based on the maximum levels for a single event. FTA guidelines show that a vibration level of up to 0.5 inches per second [in/sec] in peak particle velocity [PPV] is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction building vibration damage criterion is 0.2 in/sec in PPV.

Existing Noise Conditions. Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is bordered to the north by residential uses; to the east by vacant undeveloped land; to the south by vacant land, the Southern Pacific Railroad (SPRR) railroad property, and the Antioch Bay Area Rapid Transit (BART) station/arterial track; and to the west by Hillcrest Avenue. The single-family residences located approximately 20 feet north of the project site are the closest sensitive receptors to the project site.

Existing Ambient Noise Level Measurements. The ambient noise environment in the vicinity of the project site is affected by a variety of noise sources. While noise associated with aircraft flyovers and rail activities occur in the project area, the major sources of noise are traffic on Hillcrest Avenue and State Route 4 (SR-4). Three long-term (24-hour) noise measurements were conducted June 8, 2023, through June 9, 2023, to establish the existing ambient noise environment at the project site. Data collected during the noise measurements are summarized in Table 4.F. The noise measurements indicate that ambient noise at the project site ranges between 61.8 dBA CNEL and 72.4 dBA CNEL.

[50] Federal Transit Administration (FTA). 2018. Office of Planning and Environment. *Transit Noise and Vibration Impact Assessment Manual.* FTA-VA-90-1003-06. September.

[51] Ibid.

Table 4.F: Long-Term Ambient Noise Level Measurements

Location	Daytime Noise Levels[1] (dBA L_{eq})	Evening Noise Levels[2] (dBA L_{eq})	Nighttime Noise Level[3] (dBA L_{eq})	Daily Noise Level (dBA CNEL)
LT-1: Near northeast corner of project site, on the 2nd pole from the east by the wall.	54.6 – 63.6	55.4 – 57.2	47.4 – 58.6	61.8
LT-2: North of PG&E entrance, on a tree, approximately 80 feet from Hillcrest Avenue centerline.	67.3 – 69.1	67.6 – 68.3	56.6 – 67.3	71.5
LT-3: Near southwest corner of project site, at the fence, approximately 80 feet from Hillcrest Avenue centerline.	67.4 – 69.3	66.9 – 69.0	58.5 – 70.4	72.4

Source: Compiled by LSA. (2023).
[1] Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 7:00 p.m.
[2] Evening Noise Levels = noise levels during the hours of 7:00 p.m. to 10:00 p.m.
[3] Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.

CNEL = community noise equivalent level
dBA = A-weighted decibels
L_{eq}=equivalent continuous sound level

The noise measurement locations are shown in Figure 4.13-1 and noise measurement sheets are provided in Appendix F.

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise Impacts. Implementation of the proposed project would include construction activities that would result in a substantial temporary increase in ambient noise levels in the vicinity of the project site.

The project site is generally surrounded by a mix of commercial and residential uses. The closest sensitive receptors include the residential uses located north of the project site approximately 580 feet from the center of project site. Project construction would result in short-term noise impacts to these sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.



LSA

LEGEND

Project Location

LT-1 Long-term Noise Monitoring Location

FIGURE 4.13-1

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FEET

SOURCE: Google Earth 2023

PG&E Antioch Service Center

Noise Monitoring Locations

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Short-term noise impacts would occur during grading and site preparation activities. Table 4.G lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Construction-related short-term noise levels would be higher than existing ambient noise levels in the project area, but would no longer occur once construction of the proposed project is completed.

Table 4.G: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Compressor	40	80
Cranes	16	85
Dozers	40	85
Drill Rig	20	84
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Generator	50	82
Man-lift	20	85
Rollers	20	85
Water Truck	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
FHWA = Federal Highway Administration
L_{max} = maximum instantaneous sound level

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transportation of construction equipment and materials to the site for the proposed project, which would incrementally increase noise levels on roads leading to the site. As shown in Table 4.G, there would be a relatively high single-event noise exposure potential at a maximum level of 85 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during demolition, site preparation, excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 4.G lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Average maximum noise levels range up to 85 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation and grading phases, including excavation of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction

equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

As identified above, the closest sensitive receptors would be the single-family residences located approximately 580 feet east from the center of project site. The 580-foot distance would decrease the noise level by approximately 22 dBA compared to the noise level measured at 50 feet from the construction activity. Therefore, the closest off-site receptors may be subject to short-term construction noise levels of 66 dBA L_{eq} when construction is occurring at the center of project site, and this noise level would be lower than the 80 dBA L_{eq} criteria for residential uses. All other receptors are further away and would be exposed to lower short-term construction noise levels. Therefore, construction noise impact would be **less than significant**. Construction equipment calculations are provided in Appendix G.

Long-Term Noise Impacts. The proposed project is not anticipated to generate any new trips and therefore the proposed project would not generate long-term noise impacts from traffic noise sources. Another noise source associated with operations of the project would be from stationary noise sources, including heating, ventilation, and air conditioning (HVAC) equipment. However, HVAC systems are typically housed in an equipment room or located on the roof of the building and shielded by screen walls (parapets). Therefore, HVAC noise associated with the project is expected to be minimal and the proposed project would not substantially increase noise levels over existing conditions. This impact would be **less than significant**.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Ground-borne vibration from construction activity has the potential to be high when activities occur near project boundaries but would be mostly low to moderate as activities are more central to the project site.

The roadways surrounding the project area, including Hillcrest Avenue, and the existing driveways (except for the southern driveway), are paved, smooth, and unlikely to cause significant ground-borne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause ground-borne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary.

The following vibration impact analysis discusses the level of human annoyance using vibration levels in vibration velocity decibels (VdB) and assesses the potential for structural damages using vibration levels in PPV (in/sec), because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage.

Construction Vibration. Construction of the proposed project could result in the generation of ground-borne vibration. Table 4.H shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 4.H, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 0.089 PVV (in/sec) or 87 VdB of ground-borne vibration when measured at 25 feet, based on the FTA *Transit Noise and Vibration Impact Assessment Manual*. At this level, ground-borne vibration would result in potential annoyance to residents and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels.

Table 4.H: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L_V (VdB)[a]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[a] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
µin/sec = micro-inches per second
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$
$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

The threshold at which vibration levels would result in annoyance would be 78 VdB for daytime residential uses. The FTA guidelines indicate that for a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec in PPV. The reference distance for potential vibration annoyance impacts at nearest receptors is associated with the average condition, identified by the distance from the center of construction activities to surrounding uses, while the reference distance for potential construction vibration damage impacts at nearest receptor is

associated with the peak condition, identified by the distance from the perimeter of construction activities to surrounding structures.

For potential construction vibration damage, the closest surrounding buildings to the project site include the existing residential uses located approximately 20 feet north of the project site boundary. At 20 feet, the structure would experience vibration levels of up to 0.124 PPV in/sec. This vibration level at the nearest building from construction equipment would not exceed the 0.2 PPV in/sec damage threshold considered safe for non-engineered timber and masonry buildings. Vibration levels at all other buildings would be lower. Therefore, ground-borne vibration impacts from construction activities associated with the proposed project would be considered less than significant.

For potential construction vibration annoyance, vibration levels are expected to approach 46 VdB at the closest residential uses located approximately 580 feet north of the center of construction activities, which is below the 78 VdB threshold for annoyance. Project construction would not result in vibration levels that would typically result in human annoyance. Therefore, this level of ground-borne vibration would be **less than significant** for human annoyance. No mitigation is required.

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 2 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?

The project site is not located within the vicinity of a private airstrip. The proposed project site is not within an airport land use plan, or within 2 miles of a public airport or public use airport. The closest airport to the project site is the Buchanan Field Airport, located approximately 14.7 miles west of the project site. The project site is not within the 65 dBA CNEL noise contours of this or any other airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels, and impacts would be **less than significant**.

4.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

State CEQA Guidelines Section 15126.2[d] identifies a project as growth inducing if it fosters economic or population growth, or the construction of additional housing either directly or indirectly in the surrounding environment. New employees from commercial or industrial development and new population from residential development represent direct forms of growth, which have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. Typically, the growth-inducing potential of a project would be considered substantial if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies.

The proposed project involves the demolition and replacement of the following four existing buildings on site: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. Construction of the proposed project would involve short-term construction jobs; however, these construction jobs would be temporary and construction workers would not be expected to relocate or otherwise indirectly alter the City's existing population. The proposed project would not result in direct population growth as the use proposed is not residential and would not contribute to permanent residency on site. Once operational, the proposed project would not result in new jobs or an increase to the number of employees on-site. Additionally, the proposed project would result in the replacement of aging facilities and would not increase capacity or services by PG&E. Therefore, the proposed project would not directly or indirectly induce population growth, and there would be **no impact**.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project involves the demolition and replacement of the following four existing buildings on site: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. Under existing conditions, the project site does not contain any residential uses and construction of the proposed project would not displace existing residents within the nearby residential areas. Therefore, the proposed project would not result in the displacement of people or housing and would not require the construction of replacement housing elsewhere, and there would be **no impact**.

4.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

a. Would the project 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:

i. Fire protection?
ii. Police protection?
iii. Schools?
iv. Parks?
v. Other public facilities?

Fire Protection. Fire suppression, emergency medical, and rescue services are provided to the project area and the site by the Contra Costa County Fire Protection District (CCCFPD). The jurisdiction of the CCCFPD is served by 26 fire stations, 29 fire crews, 355 firefighters, and 51 support personnel.[52] Four CCCFPD fire stations are located within the City of Antioch, each with a minimum of three personnel per engine company (one Captain, one Engineer, and one Firefighter/Paramedic) 24 hours per day.[53] Station 88, located at 4288 Folsom Drive, approximately 1.25 miles southeast of the project site, is the nearest station serving the site. The adopted City standard for fire response is a maximum five-minute response time for 80 percent of emergency fire, medical, and hazardous materials calls on a citywide response area basis.[54]

52 Contra Costa County Fire Protection District (CCCFPD). 2022. *2021 Annual Report*. Website: https://www.cccfpd.org/2021-annual-report (accessed January 24, 2023).
53 City of Antioch. 2009. *Draft Environmental Impact Report, Hillcrest Station Area Specific Plan (SCH No. 2008052128*). January.
54 City of Antioch. 2009. Op. cit.

The proposed project involves the replacement and demolition of the following four existing buildings onsite: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The proposed project would not result in any changes to the existing land use on site and once operational, the proposed project would not result in new jobs or an increase to the number of employees on site. The proposed project would be required to comply with all applicable codes for fire safety and emergency access and the project Applicant would be required to submit plans to CCCFPD for review and approval prior to the issuance of building permits to ensure the project would conform to applicable building and fire codes.

The CCCFPD would continue providing services to the project site and would not require additional firefighters to serve the proposed project. The construction of a new or expanded fire station would not be required. The proposed project would not result in a significant increase in demand for fire protection and life safety services because the project would not result in any changes to the existing land use on site and would not result in new jobs or an increase to the number of employees on site. Implementation of the proposed project is not expected to adversely affect existing responses times to the site or within the City. Therefore, construction and operation of the proposed project would have a **less than significant impact** on fire protection and safety services and facilities.

Police Protection. The Antioch Police Department (APD) provides law enforcement service to the City as well as to the project site. The APD employs 104 sworn officers and 33 non-sworn employees, which include Administration Support staff, Dispatchers, and Community Service Officers. The APD Station, located at 300 L Street, is approximately 2 miles northwest of the project site. As previously discussed, the proposed project would not result in any changes to the existing land use on site and the proposed project would not result in new jobs or an increase to the number of employees on site. APD would continue to provide service to the project site and would likely not require additional officers to serve the project. The construction of new or expanded police facilities would not be required. Additionally, the project Applicant would be required to pay a police development impact fee of $0.17 per square feet of development[55] which would be directed towards maintaining adequate service levels, ensuring that any impact to police protection that could result from the proposed project would be offset by development fees, and in effect, reduce potential impacts to a **less than significant** level.

Schools. The Antioch Unified School District (AUSD), which provides kindergarten through high school education, serves the educational needs in the City of Antioch. The AUSD had a 2021-2022 enrollment of 16,181 students and includes 13 elementary schools, 4 middle schools, 3 high schools, 2 continuation schools, and 2 alternative schools.[56]

[55] City of Antioch. 2021. Master Fee Schedule, Effective July 1, 2021. Website: https://www.antiochca.gov/fc/finance/Master-Fee-Schedule-Effective-July-1-2021.pdf (accessed January 24, 2023).

[56] California Department of Education, Data Quest. Website: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=0761648&agglevel=district&year=2021-22 (accessed January 24, 2023).

The proposed project does not include any residential uses, and therefore would not directly affect student population. As previously discussed, the proposed project would not result in any changes to the existing land use on site and would not result in new jobs or an increase to the number of employees on site. Therefore, the proposed project would not increase student population within the City and would have **no impact** on schools.

Parks. Section 4.16, Recreation of this Initial Study provides a discussion and analysis of the project's potential impact on parks and recreational facilities. As previously discussed, the proposed project would not result in any changes to the existing land use on site and would not result in new jobs or an increase to the number of employees on site. Therefore, the proposed project would have **no impact** on parks and recreational facilities.

Other Public Facilities. Development of the proposed project would not increase the demand for other public service including libraries, community centers, and public health care facilities. As previously discussed, the proposed project does not include development of residential uses, would not result in any changes to the existing land use on site, and would not result in new jobs or an increase to the number of employees on site. Therefore, the proposed project would not result in an increased demand for public facilities, and there would be **no impact**.

4.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

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?

The proposed project involves the demolition and replacement of the following four existing buildings on site: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The project site would continue to be used as a PG&E service center and would not result in any changes to the existing land use on site. As previously discussed in Section 4.14, Population and Housing, the proposed project would not result in new jobs or an increase to the number of employees on site and would not directly or indirectly induce population growth. Therefore, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **No impact** would occur.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project involves the demolition and replacement of the following four existing buildings on site: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The project does not include recreational facilities as part of its design nor does it include the expansion of existing recreational facilities. As such, implementation of the proposed project would not include the development of recreational facilities which may have an adverse physical effect on the environment, and **no impact** would occur.

4.17 TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines §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?	☐	☐	☒	☐

a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The proposed project involves the demolition and replacement of four existing buildings on site. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. Improvements would only occur on the project site and no improvements would occur at off-site locations (e.g., new infrastructure installation in City-owned road right-of-way, development of a new access road, installation of new lights at nearby intersections, or intersection improvements). The proposed project would not include features that would change (improve or degrade) the existing transit system, bicycle and pedestrian facilities, or roadways in the City of Antioch. As such, implementation of the proposed project would not conflict with a program plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities. Impacts would be **less than significant**.

b. Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

On September 27, 2013, California Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process that changed the way transportation impact analysis is conducted as part of CEQA compliance. These changes include elimination of automobile delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts under CEQA. According to SB 743, these changes are intended to "more appropriately balance the needs of congestion management with Statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

In December 2018, the Governor's Office of Planning and Research (OPR) completed an update to the *State CEQA Guidelines* to implement the requirements of SB 743. The *State CEQA Guidelines* state that vehicle miles traveled (VMT) must be the metric used to determine significant

transportation impacts. The Guidelines require all lead agencies in California to use VMT-based thresholds of significance in CEQA documents published after July 1, 2020.

The proposed project involves the replacement and demolition of the following four existing buildings on site: Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings. Additionally, the proposed project would include the construction of new non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The project site would continue to be used as a PG&E service center and would not result in any changes to the existing land use on site. As previously discussed in Section 4.14, Population and Housing, the proposed project would not result in new jobs or an increase to the number of employees on site and would not directly or indirectly induce population growth. Therefore, the proposed project would not result in any changes to VMT compared to existing conditions, and this impact would be **less than significant.**

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The existing access points to the project site along Hillcrest Avenue would be maintained and be unchanged from existing conditions. The northern and southern access points would function as entry only and exit only driveways, respectively, (30 feet in width) with a rolling vehicular gate. The middle access point driveway (35 feet in width) would be maintained as a two-way driveway. The proposed project would include a new kiosk guard for the southern access point and would be improved with asphalt concrete. All three access driveways would be maintained in compliance with City of Antioch and Contra Costa County Fire Protection District (CCCFPD) standards and would comply with line of site distances per City of Antioch standards.

The proposed project would provide the number of spaces required by the City of Antioch Municipal Code, including 362 employee/visitor parking spaces (does not include fleet parking), 8 of which would be compliant with Americans with Disabilities Act (ADA) requirements, and 22 of which would be electric vehicle parking. The proposed project would include one level of below grade parking beneath the proposed Operations building which would include 49 of the 362 proposed parking spaces. Fleet parking would include a total of 127 spaces, 26 of which would be just south of the proposed Operations building, 34 of which would be directly east of the proposed northern bioretention basin, and 67 of which would be located directly west of the new Fleet Maintenance building. The employee/visitor parking lot located directly north of the proposed Operations building would include all of the electric vehicle spaces and a photovoltaic (PV) canopy cover.

No off-site improvements (e.g., development of a new access road, installation of new lights at nearby intersections, or intersection improvements) would occur with implementation of the proposed project. Overall, the proposed project would not include geometric design features that would substantially increase transportation hazards. The proposed project would be located in an area of Antioch where residential, industrial, transportation, utility, and commercial uses exist. Development of the proposed project would not include incompatible uses that would substantially increase transportation hazards. Impacts would be **less than significant**.

d. Would the project result in inadequate emergency access?

The project site is located in the City of Antioch and is accessed via Hillcrest Avenue. As shown in Figure 2-3, in Chapter 2.0, Project Description, existing vehicular access points would be maintained, and the site would have internal vehicular circulation. The southern access point along Hillcrest Avenue would remain unchanged and function as an exit only driveway (30 feet in width) with an existing rolling vehicular gate. The northern and southern access points would function as entry only and exit only driveways, respectively, (30 feet in width) with a rolling vehicular gate. The middle access point driveway (35 feet in width) would be maintained as a two-way driveway. The proposed project would include a new kiosk guard for the southern access point and would be improved with asphalt concrete. The proposed project would be designed to allow for emergency vehicle access in compliance with City of Antioch and CCCFPD standards. No off-site roadway improvements would occur under the proposed project; as such, emergency access via local and regional roads would still occur without any detours or disruptions. Finally, prior to issuance of building permits, during final plan check, the City of Antioch and CCCFPD would review the proposed project to ensure that adequate emergency access is provided. As such, implementation of the proposed project would not result in inadequate emergency access, and this impact would be **less than significant**.

4.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	☐	☐	☐	☒
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

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

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or

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

Assembly Bill (AB) 52, which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA environmental review process, and equates significant impacts to "tribal cultural resources" with significant environmental impacts. Public Resources Code (PRC) Section 21074 states that "tribal cultural resources" are:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are one of the following:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources.
- Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.
- 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency's notification list for CEQA projects. Within 14 days of determining that a project application is complete, or a decision by a public agency to undertake a project, the lead agency must notify tribes of the opportunity to consult on the project, should a tribe have previously requested to be on the agency's notification list. California Native American tribes must be recognized by the California Native American Heritage Commission as traditionally and culturally affiliated with the project site, and must have previously requested that the lead agency notify them of projects. Tribes have 30 days following notification of a project to request consultation with the lead agency.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or Mitigated Negative Declaration, or certification of an Environmental Impact Report (PRC Sections 21080.3.1, 21080.3.2, 21082.3).

The City sent letters describing the project and maps depicting the project site via certified mail on May 18, 2023, to Native American contacts that had previously requested to be contacted by the City for potential consultation pursuant to AB 52. No requests for consultation have been received to date.

As discussed in Section 4.5, Cultural Resources, of this Initial Study, the Northwest Information Center (NWIC) records search and the archaeological survey completed for the project did not identify evidence of Native American archaeological deposits or ancestral remains. The proposed project would have no impact on known tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources, nor has the City identified a tribal cultural resource at the project site. With implementation of **Mitigation Measure CUL-1**, as detailed in Section 4.5, Cultural Resources, and compliance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resource Code, the potential construction-period discovery of previously unidentified human remains, which may be of tribal origin, would be reduced to a **less than significant level with mitigation incorporated**.

4.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
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 management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The City of Antioch maintains existing sanitary sewer lines within the vicinity of the project site, including a 6-inch line along Hillcrest Avenue, and 4-inch lines within the project site. New 6-inch and 4-inch lines would be installed that would serve the proposed Operations building, Fleet Maintenance building, Shops building, and Logistics Warehouse building, and would connect to the existing 6-inch main within Hillcrest Avenue. The new sanitary sewer lines installed on the project site would be constructed in conformance with City standards, and their construction would not cause significant environmental effects.

The City maintains existing water lines within the vicinity of the project site, including a 10-inch line along Hillcrest Avenue, and waterlines within the project site. New 6-inch, 8-inch, and 10-inch fire water lines as well as 1.25-inch domestic water lines would be installed that would serve the proposed Operations building, Fleet Maintenance building, Logistics Shops building, and Logistics Warehouse building, which would connect to the existing main line within Hillcrest Avenue. The new water lines installed on the project site would be constructed in conformance with City standards, and their construction would not cause significant environmental effects.

The City of Antioch has two main water supply sources: surface water from the Sacramento/San Joaquin Rivers Delta and purchased water from Contra Costa Water District's (CCWD) Contra Costa Canal. The City pumps water from the Delta intake and stores it in the Municipal Reservoir before

treating it at the Antioch Water Treatment Plant (WTP). The City can pump CCWD water from the Contra Costa Canal (Canal) either into the Municipal Reservoir or directly to the WTP. The City updated its Urban Water Management Plan (UWMP) in 2020, which was adopted in 2021. According to the UWMP, the annual water use in 2020 was 5,091 million gallons.[57] As discussed in Section 4.19.b, the proposed project would not substantially increase demand for water and would therefore not exceed the capacity of existing water treatment facilities. The proposed project would not require the construction of new water treatment facilities, or the expansion of existing facilities, other than those already planned as part of the City's Water Master Plan.

Under existing conditions, storm water is collected in inlets throughout the project site that drain to existing 8-inch, 15-inch, and 24-inch storm drains on site which discharge into an existing storm drain line located in Hillcrest Avenue. The proposed project would include inlets located in multiple locations across the project site to capture on-site runoff and direct runoff into four bioretention basins. The bioretention basins would collect and treat storm water before discharging into an existing storm drain line that extends west to the City system. The proposed project would include two storm drain connections to existing curb inlets in Hillcrest Avenue and one connection through Pacific Gas & Electric Company (PG&E) land in the northeastern corner of the project site. The on-site drainage would be designed to be consistent with the Contra Costa County National Pollutant Discharge Elimination System (NPDES) C.3 requirements for Low Impact Development (LID). Therefore, the impact of the proposed project on storm water infrastructure would be **less than significant.**

Electricity and gas service is provided to the project site by PG&E. The proposed project would include connections to the existing electricity and natural gas lines that run adjacent to the project site on Hillcrest Avenue. There would be no changes to the existing telecommunications facilities. Energy consumption would likely increase slightly at the project site (approximately 30 percent) with the implementation of the proposed project as more safe work environments are created with more lighted indoor shops, warehouse and storage areas, and more exhaust/ventilation and conditioning equipment, as well as increased EV charging for both personal and fleet vehicles. However, this energy increase will be somewhat offset with more energy efficient buildings, systems, and photovoltaic (PV) panels for on-site energy generation and the proposed project would not require the expansion of existing electric power facilities.

Therefore, because the proposed project would connect to existing utility services within or adjacent to the project site, the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunications facilities would not be required. Impacts would be **less than significant,** and no mitigation is required.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The City of Antioch provides water to the project site. As previously discussed, the City's potable water supply is sourced from surface water from the Sacramento/San Joaquin Rivers Delta and purchased water from Contra Costa Water District's (CCWD) Contra Costa Canal. The City's 2020

[57] City of Antioch. 2021. *Draft 2020 Urban Water Management Plan*. May.

UWMP describes the projected water supplies from each source and compares those to the projected demand over the next 25 years, in 5-year increments. The City has determined that water supplies would be adequate during normal year, single-dry year, and multiple-dry year scenarios through the year 2045 based on the development of the land uses within the City.[58]

As previously discussed, the proposed project would not result in any changes to the existing land use on site and would not result in new jobs or an increase to the number of employees on site. Water use may increase slightly (roughly 20 percent) as portable toilets are replaced with fixtures inside new facilities. However, the estimated demand for water at the project site would not vary significantly from existing conditions. Therefore, the existing water system infrastructure has adequate capacity to serve the proposed project. In addition, the proposed project would be required to use recycled water to the maximum extent feasible and coordinate with the Contra Costa County Fire Protection District (CCCFPD) to assess fire flow requirements and comply with them as part of the proposed project. Based on the above, the City would provide sufficient water supplies to the proposed project for the foreseeable future during normal, dry, and multiple dry year scenarios, and this impact would be **less than significant**.

c. Would the project 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?

The Delta Diablo Sanitation District (DDSD) provides sewer treatment service to Antioch, Pittsburg, and Bay Point. The DDSD is responsible for conveyance of wastewater from the point of discharge from City of Antioch pipes to interceptor stations, which convey the sewage to the Bridgehead and Antioch pump stations, located in southeast Antioch and at Fulton Shipyard Road, respectively. The wastewater is treated at the DDSD wastewater treatment plant, located near the border of Antioch and Pittsburg. The DDSD currently serves a population of 215,000 residents and has a current average dry weather flow capacity of 19.5 million gallons per day (mgd).[59] The DDSD treats an average of 12.4 million gallons of wastewater per day, which is about 64 percent of its 19.5 mgd capacity.[60]

As previously discussed, the proposed project would not result in any changes to the existing land use on site and would not result in new jobs or an increase in the number of employees on site. Wastewater generated at the project site may increase slightly (roughly 20 percent) as portable toilets are replaced with fixtures inside new facilities. However, considering the treatment plant only treats an average of approximately 64 percent of its capacity on a daily basis, it would be able to adequately accommodate wastewater generated by the proposed project. Therefore, wastewater

58 City of Antioch. 2021. *Draft 2020 Urban Water Management Plan*. May.

59 Delta Diablo Sanitation District (DDSD). 2021. Delta Diablo, Comprehensive Annual Financial Report for the Fiscal Years Ended June 30, 2021, and 2020, Website: https://www.deltadiablo.org/files/da7fef18c/Annual+Comprehensive+Finance+Report+for+Fiscal+Year+ended+June+30+2021.pdf (accessed January 24, 2023).

60 Delta Diablo Sanitation District (DDSD). Delta Diablo. Website: https://www.deltadiablo.org/faqs (accessed April 8, 2021).

generated from the proposed project would not cause the DDSD to violate any wastewater treatment requirements, and this impact would be **less than significant**.

d. Would the project 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?

Republic Services provides solid waste and recycling pickup and disposal at the project site and at other uses within the City. Solid waste and recyclables are taken from Antioch to the Contra Costa Transfer and Recovery Station located in the City of Martinez, where recyclables are separated out and stored before shipment to recycling markets. Remaining solid waste is transferred to the Keller Canyon Landfill in the City of Pittsburg. The Keller Canyon Landfill has a permitted lifetime capacity of 75,018,280 cubic yards, estimated remaining capacity of 63,408,410 cubic yards, and an anticipated closure date of December 31, 2050. The facility has a daily maximum permitted disposal rate of 3,500 tons of solid waste.[61]

Solid waste generated by the proposed project would be disposed of at the Keller Canyon Landfill. As previously discussed, the proposed project would not result in any changes to the existing land uses on site and would not result in new jobs or an increase to the number of employees on site. Therefore, the solid waste generated from the proposed project would not vary significantly from existing conditions. Based on the remaining capacity and the daily maximum intake of the facility, the Keller Canyon Landfill would be able to accommodate the daily and annual general solid waste generated by the proposed project as it would be consistent with existing conditions. Therefore, impacts associated with the disposition of solid waste would be **less than significant**.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed project would comply with all federal, State, and local solid waste statutes and/or regulations related to solid waste and, as noted above, the Keller Canyon Landfill has adequate capacity to serve the proposed project. Therefore, the proposed project would result in a **less than significant** impact related to solid waste regulations.

[61] California Department of Resources Recycling and Recovery (CalRecycle). 2019. *SWIS Facility/Site Activity Details, Keller Canyon Landfill (07-AA-0032)*. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228 (accessed January 24, 2023).

4.20 WILDFIRE

	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?	☐	☐	☐	☒

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project site is not located within or near a State Responsibility Area (SRA) for fire service and is not located in a Very High Fire Hazard Severity Zone (VHFHSZ).[62] An SRA High Fire Hazard Severity Zone is located approximately 3 miles southwest of the project site. The proposed project would be designed to provide adequate access to the site for fire/police/emergency medical service personnel in the event of an emergency at the project site. As the proposed improvements would be limited to the project site with no improvements occurring to the local roadway system, it would not substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, there would be **no impact**.

b. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Refer to Section 4.20.a. Additionally, as noted in Chapter 2.0, Project Description, the project site is generally level and is primarily surrounded by existing development. Furthermore, the proposed project would not include any design features that would increase the potential for a wildfire. Therefore, the proposed project would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and there would be **no impact**.

[62] California Department of Forestry and Fire Protection (CAL FIRE). Fire and Resource Assessment Program, FHSZ Viewer. https://egis.fire.ca.gov/FHSZ/ (accessed January 11, 2023).

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Refer to Section 4.20.a. The proposed project is not located within an SRA for fire service and is not within a Very High Fire Hazard Severity Zone (VHFHSZ). The proposed project would connect to existing utility infrastructure and would not require the construction of new roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. There would be **no impact**.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Refer to Sections 4.20.a and 4.20.b. The project site is generally level and is not located within an SRA for fire service or a very high fire hazard severity zone. Based on the location of the proposed project, the site's susceptibility to downstream flooding or landslides as a result of runoff from post-fire slope instability or post-fire drainage changes would be low. Therefore, the proposed project would not expose people or structures to significant risks as a result of post-fire slope instability or drainage and runoff changes, and there would be **no impact**.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Implementation of **Mitigation Measures CUL-1 and GEO-1** would ensure that potential impacts to historic, archaeological, tribal, and paleontological resources that could be uncovered during construction activities would be reduced to a less than significant level. Implementation of **Mitigation Measures BIO-1 and BIO-2** would ensure that potential impacts to burrowing owls and nesting birds are reduced to a less than significant level. Therefore, with the incorporation of mitigation measures, development of the proposed project would not: (1) degrade the quality of the environment; (2) substantially reduce the habitat of a fish or wildlife species; (3) cause a fish or wildlife species population to drop below self-sustaining levels; (4) threaten to eliminate a plant or animal community; (5) reduce the number or restrict the range of a rare or endangered plant or animal; or (6) eliminate important examples of the major periods of California history. This impact would be **less than significant with mitigation incorporated**.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The proposed project's impacts would be individually limited and not cumulatively considerable. The potentially significant impacts that can be reduced to a less than significant level with

implementation of recommended mitigation measures include the topics of aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and hydrology and water quality. These impacts would primarily be related to construction-period activities, would be temporary in nature, and would not substantially contribute to any potential cumulative impacts associated with these topics. For the topic of aesthetics, potentially significant light and glare impacts would be reduced to less than significant levels with implementation of **Mitigation Measure AES-1**. For the topic of air quality, potentially significant impacts to air quality standards associated with project construction would be reduced to less than significant levels with implementation of **Mitigation Measures AIR-1 and AIR-2**. For the topic of biological resources, implementation of **Mitigation Measures BIO-1 and BIO-2** would ensure that impacts to western burrowing owls and nesting birds are reduced to a less than significant level. For the topic of cultural resources and tribal cultural resources, potentially significant impacts to archaeological and cultural resources would be reduced to less than significant levels with implementation of **Mitigation Measure CUL-1**. For the topic of geology and soils, potentially significant impacts related to paleontological resources would be reduced to less than significant levels with implementation of **Mitigation Measure GEO-1**. For the topic of hazards and hazardous materials, implementation of **Mitigation Measures HAZ-1 and HAZ-2** would ensure that potential impacts associated with the release of hazardous materials, which could in turn degrade the quality of the environment, would be reduced to a less than significant level. For the topic of hydrology and water quality, implementation of **Mitigation Measures HYD-1 and HYD-2** would ensure that potential water quality impacts are reduced to a less than significant level.

For the topics of agricultural and forestry resources, energy, GHG emissions, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire, the project would have no impacts or less than significant impacts and, therefore, would not substantially contribute to any potential cumulative impacts for these topics. All environmental impacts that could occur as a result of the proposed project would be reduced to a less than significant level through the implementation of the mitigation measures recommended in this document.

Implementation of these measures would ensure that the impacts of the project would be below established thresholds of significance and that these impacts would not combine with the impacts of other cumulative projects to result in a cumulatively considerable impact on the environment as a result of project development. Therefore, this impact would be **less than significant with mitigation incorporated**.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed project would not result in environmental effects that would cause substantial direct or indirect adverse effects to human beings. **No impact** would occur.

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6.0 REFERENCES

Bay Area Air Quality Management District (BAAQMD). 2017. Clean Air Plan. April 19.

_____. 2022. *California Environmental Quality Act Air Quality Guidelines*. April 20.

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*, Second Edition. University of California Press, Berkeley.

BKF Engineers. 2021. *Stormwater Control Plan for PG&E Antioch Service Center Site Improvements*. December.

Blackburn Consulting. 2017a. *Geotechnical Report, PG&E Antioch Service Center, Antioch, California.* August.

_____. 2017b. *Geotechnical Report Addendum, PG&E Antioch Service Center – Phase 1, Antioch, California*. August.

California Department of Conservation, California Geologic Survey (DOC CGS). Earthquake Zones of Required Investigation. Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed June 22, 2023).

_____. 1983. SR-146-Plates 2.2 and 2.25. Website: https://maps.conservation. ca.gov/cgs/ information warehouse/index.html?map=mlc (accessed June 2023).

California Department of Conservation (DOC). 2016. Division of Land Use Resource Protection. California Important Farmland Finder. Website: https://maps.conservation.ca.gov/dlrp/ciff/ (accessed January 9, 2023).

_____. 2022. Division of Land Resource Protection, Williamson Act Contracts. Website: https:// www.conservation.ca.gov/dlrp/wa/Pages/contracts.aspx (accessed January 10, 2023)./

California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database, Commercial Version, dated June 2023. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento.

California Department of Education, Data Quest. 2022. Website: https://dq.cde.ca.gov/dataquest/ dqcensus/EnrGrdLevels.aspx?cds=0761648&agglevel=district&year=2021-22 (accessed January 24, 2023).

California Department of Forestry and Fire Protection (CAL FIRE). 2022. Fire and Resource Assessment Program, FHSZ Viewer. Website: https://egis.fire.ca.gov/FHSZ/ (accessed June 23, 2023).

California Department of Resources Recycling and Recovery (CalRecycle). 2019. SWIS Facility/Site Activity Details, Keller Canyon Landfill (07-AA-0032). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228 (accessed January 24, 2023).

California Department of Transportation (Caltrans). 2013. *Caltrans Transportation and Construction Vibration Guidance Manual*. September.

_____. 2018. California State Scenic Highway System Map. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed January 10, 2023).

California Department of Toxic Substances Control (DTSC). 2021. Facilities from the California Environmental Reporting Systems (CERS). Website: https://lsa.maps.arcgis.com/home/item.html?id=52f1ca9a13d848daaee8f6232ea39aed (accessed June 29, 2023).

California Department of Water Resources (DWR). 2015. Division of Safety of Dams. Dam Breach Inundation Map Web Publisher. Website: https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2 (accessed January 11, 2023).

_____. 2018. Groundwater Basin Boundary Assessment Tool. Website: https://gis.water.ca.gov/app/bbat/ (accessed January 10, 2023).

California Energy Commission (CEC). 2022. Energy Consumption Data Management Service. Electricity Consumption by County. Website: www.ecdms.energy.ca.gov/elecbycounty.aspx (accessed July 2023).

California State Mining and Geology Board. 2014. Surface Mining Reclamation Act Regulations. California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

California Stormwater Quality Association. 2019. *Stormwater Best Management Handbook – Construction.* December.

City of Antioch. 2003. *City of Antioch General Plan*. November 24.

_____. 2003. *City of Antioch General Plan Update EIR*. July.

_____. 2009. Draft Environmental Impact Report, Hillcrest Station Area Specific Plan (SCH No. 2008052128). January.

_____. 2009. Hillcrest Station Area Specific Plan. Updated April 2009. Website: https://www.antiochca.gov/fc/community/transportation/Hillcrest-Station-Area-Specific-Plan.pdf (accessed May 2023).

_____. 2020. Climate Action and Resilience Plan. May 12. Website: https://www.antiochca.gov/fc/environment/climate/carp/Final-CARP.pdf (accessed July 2023).

_____. 2021. Draft 2020 Urban Water Management Plan. May.

_____. 2021. Master Fee Schedule, Effective July 1, 2021.Website: https://www.antiochca.gov/fc/finance/Master-Fee-Schedule-Effective-July-1-2021.pdf (accessed January 24, 2023).

_____. 2022. *City of Antioch Municipal Code*. October 11.

_____. 2023a. *City of Antioch General Plan.* Updated November 24, 2003. Website: https://www.antiochca.gov/fc/community-development/planning/Antioch_Adopted_General_Plan.pdf (accessed May 2023).

_____. 2023b. *Zoning Map*. Website: https://www.antiochca.gov/fc/public-works/gis/zoning-map.pdf (accessed May 2023).

Contra Costa Clean Water Program. 2022. *Stormwater C.3 Guidebook, Stormwater Quality Requirements for Development Applications.* December 23.

Contra Costa County Department of Conservation and Development. 2010. *Contra Costa County General Plan 2005-2020.* July.

Contra Costa County Fire Protection District (CCCFPD). 2022. 2021 Annual Report. Website: https://www.cccfpd.org/2021-annual-report (accessed January 24, 2023).

Delta Diablo Sanitation District (Delta Diablo). 2021. Comprehensive Annual Financial Report for the Fiscal Years Ended June 30, 2021, and 2020. Website: https://www.deltadiablo.org/files/da7fef18c/Annual+Comprehensive+Finance+Report+for+Fiscal+Year+ended+June+30+2021.pdf (accessed January 24, 2023).

_____. Delta Diablo. 2023. Website: https://www.deltadiablo.org/faqs (accessed April 8, 2021).

East Contra Costa Groundwater Sustainability Agency Working Group. 2021. East Contra Costa Subbasin Groundwater Sustainability Plan. October.

Federal Emergency Management Agency (FEMA). 2009 and 2015. Flood Insurance Rate Map (FIRM) Numbers 06013C0331F and 06013C0143G, effective June 16 and September 30. Website: https://msc.fema.gov/portal/search?AddressQuery=2111%20hillcrest%20avenue%2C%20antioch%2C%20ca#searchresultsanchor (accessed January 11, 2023).

Federal Highway Administration (FHWA). 2006. Roadway Construction Noise Model.

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. FTA-VA-90-1003-06. September.

Governor's Office of Planning and Research (OPR). 2018. *Technical Advisory on Evaluation Transportation Impacts in CEQA.* December.

LSA Associates, Inc. (LSA). 2023a. *Archaeological Resources Assessment for the Pacific Gas and Electric Antioch Service Center Improvements Project, 2111 Hillcrest Avenue, Antioch, Contra Costa County, California* (LSA Project No. CAN2203). June 16.

_____. 2023b. *Historical Resource Evaluation of a segment of the Contra Costa-Moraga Transmission Line (P-07-004688), Pacific Gas and Electric Service Center, 2111 Hillcrest Avenue, City of Antioch, Contra Costa County, California* (LSA Project No.: CAN2203). June 13.

California State Water Resources Control Board. 2022. NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002).

Pacific Gas & Electric Company (PG&E). 2021. Exploring Clean Energy Solutions. Website: https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page?WT.mc_id=Vanity_cleanenergy (accessed July 2023).

State Water Resources Control Board (SWRCB). 2023a. 2020-2022 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report). Website: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_ integrated_report.html (accessed July 2023).

_____. 2023b. GeoTracker. Website: https://geotracker.waterboards.ca.gov/search?PAGE=16&CMD=search&business_name=&main_street_number=&main_street_name=&city=&zip=&county=&branch=&status=&site_type=LUFT&cleanup_type=&npl=&reporttype=&reporttitle=PROJECT+SEARCH+RESULTS&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&permitted=&corrective_action=&spec_prog=&national_priority_list=&senate=&assembly=&critical_pol=&business_type=&case_type=&gwbasin=&display_results=&pub=&watershed=&ORDERBY=city&excludenc=False&next=Next+50 (accessed June 29, 2023).

_____. 2023c. Geotracker. PG&E Antioch Service Center (T0601300787). Website: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300787 (accessed June 29, 2023).

_____. 2023d. Geotracker. KEMP Hillcrest Release (T10000012348). Website: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000012348 (accessed June 29, 2023).

United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). June 26, 2023.

University of California Museum of Paleontology (UCMP). 2023. Databases. Website: https://ucmp.berkeley.edu/collections/databases/ (accessed June 2023).

APPENDIX A

CALEEMOD OUTPUTS

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Pacific Gas and Electric Company (PG&E) Antioch Service Center Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Pacific Gas and Electric Company (PG&E) Antioch Service Center
Construction Start Date	1/1/2024
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	20.6
Location	2111 Hillcrest Ave, Antioch, CA 94509, USA
County	Contra Costa
City	Antioch
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1360
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	204	1000sqft	6.39	203,500	0.00	—	—	—
Parking Lot	313	Space	30.0	0.00	94,834	—	—	—
Enclosed Parking with Elevator	49.0	Space	0.00	19,600	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.59	1.64	63.5	43.1	0.13	1.56	7.81	8.93	1.37	3.97	4.99	—	18,061	18,061	1.20	1.88	25.2	18,676
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.14	27.7	39.9	29.0	0.05	1.12	7.81	8.93	1.02	3.97	4.99	—	5,440	5,440	0.22	0.20	0.16	5,460
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.10	4.07	27.8	20.2	0.05	0.76	2.58	3.34	0.68	0.95	1.64	—	6,466	6,466	0.38	0.53	3.39	6,636
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.74	5.08	3.69	0.01	0.14	0.47	0.61	0.12	0.17	0.30	—	1,071	1,071	0.06	0.09	0.56	1,099

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.59	1.64	63.5	43.1	0.13	1.56	7.81	8.93	1.37	3.97	4.99	—	18,061	18,061	1.20	1.88	25.2	18,676
2025	1.06	1.00	20.4	18.9	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,210	4,210	0.17	0.19	5.89	4,277
2026	1.04	0.97	20.3	18.6	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,177	4,177	0.17	0.19	5.33	4,243
2027	1.02	0.94	20.3	18.3	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,142	4,142	0.17	0.19	4.77	4,208
2028	1.01	1.42	20.2	18.1	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,104	4,104	0.16	0.16	4.27	4,160
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.14	1.13	39.9	29.0	0.05	1.12	7.81	8.93	1.02	3.97	4.99	—	5,440	5,440	0.22	0.20	0.16	5,460
2025	1.04	0.97	20.5	18.3	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,140	4,140	0.17	0.19	0.15	4,202
2026	1.02	0.93	20.4	18.0	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,108	4,108	0.17	0.19	0.14	4,171
2027	1.00	0.92	20.4	17.8	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,075	4,075	0.17	0.19	0.12	4,137
2028	1.00	27.7	20.3	17.6	0.03	0.70	1.03	1.73	0.66	0.25	0.91	—	4,039	4,039	0.16	0.19	0.11	4,099
2029	0.10	27.7	1.13	1.48	< 0.005	0.07	0.15	0.22	0.06	0.04	0.10	—	274	274	0.01	0.01	0.01	276
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.10	0.84	27.8	20.2	0.05	0.76	2.58	3.34	0.68	0.95	1.64	—	6,466	6,466	0.38	0.53	3.39	6,636
2025	0.74	0.69	14.6	13.0	0.02	0.50	0.73	1.23	0.47	0.18	0.65	—	2,963	2,963	0.12	0.14	1.82	3,009
2026	0.73	0.66	14.6	12.8	0.02	0.50	0.73	1.23	0.47	0.18	0.65	—	2,940	2,940	0.12	0.14	1.64	2,986
2027	0.72	0.65	14.5	12.7	0.02	0.50	0.73	1.23	0.47	0.18	0.65	—	2,916	2,916	0.12	0.14	1.47	2,961
2028	0.51	3.34	10.9	9.35	0.01	0.41	0.42	0.83	0.38	0.10	0.49	—	1,924	1,924	0.08	0.07	0.74	1,949
2029	0.02	4.07	0.16	0.21	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	—	40.4	40.4	< 0.005	< 0.005	0.03	40.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.20	0.15	5.08	3.69	0.01	0.14	0.47	0.61	0.12	0.17	0.30	—	1,071	1,071	0.06	0.09	0.56	1,099

2025	0.14	0.13	2.67	2.37	< 0.005	0.09	0.13	0.22	0.09	0.03	0.12	—	491	491	0.02	0.02	0.30	498
2026	0.13	0.12	2.66	2.34	< 0.005	0.09	0.13	0.22	0.09	0.03	0.12	—	487	487	0.02	0.02	0.27	494
2027	0.13	0.12	2.65	2.31	< 0.005	0.09	0.13	0.22	0.09	0.03	0.12	—	483	483	0.02	0.02	0.24	490
2028	0.09	0.61	1.99	1.71	< 0.005	0.07	0.08	0.15	0.07	0.02	0.09	—	319	319	0.01	0.01	0.12	323
2029	< 0.005	0.74	0.03	0.04	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	6.69	6.69	< 0.005	< 0.005	< 0.005	6.75

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.09	7.06	1.55	10.5	< 0.005	0.06	0.00	0.06	0.07	0.00	0.07	193	2,201	2,394	19.9	0.26	0.00	2,969
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.36	5.47	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	193	2,161	2,354	19.9	0.26	0.00	2,929
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.09	6.14	1.01	5.34	< 0.005	0.04	0.00	0.04	0.04	0.00	0.04	193	2,123	2,316	19.9	0.26	0.00	2,891
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	1.12	0.18	0.97	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	32.0	351	383	3.29	0.04	0.00	479

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	1.73	6.73	0.08	9.70	< 0.005	0.01	—	0.01	0.02	—	0.02	—	39.9	39.9	< 0.005	< 0.005	—	40.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,819	1,819	0.29	0.04	—	1,837
Water	—	—	—	—	—	—	—	—	—	—	—	90.2	173	264	9.27	0.22	—	562
Waste	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361
Stationary	0.36	0.33	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	168	168	0.01	< 0.005	0.00	168
Total	2.09	7.06	1.55	10.5	< 0.005	0.06	0.00	0.06	0.07	0.00	0.07	193	2,201	2,394	19.9	0.26	0.00	2,969
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	5.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,819	1,819	0.29	0.04	—	1,837
Water	—	—	—	—	—	—	—	—	—	—	—	90.2	173	264	9.27	0.22	—	562
Waste	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361
Stationary	0.36	0.33	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	168	168	0.01	< 0.005	0.00	168
Total	0.36	5.47	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	193	2,161	2,354	19.9	0.26	0.00	2,929
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.85	5.93	0.04	4.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.7	19.7	< 0.005	< 0.005	—	19.7
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,819	1,819	0.29	0.04	—	1,837
Water	—	—	—	—	—	—	—	—	—	—	—	90.2	173	264	9.27	0.22	—	562
Waste	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361

Stationary	0.24	0.22	0.97	0.55	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	0.00	110	110	< 0.005	< 0.005	0.00	111
Total	1.09	6.14	1.01	5.34	< 0.005	0.04	0.00	0.04	0.04	0.00	0.04	193	2,123	2,316	19.9	0.26	0.00	2,891
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.16	1.08	0.01	0.87	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.26	3.26	< 0.005	< 0.005	—	3.27
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	301	301	0.05	0.01	—	304
Water	—	—	—	—	—	—	—	—	—	—	—	14.9	28.7	43.6	1.54	0.04	—	93.0
Waste	—	—	—	—	—	—	—	—	—	—	—	17.1	0.00	17.1	1.71	0.00	—	59.7
Stationary	0.04	0.04	0.18	0.10	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	18.3	18.3	< 0.005	< 0.005	0.00	18.3
Total	0.20	1.12	0.18	0.97	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	32.0	351	383	3.29	0.04	0.00	479

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.72	24.9	18.2	0.03	0.79	—	0.79	0.71	—	0.71	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.25	0.25	—	0.04	0.04	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	4.10	2.99	0.01	0.13	—	0.13	0.12	—	0.12	—	563	563	0.02	< 0.005	—	565
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.75	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.2	93.2	< 0.005	< 0.005	—	93.5
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.57	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	123	123	< 0.005	0.01	0.01	125
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.43	0.20	< 0.005	0.01	0.08	0.09	< 0.005	0.02	0.03	—	320	320	0.03	0.05	0.02	336
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	20.5	20.5	< 0.005	< 0.005	0.04	20.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	52.5	52.5	< 0.005	0.01	0.05	55.2

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.39	3.39	< 0.005	< 0.005	0.01	3.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.01	9.14

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	1.07	39.9	28.3	0.05	1.12	—	1.12	1.02	—	1.02	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.09	3.28	2.33	< 0.005	0.09	—	0.09	0.08	—	0.08	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.60	0.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.79	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	157	157	< 0.005	0.01	0.66	160
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.67	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	144	144	< 0.005	0.01	0.02	146
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.02	12.1

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.33	48.8	35.3	0.06	1.36	—	1.36	1.23	—	1.23	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.63	3.63	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.33	12.0	8.72	0.02	0.34	—	0.34	0.30	—	0.30	—	1,627	1,627	0.07	0.01	—	1,633

Dust From Material Movement	—	—	—	—	—	—	0.90	0.90	—	0.35	0.35	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	2.20	1.59	< 0.005	0.06	—	0.06	0.06	—	0.06	—	269	269	0.01	< 0.005	—	270
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.90	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.76	183
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.17	0.24	14.6	6.90	0.07	0.20	2.87	3.07	0.14	0.79	0.92	—	11,283	11,283	0.93	1.82	24.4	11,873
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.0	41.0	< 0.005	< 0.005	0.08	41.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.29	0.06	3.72	1.71	0.02	0.05	0.70	0.75	0.03	0.19	0.23	—	2,783	2,783	0.23	0.45	2.60	2,925
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.79	6.79	< 0.005	< 0.005	0.01	6.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.05	0.01	0.68	0.31	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	461	461	0.04	0.07	0.43	484

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.14	4.21	3.19	0.01	0.15	—	0.15	0.14	—	0.14	—	535	535	0.02	< 0.005	—	537
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.77	0.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	88.6	88.6	< 0.005	< 0.005	—	88.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.35	0.26	4.22	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	843	843	0.02	0.03	3.56	856
Vendor	0.10	0.04	1.37	0.66	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	1,002	1,002	0.05	0.15	2.63	1,051
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.33	0.32	3.57	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	771	771	0.02	0.03	0.09	781
Vendor	0.10	0.04	1.45	0.67	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	1,003	1,003	0.05	0.15	0.07	1,049
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.78	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	174	174	< 0.005	0.01	0.34	176
Vendor	0.02	0.01	0.32	0.15	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	224	224	0.01	0.03	0.25	234
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.8	28.8	< 0.005	< 0.005	0.06	29.2
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.0	37.0	< 0.005	0.01	0.04	38.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.44	13.5	10.2	0.02	0.49	—	0.49	0.46	—	0.46	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	2.46	1.86	< 0.005	0.09	—	0.09	0.08	—	0.08	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.34	0.23	3.93	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	826	826	0.01	0.03	3.27	839
Vendor	0.09	0.04	1.31	0.63	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	986	986	0.05	0.14	2.61	1,033
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.32	0.29	3.33	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	756	756	0.02	0.03	0.08	766

Vendor	0.09	0.04	1.38	0.65	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	987	987	0.05	0.14	0.07	1,031
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.22	0.19	2.32	0.00	0.00	0.55	0.55	0.00	0.13	0.13	—	546	546	0.01	0.02	1.01	554
Vendor	0.07	0.03	0.96	0.45	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	705	705	0.04	0.10	0.81	737
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.42	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.3	90.3	< 0.005	< 0.005	0.17	91.7
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	117	117	0.01	0.02	0.13	122
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.44	13.5	10.2	0.02	0.49	—	0.49	0.46	—	0.46	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	2.46	1.86	< 0.005	0.09	—	0.09	0.08	—	0.08	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.32	0.20	3.67	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	810	810	0.01	0.03	2.98	822
Vendor	0.09	0.03	1.24	0.60	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	969	969	0.05	0.14	2.34	1,015
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.27	3.09	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	741	741	0.02	0.03	0.08	751
Vendor	0.09	0.03	1.31	0.61	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	970	970	0.05	0.14	0.06	1,014
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.17	2.16	0.00	0.00	0.55	0.55	0.00	0.13	0.13	—	535	535	0.01	0.02	0.92	543
Vendor	0.07	0.02	0.92	0.43	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	693	693	0.04	0.10	0.72	725
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.39	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	88.6	88.6	< 0.005	< 0.005	0.15	89.9

Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	0.01	0.02	0.12	120
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.44	13.5	10.2	0.02	0.49	—	0.49	0.46	—	0.46	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	2.46	1.86	< 0.005	0.09	—	0.09	0.08	—	0.08	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.20	3.44	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	795	795	0.01	0.03	2.70	807
Vendor	0.09	0.03	1.18	0.57	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	950	950	0.05	0.14	2.06	996
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.27	0.24	2.91	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	727	727	0.02	0.03	0.07	737
Vendor	0.08	0.03	1.25	0.59	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	950	950	0.05	0.14	0.05	994
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.17	2.02	0.00	0.00	0.55	0.55	0.00	0.13	0.13	—	525	525	0.01	0.02	0.83	533
Vendor	0.06	0.02	0.87	0.42	< 0.005	0.01	0.18	0.19	0.01	0.05	0.06	—	679	679	0.04	0.10	0.64	710
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.37	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.9	86.9	< 0.005	< 0.005	0.14	88.2
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	112	112	0.01	0.02	0.11	118
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.62	18.9	14.3	0.02	0.69	—	0.69	0.64	—	0.64	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	6.98	5.29	0.01	0.25	—	0.25	0.24	—	0.24	—	887	887	0.04	0.01	—	890
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	1.27	0.97	< 0.005	0.05	—	0.05	0.04	—	0.04	—	147	147	0.01	< 0.005	—	147
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.17	3.24	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	780	780	0.01	0.01	2.44	785
Vendor	0.08	0.03	1.12	0.55	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	927	927	0.05	0.13	1.83	970
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.26	0.23	2.74	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	714	714	0.02	0.03	0.06	724

Vendor	0.08	0.03	1.18	0.57	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	927	927	0.05	0.14	0.05	969
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.99	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	267	267	0.01	0.01	0.39	271
Vendor	0.03	0.01	0.43	0.21	< 0.005	0.01	0.09	0.10	0.01	0.03	0.03	—	343	343	0.02	0.05	0.29	358
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.06	44.8
Vendor	0.01	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	56.8	56.8	< 0.005	0.01	0.05	59.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.50	13.3	10.6	0.01	0.58	—	0.58	0.54	—	0.54	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.12	3.28	2.61	< 0.005	0.14	—	0.14	0.13	—	0.13	—	373	373	0.02	< 0.005	—	374
Paving	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.60	0.48	< 0.005	0.03	—	0.03	0.02	—	0.02	—	61.7	61.7	< 0.005	< 0.005	—	61.9
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.52	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	125	125	< 0.005	< 0.005	0.39	126
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.44	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	114	114	< 0.005	0.01	0.01	116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.5	28.5	< 0.005	< 0.005	0.04	28.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.72	4.72	< 0.005	< 0.005	0.01	4.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	27.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	12.8	12.8	< 0.005	< 0.005	—	12.8
Architectural Coatings	—	2.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.12	2.12	< 0.005	< 0.005	—	2.13
Architectural Coatings	—	0.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.55	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	143	143	< 0.005	0.01	0.01	145
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	1.09	0.96	< 0.005	0.07	—	0.07	0.06	—	0.06	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	27.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.16	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.6	19.6	< 0.005	< 0.005	—	19.7
Architectural Coatings	—	4.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.24	3.24	< 0.005	< 0.005	—	3.26
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.51	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	140	140	< 0.005	0.01	0.01	142
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.8	20.8	< 0.005	< 0.005	0.03	21.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.45	3.45	< 0.005	< 0.005	< 0.005	3.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,139	1,139	0.18	0.02	—	1,151
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	640	640	0.10	0.01	—	646
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	40.4	40.4	0.01	< 0.005	—	40.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,819	1,819	0.29	0.04	—	1,837
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,139	1,139	0.18	0.02	—	1,151

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	640	640	0.10	0.01	—	646
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	40.4	40.4	0.01	< 0.005	—	40.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,819	1,819	0.29	0.04	—	1,837
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	189	189	0.03	< 0.005	—	190
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	106	106	0.02	< 0.005	—	107
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	6.69	6.69	< 0.005	< 0.005	—	6.76
Total	—	—	—	—	—	—	—	—	—	—	—	—	301	301	0.05	0.01	—	304

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.73	1.59	0.08	9.70	< 0.005	0.01	—	0.01	0.02	—	0.02	—	39.9	39.9	< 0.005	< 0.005	—	40.0
Total	1.73	6.73	0.08	9.70	< 0.005	0.01	—	0.01	0.02	—	0.02	—	39.9	39.9	< 0.005	< 0.005	—	40.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.16	0.14	0.01	0.87	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.26	3.26	< 0.005	< 0.005	—	3.27
Total	0.16	1.08	0.01	0.87	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.26	3.26	< 0.005	< 0.005	—	3.27

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	90.2	170	260	9.27	0.22	—	559
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	3.12	3.12	< 0.005	< 0.005	—	3.15
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	90.2	173	264	9.27	0.22	—	562
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	90.2	170	260	9.27	0.22	—	559
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	3.12	3.12	< 0.005	< 0.005	—	3.15

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	90.2	173	264	9.27	0.22	—	562
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	14.9	28.2	43.1	1.54	0.04	—	92.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.52	0.52	< 0.005	< 0.005	—	0.52
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.9	28.7	43.6	1.54	0.04	—	93.0

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	17.1	0.00	17.1	1.71	0.00	—	59.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	17.1	0.00	17.1	1.71	0.00	—	59.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.36	0.33	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	168	168	0.01	< 0.005	0.00	168
Total	0.36	0.33	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	168	168	0.01	< 0.005	0.00	168
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.36	0.33	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	168	168	0.01	< 0.005	0.00	168
Total	0.36	0.33	1.47	0.84	< 0.005	0.05	0.00	0.05	0.05	0.00	0.05	0.00	168	168	0.01	< 0.005	0.00	168
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.04	0.04	0.18	0.10	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	18.3	18.3	< 0.005	< 0.005	0.00	18.3
Total	0.04	0.04	0.18	0.10	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	18.3	18.3	< 0.005	< 0.005	0.00	18.3

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description

Demolition	Demolition	1/1/2024	3/22/2024	5.00	60.0	—
Site Preparation	Site Preparation	3/25/2024	5/3/2024	5.00	30.0	—
Grading	Grading	5/6/2024	9/6/2024	5.00	90.0	—
Building Construction	Building Construction	9/9/2024	7/7/2028	5.00	1,000	—
Paving	Paving	7/10/2028	11/10/2028	5.00	90.0	—
Architectural Coating	Architectural Coating	11/13/2028	3/16/2029	5.00	90.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 2	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 2	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 2	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 2	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 2	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 2	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 2	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 2	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 2	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 2	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 2	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 2	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 2	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 2	3.00	7.00	84.0	0.37

Building Construction	Welders	Diesel	Tier 2	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 2	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 2	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 2	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 2	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	4.38	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT
Grading	Hauling	155	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	93.7	11.7	LDA,LDT1,LDT2

Building Construction	Vendor	36.6	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	18.7	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	305,250	101,750	78,408

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	22,844	—
Site Preparation	—	—	45.0	0.00	—
Grading	—	111,434	270	0.00	—
Paving	0.00	0.00	0.00	0.00	30.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	30.0	100%
Enclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005
2024	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	305,250	101,750	78,408

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,038,625	204	0.0330	0.0040	0.00
Parking Lot	1,144,757	204	0.0330	0.0040	0.00
Enclosed Parking with Elevator	72,352	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	47,059,375	0.00
Parking Lot	0.00	1,131,858
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	191	—
Parking Lot	0.00	—
Enclosed Parking with Elevator	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	0.10	24.0	2,000	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

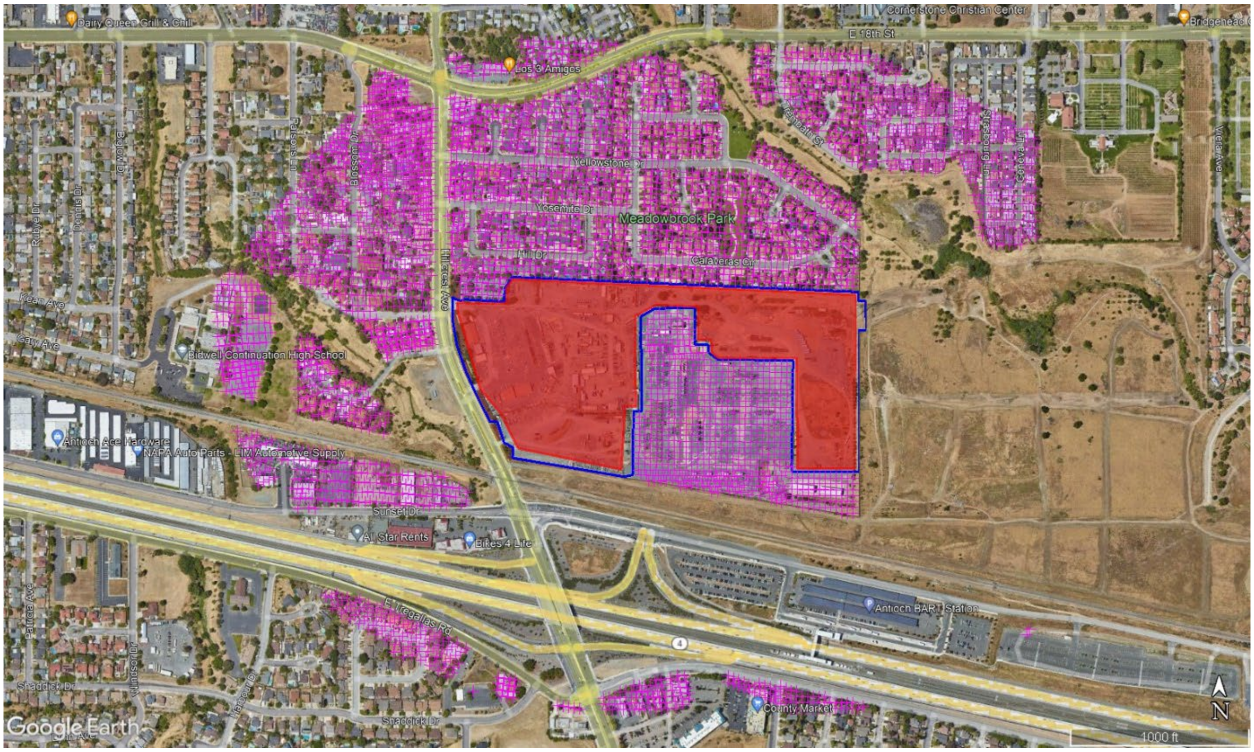
Screen	Justification
Land Use	The project site is located on 36.39 acres and would result in a total combined building area of 203,500 square feet within the project site.
Construction: Construction Phases	Construction is anticipated to begin in 2024 and occur over four phases (each approximately 14 months each), ending in 2029.
Construction: Off-Road Equipment	Assuming the use of Tier 2 construction equipment.
Operations: Vehicle Data	Operation of the proposed project would not change the average daily trips.
Operations: Energy Use	All new facilities would be all-electric.

APPENDIX B

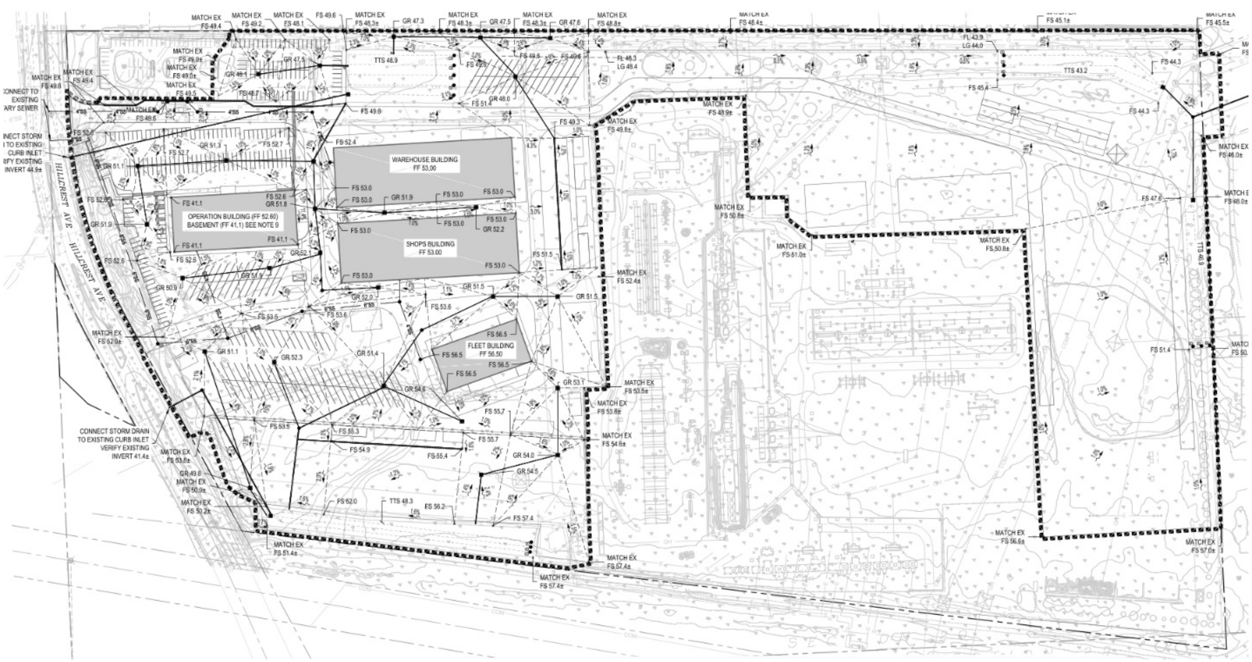
HEALTH RISK ASSESSMENT MODEL SNAPSHOTS

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Receptor Grid



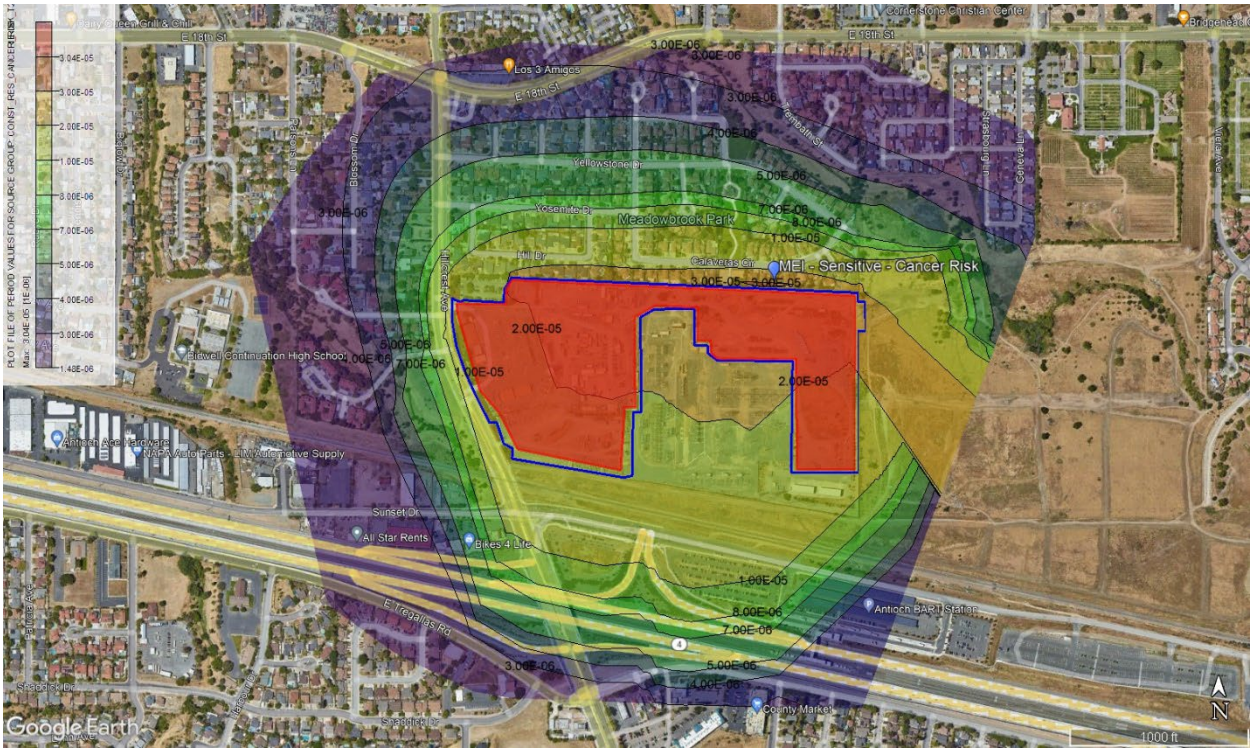
Project Location



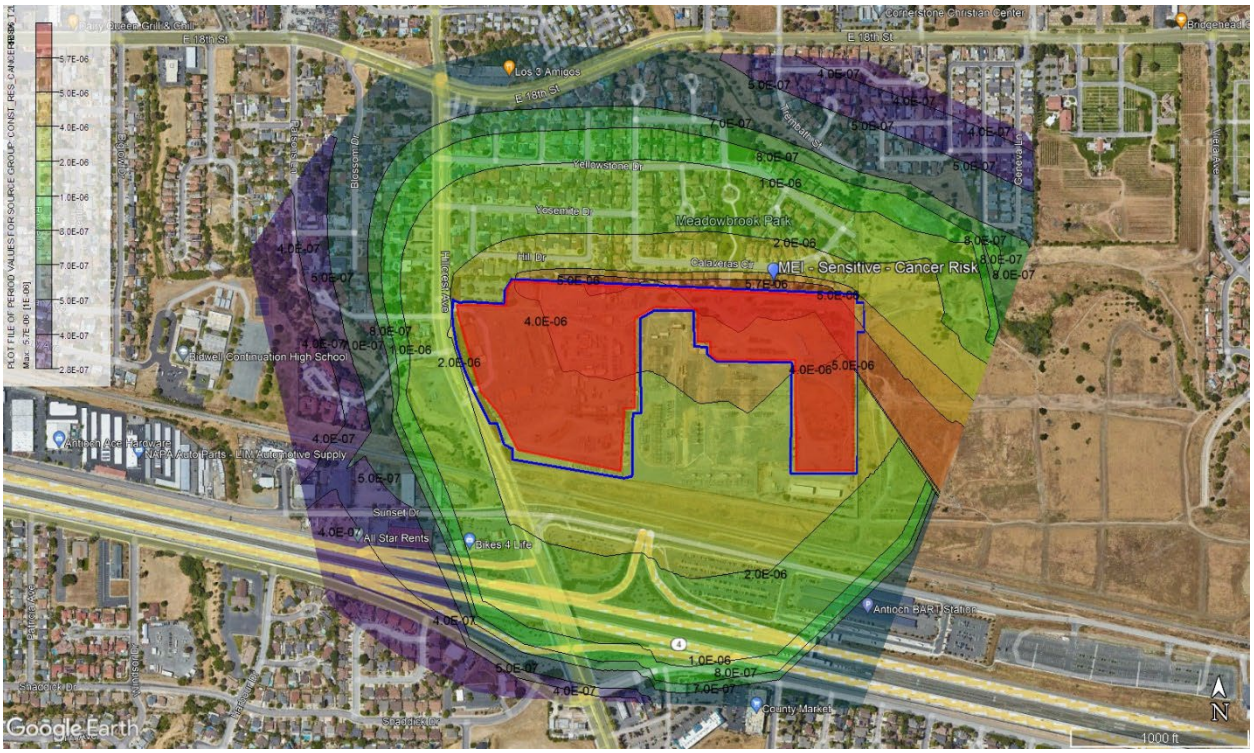
Project Layout



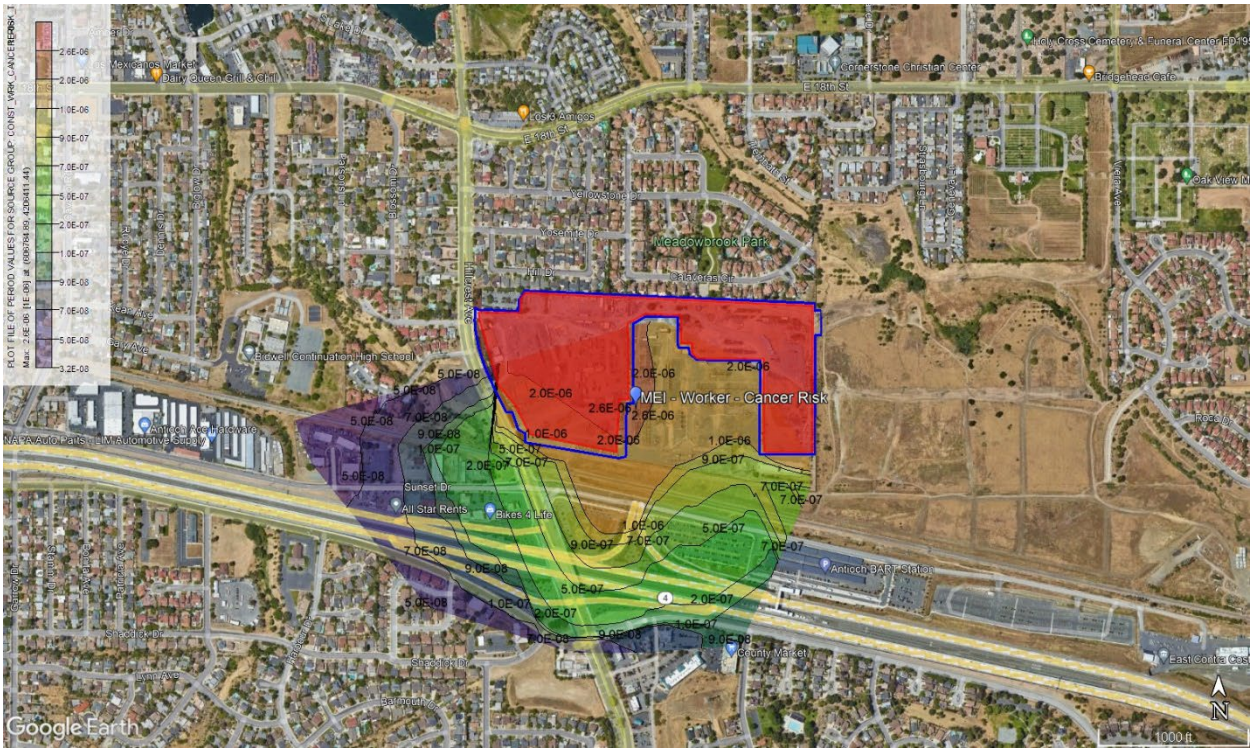
Construction Cancer Risk – Sensitive Receptor (unmitigated)



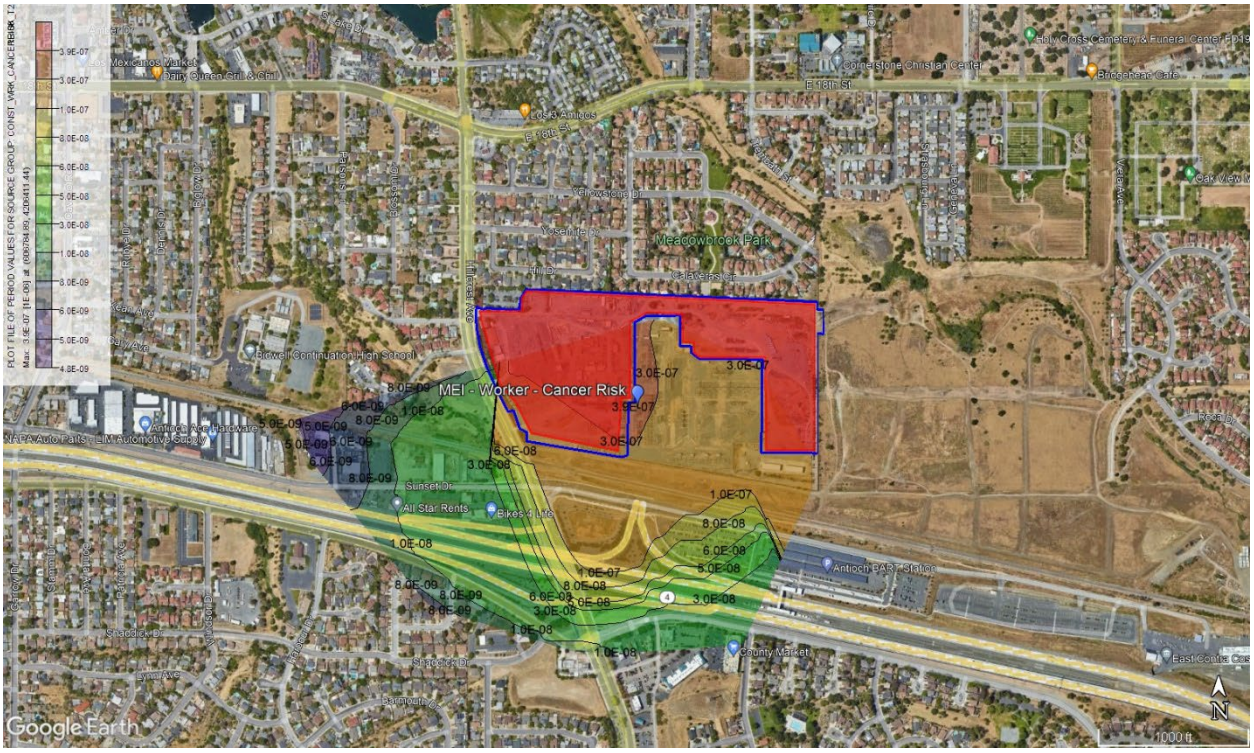
Construction Cancer Risk - Sensitive Receptor (mitigated)



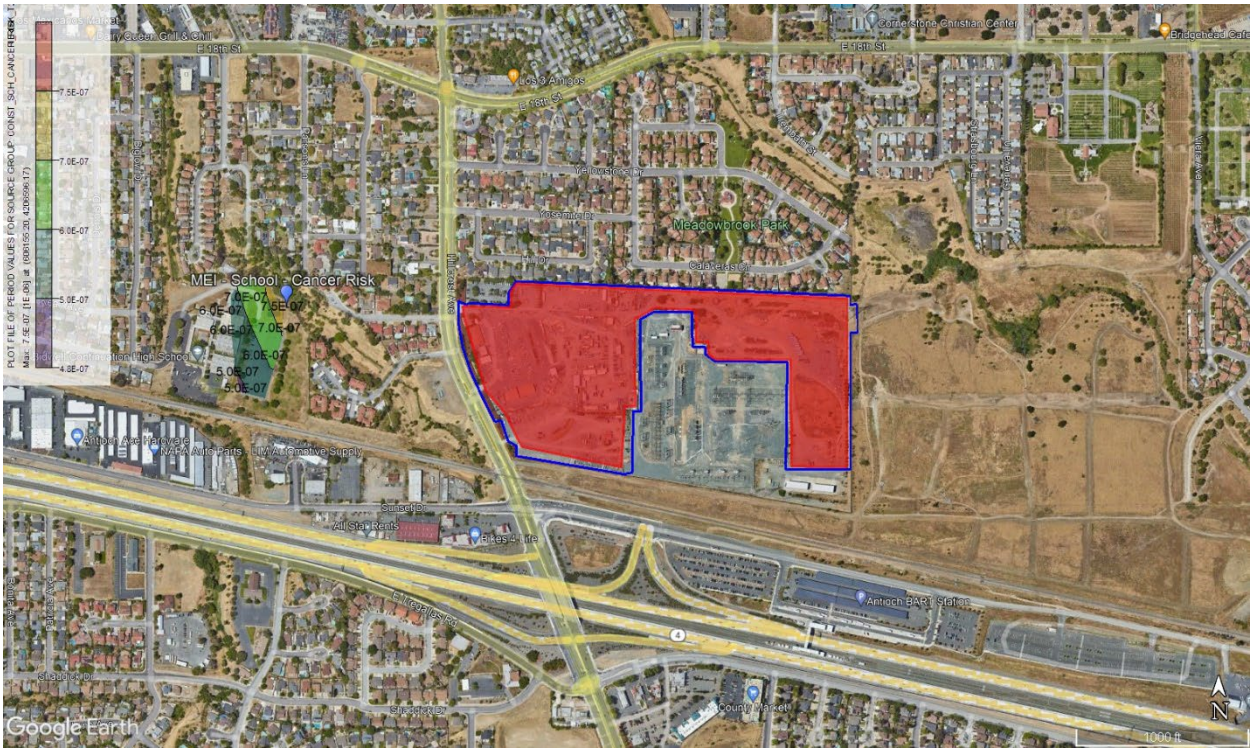
Construction Cancer Risk – Worker Receptor (unmitigated)



Construction Cancer Risk – Worker Receptor (mitigated)



Construction Cancer Risk – School Receptor (unmitigated)



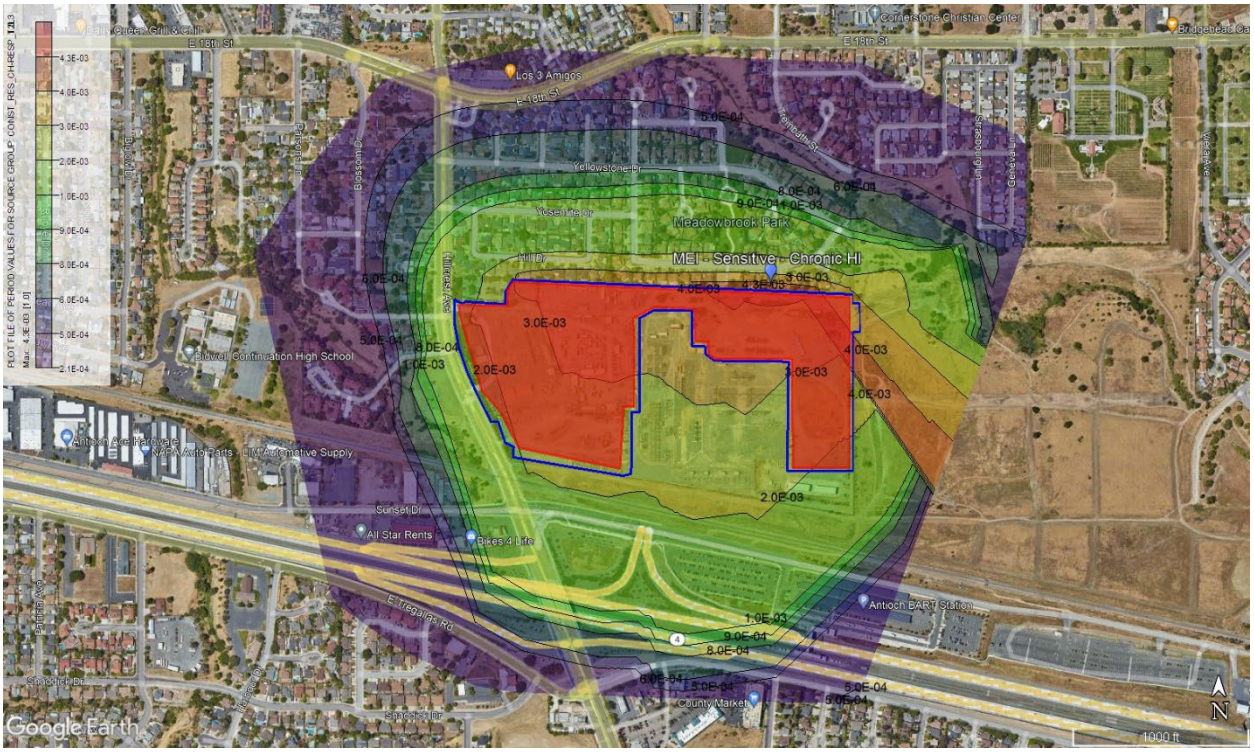
Construction Cancer Risk – School Receptor (mitigated)



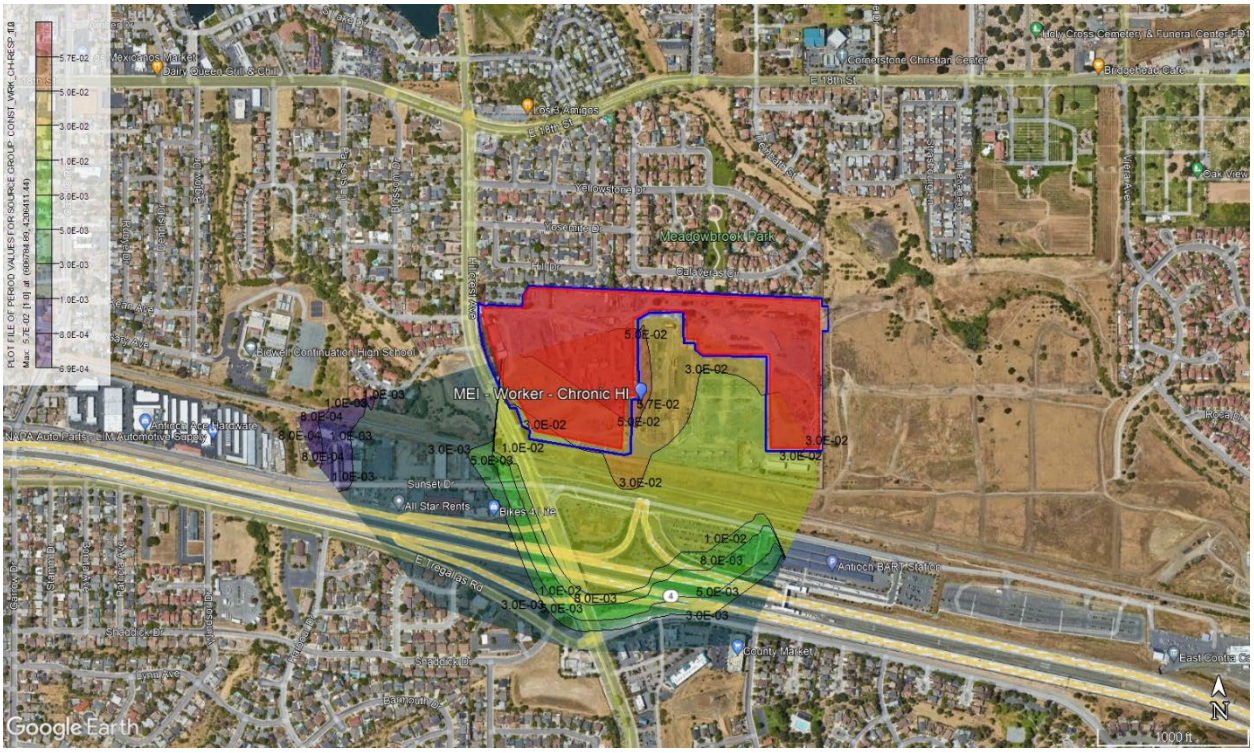
Construction Chronic Hazard Index – Sensitive Receptor (unmitigated)



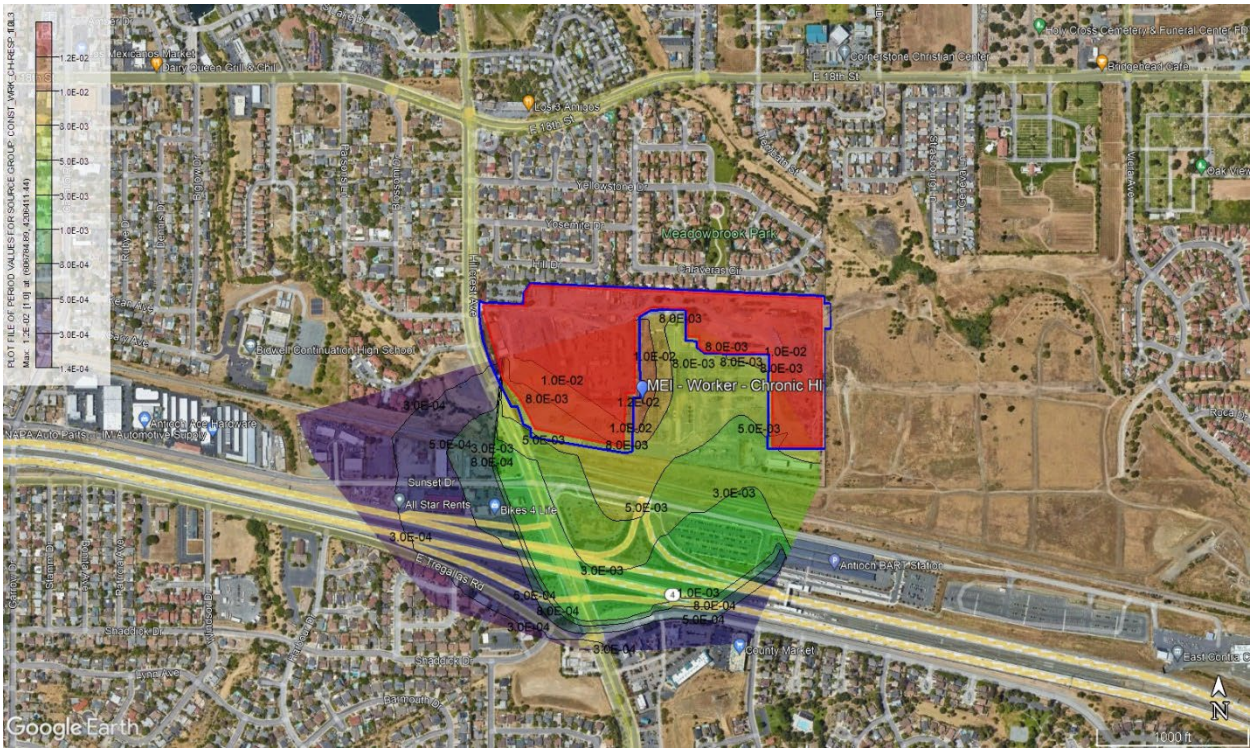
Construction Chronic Hazard Index - Sensitive Receptor (mitigated)



Construction Chronic Hazard Index – Worker Receptor (unmitigated)



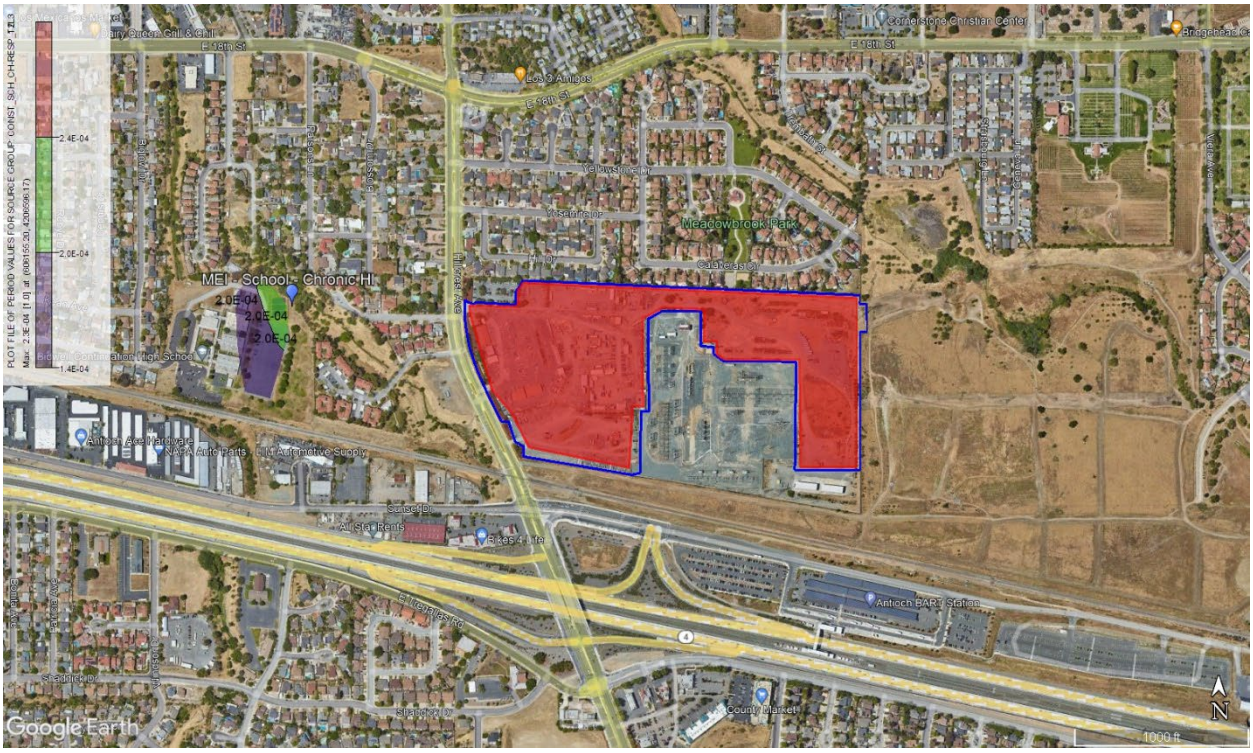
Construction Chronic Hazard Index – Worker Receptor (mitigated)



Construction Chronic Hazard Index – School Receptor (unmitigated)



Construction Chronic Hazard Index - School Receptor (unmitigated)



APPENDIX C

PLANT AND WILDLIFE SPECIES LISTS

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Antioch South (3712187) OR Antioch North (3812117) OR Brentwood (3712186) OR Jersey Island (3812116) OR Byron Hot Springs (3712176) OR Tassajara (3712177) OR Diablo (3712178) OR Clayton (3712188) OR Honker Bay (3812118))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acipenser medirostris pop. 1	AFCAA01031	Threatened	None	G2T1	S1	
green sturgeon - southern DPS						
Agelaius tricolor	ABPBXB0020	None	Threatened	G1G2	S2	SSC
tricolored blackbird						
Alkali Meadow	CTT45310CA	None	None	G3	S2.1	
Alkali Meadow						
Alkali Seep	CTT45320CA	None	None	G3	S2.1	
Alkali Seep						
Ambystoma californiense pop. 1	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
California tiger salamander - central California DPS						
Ammodramus savannarum	ABPBXA0020	None	None	G5	S3	SSC
grasshopper sparrow						
Amsinckia grandiflora	PDBOR01050	Endangered	Endangered	G1	S1	1B.1
large-flowered fiddleneck						
Andrena blennospermatis	IIHYM35030	None	None	G2	S1	
Blennosperma vernal pool andrenid bee						
Anniella pulchra	ARACC01020	None	None	G3	S2S3	SSC
Northern California legless lizard						
Anomobryum julaceum	NBMUS80010	None	None	G5?	S2	4.2
slender silver moss						
Anthicus antiochensis	IICOL49020	None	None	G3	S3	
Antioch Dunes anthicid beetle						
Antrozous pallidus	AMACC10010	None	None	G4	S3	SSC
pallid bat						
Apodemia mormo langei	IILEPH7012	Endangered	None	G5T1	S1	
Lange's metalmark butterfly						
Aquila chrysaetos	ABNKC22010	None	None	G5	S3	FP
golden eagle						
Archoplites interruptus	AFCQB07010	None	None	G1	S1	SSC
Sacramento perch						
Arctostaphylos auriculata	PDERI04040	None	None	G2	S2	1B.3
Mt. Diablo manzanita						
Arctostaphylos manzanita ssp. laevigata	PDERI04273	None	None	G5T2	S2	1B.2
Contra Costa manzanita						
Ardea herodias	ABNGA04010	None	None	G5	S4	
great blue heron						

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Asio flammeus short-eared owl	ABNSB13040	None	None	G5	S3	SSC
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
Atriplex minuscula lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Branchinecta conservatio Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
Branchinecta longiantenna longhorn fairy shrimp	ICBRA03020	Endangered	None	G1	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
Calochortus pulchellus Mt. Diablo fairy-lantern	PMLIL0D160	None	None	G2	S2	1B.2
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Chloropyron molle ssp. molle soft salty bird's-beak	PDSCR0J0D2	Endangered	Rare	G2T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Cicuta maculata var. bolanderi Bolander's water-hemlock	PDAPI0M051	None	None	G5T4T5	S2?	2B.1
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cismontane Alkali Marsh Cismontane Alkali Marsh	CTT52310CA	None	None	G1	S1.1	
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Coastal Brackish Marsh Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
Coelus gracilis San Joaquin dune beetle	IICOL4A020	None	None	G1	S1	
Cordylanthus nidularius Mt. Diablo bird's-beak	PDSCR0J0F0	None	Rare	G1	S1	1B.1
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Cryptantha hooveri Hoover's cryptantha	PDBOR0A190	None	None	GH	SH	1A
Delphinium californicum ssp. interius Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Dipodomys heermanni berkeleyensis Berkeley kangaroo rat	AMAFD03061	None	None	G4T1	S2	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Efferia antiochi Antioch efferian robberfly	IIDIP07010	None	None	G1G2	S1S2	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriastrum ertterae Lime Ridge eriastrum	PDPLM030F0	None	Candidate Endangered	G1	S1	1B.1
Eriogonum nudum var. psychicola Antioch Dunes buckwheat	PDPGN0849Q	None	None	G5T1	S1	1B.1
Eriogonum truncatum Mt. Diablo buckwheat	PDPGN085Z0	None	None	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Erysimum capitatum var. angustatum Contra Costa wallflower	PDBRA16052	Endangered	Endangered	G5T1	S1	1B.1
Eschscholzia rhombipetala diamond-petaled California poppy	PDPAP0A0D0	None	None	G1	S1	1B.1
Eucerceris ruficeps redheaded sphecid wasp	IIHYM18010	None	None	G1G3	S2	
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Fritillaria agrestis stinkbells	PMLIL0V010	None	None	G3	S3	4.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Grimmia torenii Toren's grimmia	NBMUS32330	None	None	G2	S2	1B.3
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Helminthoglypta nickliniana bridgesi Bridges' coast range shoulderband	IMGASC2362	None	None	G3T1	S1S2	
Hesperolinon breweri Brewer's western flax	PDLIN01030	None	None	G2	S2	1B.2
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hygrotus curvipes curved-foot hygrotus diving beetle	IICOL38030	None	None	G2	S2	
Hypomesus transpacificus Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	
Idiostatus middlekauffi Middlekauff's shieldback katydid	IIORT31010	None	None	G1G2	S1	
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasiurus frantzii western red bat	AMACC05080	None	None	G4	S3	SSC
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3	
Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030	None	Rare	G2	S2	1B.1
Limosella australis Delta mudwort	PDSCR10030	None	None	G4G5	S2	2B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lytta molesta molestan blister beetle	IICOL4C030	None	None	G2	S2	
Madia radiata showy golden madia	PDAST650E0	None	None	G3	S3	1B.1
Malacothamnus hallii Hall's bush-mallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S3	SSC
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
Melospiza melodia maxillaris Suisun song sparrow	ABPBXA301K	None	None	G5T3	S3	SSC
Melospiza melodia pop. 1 song sparrow ("Modesto" population)	ABPBXA3013	None	None	G5T3?Q	S3?	SSC
Metapogon hurdi Hurd's metapogon robberfly	IIDIP08010	None	None	G1G2	S1S2	
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Myrmosula pacifica Antioch multilid wasp	IIHYM15010	None	None	GH	SH	
Nannopterum auritum double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Navarretia gowenii Lime Ridge navarretia	PDPLM0C120	None	None	G1	S1	1B.1
Navarretia nigelliformis ssp. radians shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
Oenothera deltoides ssp. howellii Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	G5T1	S1	1B.1
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Perdita scitula antiochensis Antioch andrenid bee	IIHYM01031	None	None	G1T1	S2	
Perognathus inornatus San Joaquin pocket mouse	AMAFD01060	None	None	G2G3	S2S3	
Phacelia phacelioides Mt. Diablo phacelia	PDHYD0C3Q0	None	None	G2	S2	1B.2
Philanthus nasalis Antioch specid wasp	IIHYM20010	None	None	G2	S2	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G4	S4	SSC
Plagiobothrys hystriculus bearded popcornflower	PDBOR0V0H0	None	None	G2	S2	1B.1
Potamogeton zosteriformis eel-grass pondweed	PMPOT03160	None	None	G5	S3	2B.2
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G2	S2	1B.2
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S2	FP
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	AAABH01054	Proposed Threatened	Endangered	G3T2	S2	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Ravenella exigua chaparral harebell	PDCAM020A0	None	None	G2	S2	1B.2
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S3	FP
Rhaphiomidas trochilus San Joaquin Valley giant flower-loving fly	IIDIP05010	None	None	G1	S1	
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	
Sanicula saxatilis rock sanicle	PDAPI1Z0H0	None	Rare	G2	S2	1B.2
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Sidalcea keckii Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Sphecodogastra antiochensis Antioch Dunes halcitid bee	IIHYM78010	None	None	G1	S1	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Stabilized Interior Dunes Stabilized Interior Dunes	CTT23100CA	None	None	G1	S1.1	
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Streptanthus hispidus Mt. Diablo jewelflower	PDBRA2G0M0	None	None	G2	S2	1B.3
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Triquetrella californica coastal triquetrella	NBMUS7S010	None	None	G2	S2	1B.2
Tropidocarpum capparideum caper-fruited tropidocarpum	PDBRA2R010	None	None	G1	S1	1B.1
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Valley Sink Scrub Valley Sink Scrub	CTT36210CA	None	None	G1	S1.1	
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S3	

Record Count: 142

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Contra Costa County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse Reithrodontomys raviventris Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/613	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Clapper Rail Rallus longirostris obsoletus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sterna antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered

Reptiles

NAME	STATUS

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NAME	STATUS
Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5524	Threatened
Giant Garter Snake Thamnophis gigas Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

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NAME	STATUS
Conservancy Fairy Shrimp Branchinecta conservatio Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Colusa Grass Neostapfia colusana Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5690	Threatened
Contra Costa Goldfields Lasthenia conjugens Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7058	Endangered
Keck's Checker-mallow Sidalcea keckii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5704	Endangered

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Soft Bird's-beak Cordylanthus mollis ssp. mollis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8541	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Delta Smelt Hypomesus transpacificus For information on why this critical habitat appears for your project, even though Delta Smelt is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/321#crithab	Final

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Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list,click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum

probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▮)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

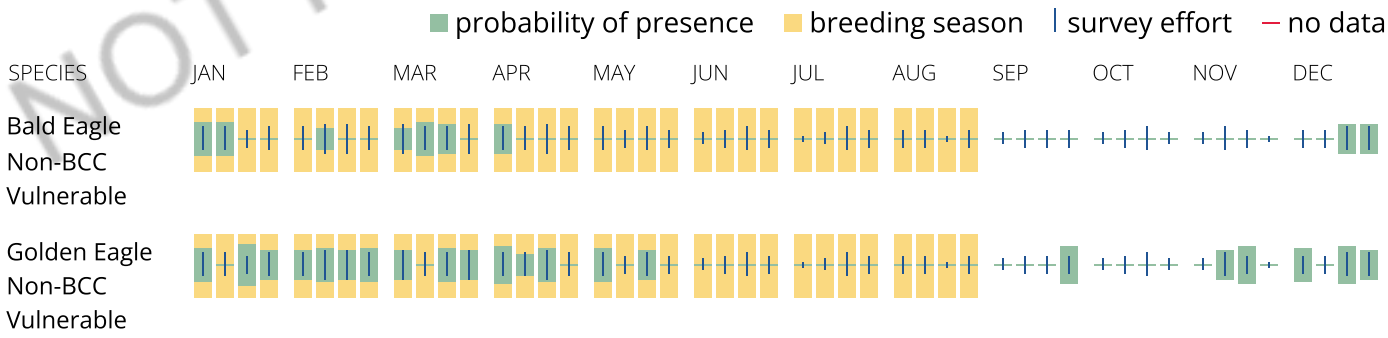
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

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Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow Passerculus sandwichensis beldingi This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole Icterus bullockii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull Larus californicus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

NOT FOR CONSULTATION

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

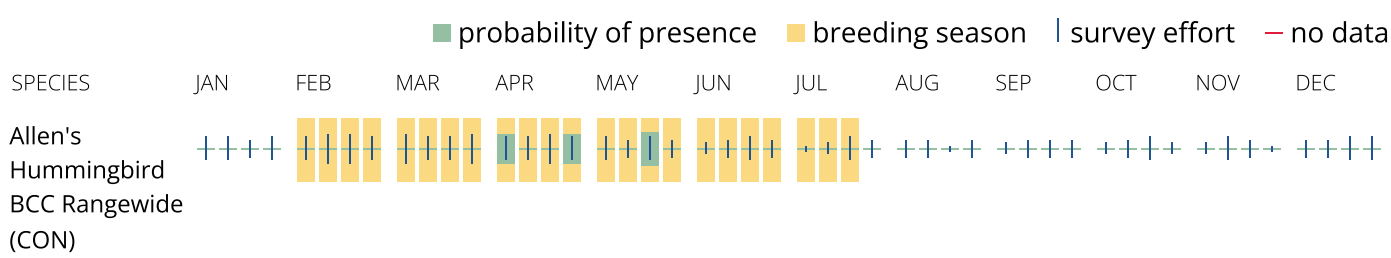
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

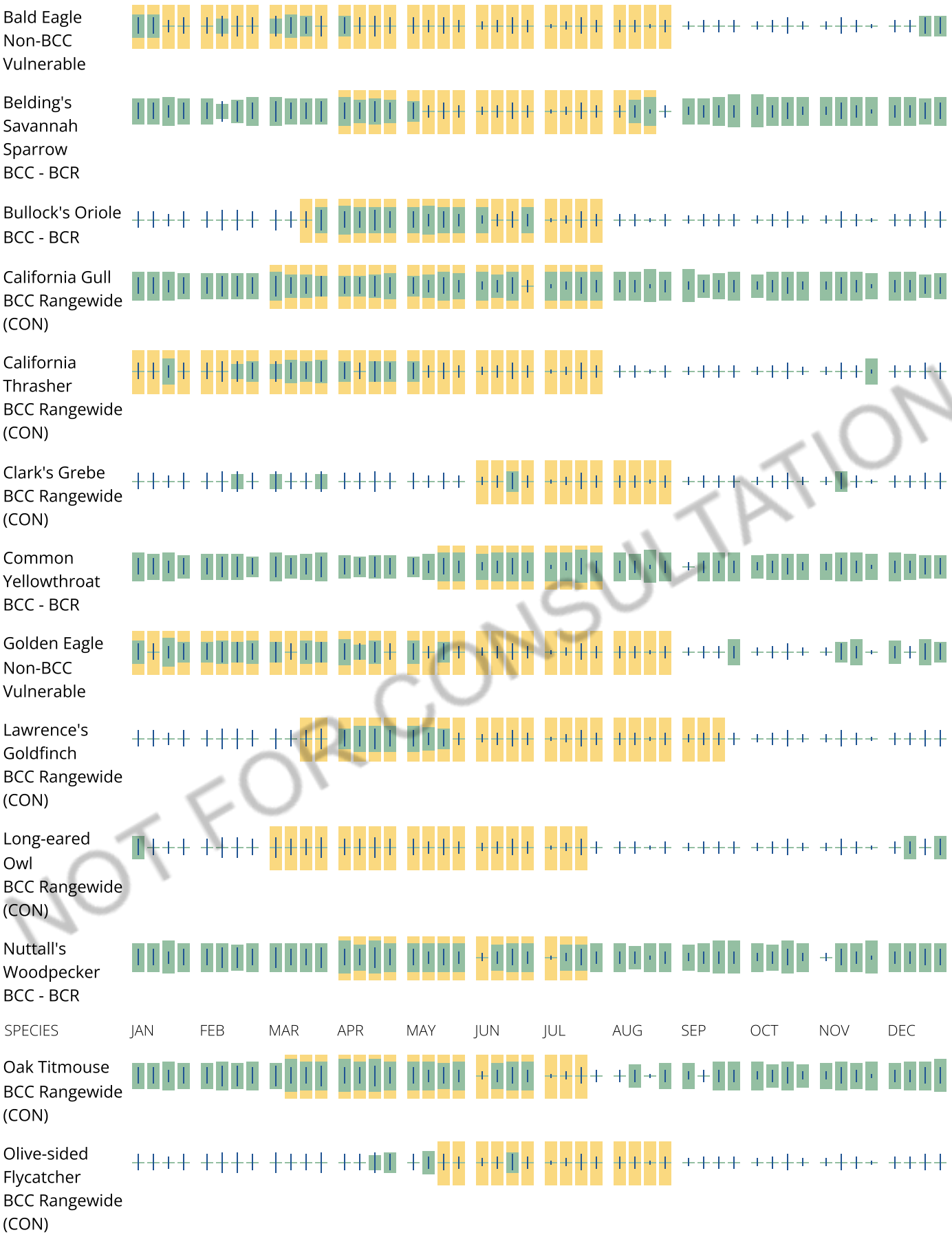
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

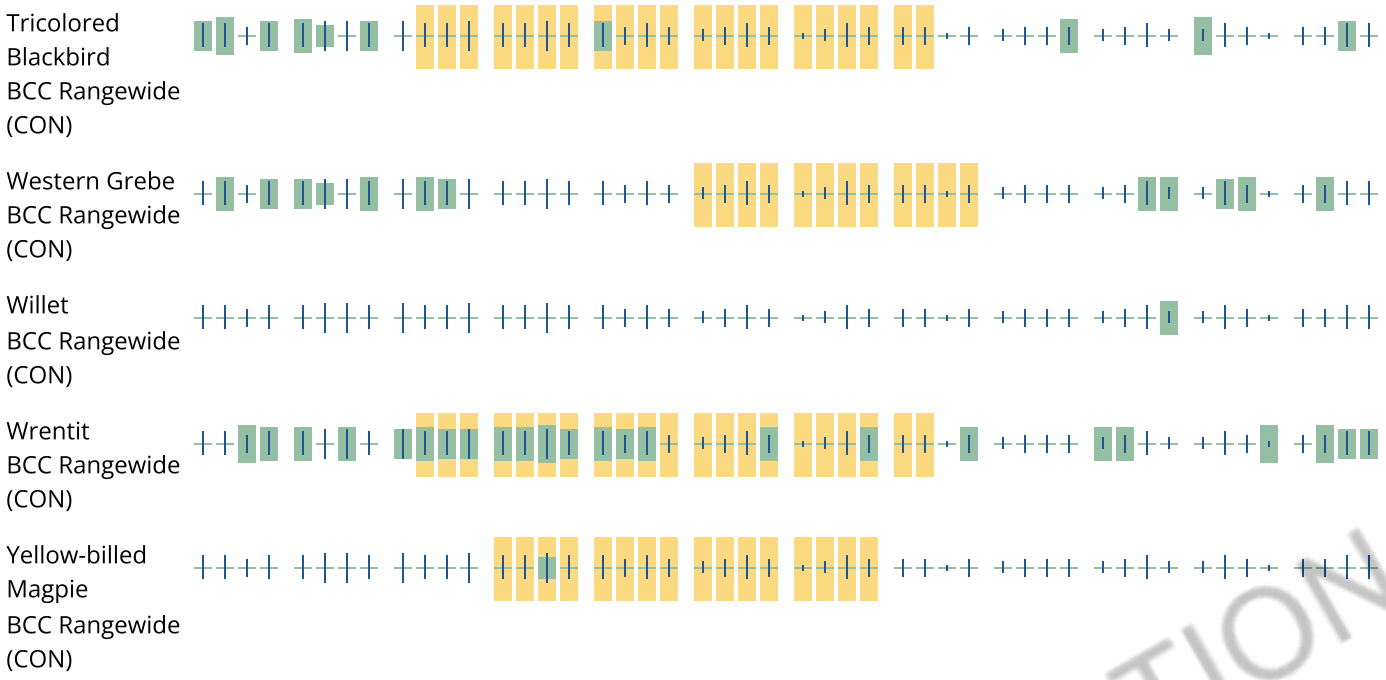
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies.

Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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APPENDIX D

ARCHAEOLOGICAL RESOURCES ASSESSMENT

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CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

June 16, 2023

Zoe Merideth
Senior Planner
City of Antioch
P.O. Box 5007
Antioch, CA 94531-5007

Subject: Archaeological Resources Assessment for the Pacific Gas and Electric Antioch Service Center Improvements Project, 2111 Hillcrest Avenue, Antioch, Contra Costa County, California (LSA Project No. CAN2203)

Dear Ms. Merideth:

LSA is under contract to the City of Antioch to conduct an archaeological resources assessment for the Pacific Gas and Electric Antioch Service Center Improvements Project (project) (Figure 1; all figures provided in Attachment A). The proposed project involves the demolition and replacement of the following four existing buildings on site (Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations). Additionally, the proposed project would include the construction of new non-occupied support structures, a below-grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure (Figure 2).

LSA conducted this archaeological resources assessment of the project area to identify cultural resources eligible for inclusion in the California Register of Historical Resources (California Register). The study did not identify any prehistoric or historical archaeological resources that warrant further study. In addition to the archaeological assessment, LSA conducted a built environment cultural resources study of the project area (*Historical Resource Evaluation of a Segment of the Contra Costa-Moraga Transmission Line (P-07-004688), Pacific Gas and Electric Service Center, 2111 Hillcrest Avenue, City of Antioch, Contra Costa County, California*; Hibma 2023). The study identified buildings and structures within the project area that are not, in LSA's opinion, eligible for inclusion in the California Register.

To complete the archaeological resources assessment, LSA conducted the following tasks.

RECORDS SEARCH

Data from a records search conducted by the Northwest Information Center (NWIC No. 22-1367) indicate there were 20 cultural resource studies within 0.5 mile, 8 of which included portions of the project area. No archaeological resources were identified within the project area by those studies, and no archaeological resources were recorded within a 0.5-mile of the project area (Attachment C).

ARCHAEOLOGICAL FIELD SURVEY

A pedestrian survey was conducted on June 8, 2023, by LSA archaeologist Neal Kaptain. The project area has been almost entirely paved or covered in gravel and afforded limited visibility of the ground's surface. The survey was conducted by walking zigzag transects that targeted areas where some exposed soils were visible. Bare ground adjacent to the facility's perimeter block wall was

reviewed for evidence of archaeological deposits that may have been exposed in back dirt during excavation for the wall's foundation. In a densely vegetated area within the eastern portion of the project area, a hoe was used to expose the ground's surface at 20-meter intervals along the survey route. Portions of the survey route were photographed using a cell phone's camera. Sparse modern refuse were noted throughout the project area. Native vegetation has been removed from the project area by development, and only ruderal species remain. Aside from a highly deteriorated, 2-meter-long remnant of railroad track, no archaeological cultural resources were identified.

SACRED LANDS FILE SEARCH

LSA requested a Sacred Lands File (SLF) search from the Native American Heritage Commission (NAHC) on March 7, 2023. The NAHC responded on March 16, 2023, with negative results and a list of tribes designated for contact (Attachment D). The results of the outreach to the Tribes (to date) are presented in Attachment B.

DISCUSSION

The project area contains a very sparse scatter of modern glass fragments and debris. A 2-meter-long segment of deteriorated railroad track was also identified.

CONCLUSION

The project area contains a PG&E facility that has been in operation since the 1920's. The modern debris fragments and short segment of railroad track have no potential to provide information regarding the history of the facility and do not warrant any further investigation. This study has not identified any archaeological cultural resources that are "historical resources" under the California Environmental Quality Act (CEQA) or appear eligible for inclusion in the California Register.

If you have any questions regarding this information, please contact LSA Principal Edward Heming at edward.heming@LSA.net.

Sincerely,

LSA Associates, Inc.

Neal Kaptain

Neal Kaptain, RPA
Archaeologist

Attachments: A: Figures
B: Assembly Bill 52 Consultation Record
C: Records Search Results Letter
D: Sacred Lands File Review Results Letter

ATTACHMENT A

FIGURES

Figure 1: Project Location and Regional Vicinity
Figure 2: Aerial Photograph of Project Site and Surrounding Land Uses

These figures are redact

ATTACHMENT B

ASSEMBLY BILL 52 CONSULTATION RECORD

Groups Contacted	Date LSA Contacted Tribes	Date of Follow-ups	Date and Results of Responses (Respondent Name/Response Summary)
Amah Mutsun Tribal Band of Mission San Juan Bautista Irenne Zwierlein, Chairperson	5/18/2023	6/1/2023	
Indian Canyon Mutsun Band of Costanoan Ann Marie Sayers, Chairperson	5/18/2023	6/1/2023	
Indian Canyon Mutsun Band of Costanoan Kanyon Sayers-Roods, MLD	5/18/2023	6/1/2023	
Muwekma Ohlone Indian Tribe of the SF Bay Area Rosemary Cambra, Chairperson	5/18/2023	6/2/2023	
The Ohlone Indian Tribe Andrew Galvan	5/18/2023	6/1/2023	
Wilton Rancheria Antonio Ruiz Jr, Cultural Resources Officer	5/18/2023	6/2/2023	
Ione Band of Miwok Indians Randy Yonamura	5/18/2023	6/2/2023	
Chicken Ranch Rancheria of Me-Wuk Indians Lloyd Mathiesen, Chairperson	5/18/2023	6/1/2023	
Guidiville Indian Rancheria Donald Duncan, Chairperson	5/18/2023	6/1/2023	
Muwekma Ohlone Indian Tribe of the SF Bay Area Monica Arellano, Vice Chairwoman	5/18/2023	6/1/2023	
Nashville Enterprise Miwok-Maidu-Nisenan Tribe Cosme Valdez, Chairperson	5/18/2023	6/1/2023	
North Valley Yokuts Tribe Katherine Perez, Chairperson	5/18/2023	6/1/2023	
The Ohlone Indian Tribe Desiree Vigil, THPO	5/18/2023	6/1/2023	
Tule River Indian Tribe Neil Peyron, Chairperson	5/18/2023	6/1/2023	
Tule River Indian Tribe Kerri Vera, Environmental Dept.	5/18/2023	6/1/2023	
Tule River Indian Tribe Joey Garfield, Tribal Archaeologist	5/18/2023	6/1/2023	
Wilton Rancheria Jesus Tarango, Chairperson	5/18/2023	6/1/2023	
Wilton Rancheria Dahlton Brown, Director of Administration	5/18/2023	6/1/2023	
Wilton Rancheria Steven Hutchason, THPO	5/18/2023	6/1/2023	
The Confederated Villages of Lisjan Corrina Gould, Chairperson	5/18/2023	6/1/2023	Corrina Gould responded via email on 6/6/23. The Confederated Villages of Lisjan do not have any comments and wish to be contacted if there are any findings.

ATTACHMENT C

RECORDS SEARCH RESULTS LETTER

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA, COLUSA, CONTRA COSTA, DEL NORTE, HUMBOLDT, LAKE, MARIN, MENDOCINO, MONTEREY, NAPA, SAN BENITO, SAN FRANCISCO, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, SONOMA, YOLO

Northwest Information Center
Sonoma State University
1400 Valley House Drive, Suite 210
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
https://nwic.sonoma.edu

4/5/2023 NWIC File No.: 22-1367

Rory Goodwin
LSA
1500 Iowa Ave, Suite 200
Riverside, CA 92507

Re: Antioch PG&E Service Center Project/LSA # CAN2203

The Northwest Information Center received your record search request for the project area referenced above, located on the Antioch North, Antioch South USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a ½ mi. radius:

Resources within project area:	P-07-002950, P-07-002651, P-07-004688
Resources within ½ mi. radius:	P-07-000813, P-07-002844, P-07-002845, P-07-002892, P-07-002893, P-07-002952
Reports within project area:	S-9054, 11826, 22464, 31171, 34412, 36622, 38392, 38872
Reports within ½ mi. radius:	S-1451, 1485, 10040, 10268, 143382, 17883, 18440, 31375, 35244, 39103, 42845, 43883

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Report Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: [as requested] ☐ enclosed ☐ not requested ☐ nothing listed

OHP Built Environment Resources Directory: ☐ enclosed ☒ not requested ☐ nothing listed

Archaeological Determinations of Eligibility: ☐ enclosed ☒ not requested ☐ nothing listed

CA Inventory of Historic Resources (1976): ☐ enclosed ☒ not requested ☐ nothing listed

GLO and/or Rancho Plat Maps: ☐ enclosed ☒ not requested ☐ nothing listed

Historical Maps: ☐ enclosed ☒ not requested ☐ nothing listed

Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☒ enclosed	☐ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

** Current versions of these resources are available on-line:

Caltrans Bridge Survey:
https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/f0004338-common-bridge-types-2004-a11y

Soils Survey: https://websoilsurvey.nrcs.usda.gov/app/homepage.htm
https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Shipwreck Inventory: https://www.slc.ca.gov/shipwrecks/

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Annette Neal

Researcher

ATTACHMENT D

SACRED LANDS FILE SEARCH RESULTS LETTER

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
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Miwok

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
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Yokayo Pomo, Yuki, Nomlaki

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Luiseño

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Stanley Rodriguez
Kumeyaay

COMMISSIONER
[Vacant]

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 16, 2023

Rory Goodwin
LSA

Via Email to: rory.godwin@lsa.net

Re: Antioch PG&E Service Center Improvements Project, Contra Costa County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

APPENDIX E

HISTORICAL RESOURCE EVALUATION

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CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

June 13, 2023

Zoe Merideth
Senior Planner
City of Antioch
200 H Street
Antioch, CA 94509

Subject: Historical Resource Evaluation of a segment of the Contra Costa-Moraga Transmission Line (P-07-004688), Pacific Gas and Electric Service Center, 2111 Hillcrest Avenue, City of Antioch, Contra Costa County, California (LSA Project No.: CAN2203)

Dear Ms. Merideth:

LSA prepared a Historical Resource Evaluation (HRE) of an approximately 1,250-foot segment of the Contra Costa-Moraga Transmission Line (P-07-004688) constructed circa 1949 that crosses through the Pacific Gas and Electric's (PG&E) Antioch Service Center facility located on a 56.16-acre parcel at 2111 Hillcrest Avenue (APN 051-160-002-5), in the City of Antioch, Contra Costa County, California (project site) (Appendix A: Figures 1 and 2). The PG&E Service Facility contains an assemblage of buildings constructed in phases beginning circa 1982 and, in LSA's opinion, have not yet reached sufficient age to warrant evaluation for historical significance and inclusion in the California Register of Historical Resources (California Register) found at §5024.1 of the California Public Resources Code (PRC) and are not addressed in this HRE.

The proposed project would demolish and replace the Fleet Maintenance, Logistics Warehouse, Logistics Shops, and Operations buildings in the project site. Additionally, the proposed project would construct additional non-occupied support structures, a below grade parking area, circulation improvements, expansion of paved surfaces, and expansion of lighting infrastructure. The proposed improvements would occur on a portion of the 56.16-acre parcel which also contains PG&E's Contra Costa Substation. No project-related activities are proposed to occur within the enclosed substation area itself.

LSA understands a segment of the Contra Costa-Moraga Transmission Line (P-07-004688) crosses through the rear, eastern portion of the project site. LSA further understands that this resource was previously evaluated for historical eligibility on two occasions, in 2011 and again in 2017. These evaluations reached different and conflicting findings. The 2011 evaluation identified the line and determined the resource did not appear eligible for inclusion in the California Register due to a lack of historical significance and accordingly not a historical resource for the purposes of the California Environmental Quality Act (CEQA) (PAR 2011). Six years later the resource was re-evaluated the entire 27-mile transmission line as a linear historic district eligible for inclusion in the National Register of Historic Places (National Register) for associations with significant events and for its architectural qualities, and therefore a historical resource for the purposes of CEQA (Historic Resources Associates, 2017). It is not clear to LSA that the evaluators in 2017 were aware of the earlier eligibility evaluation prepared in 2011.

To address these conflicting findings, LSA re-evaluated an approximately 1,250-foot segment of the Contra Costa-Moraga Transmission Line within the project site (APN 051-160-002-5). A segment of the Contra Costa-Las Positas Transmission Line (P-07-002951) also crosses into and through the project site parallel with the Contra Costa-Moraga Transmission Line. This resource was evaluated in 2008 for inclusion in the National Register or the California Register and found not eligible for either register due to a lack of significance (Garcia and Associates, 2008). LSA concurs that the Contra Costa-Las Positas Transmission Line is not a historical resource for the purposes of CEQA and is not addressed in this HRE.

LSA reviewed historical documentation of the project site and its history for information about the design, construction history, and development of the Contra Costa-Moraga Transmission Line. LSA Architectural Historian Michael Hibma conducted a pedestrian field review on May 23, 2023, and evaluated the eligibility of an approximately 1,250-foot segment of the Contra Costa-Moraga Transmission Line within the project site (APN 051-160-002-5) using the evaluative criteria of the California Register.

Based on background research and field observations, LSA concludes that the segment of the Contra Costa-Moraga Transmission Line in the project site does not appear eligible for inclusion in the California Register under any level of significance either individually or as part of an identified historic district due to a lack of historical significance. As such, this segment of the Contra Costa-Moraga Transmission Line; P-07-004688 does not appear to be historical resources for the purposes of CEQA (PRC §21084.1). The methods, analysis, and conclusions of this HRE are presented in the sections that follow. See Appendix B for Department of Parks and Recreation (DPR) 523 Series forms record for a California Register-based eligibility evaluation update.

BACKGROUND RESEARCH

Records Searches

At LSA's request, staff of the Northwest Information Center (NWIC) conducted a records search of the study rea and a 0.50-mile radius on January 1, 2023 (NWIC File #22-1367). The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resource records and reports for Alameda County. As part of the review of the previous NWIC records search results, LSA also reviewed the following local and State inventories for built environment cultural resources in and adjacent to the project site:

- *California Inventory of Historic Resources* (California Department of Parks and Recreation 1976).
- *Five Views: An Ethnic Historic Site Survey for California* (California Office of Historic Preservation 1988).
- *California Points of Historical Interest* (California Office of Historic Preservation 1992).
- *California Historical Landmarks* (California Office of Historic Preservation 1996).
- *California Historical Landmarks: Contra Costa County* (California Office of Historic Preservation 2023a).

- *Built Environment Resource Directory: Contra Costa County* (California Office of Historic Preservation 2023b). The directory includes the listings of the National Register of Historic Places, National Historic Landmarks, California Register, California Historical Landmarks, and California Points of Historical Interest.

Results. The records searches identified three previously recorded resources within the project site.

- **P-07-002950; Contra Costa Substation.** This resource consists of an electric power substation built by PG&E in 1925-26. According to the DPR 523 prepared by Garcia and Associates in 2008, "The main substation building was constructed on approximately 60 acres and included four workers cottages, a garage/warehouse building, utilitarian outbuildings, and areas for outdoor switch and bus structures. Today, the Contra Costa Substation comprises three buildings and a switching yard; a highly altered substation building and two small utilitarian support buildings." This resource was evaluated in 2008 and found not eligible for the National Register or California register due to a lack of significance and is not a historical resource for the purposes of CEQA (Garcia and Associates 2008a).

- **P-07-002951; Contra Costa-Las Positas Transmission Line**. This resource consists of an approximately 24-mile-long electrical power line "*located in eastern Contra Costa and northern Alameda Counties, was constructed by PG&E in the 1970s to provide electrical power to the city of Livermore and unincorporated Alameda County. Portions of the line running from the Contra Costa Power Plant to the Contra Costa Substation date to the 1920s when the Contra Costa Substation was constructed*." Garcia and Associates evaluated this resource in 2008 and found it not eligible for inclusion in the National Register or California Register due to a lack of significance. The Contra Costa-Las Positas Transmission line is not a historical resource for the purposes of CEQA (Garcia and Associates 2008b).

- **P-07-004688; Contra Costa-Moraga Transmission Line**. This resource consists of "*two 230 kV Pacific Gas & Electric transmission lines that traverse a large swath of Contra Costa County from east to west. The line begins in Antioch, leaving the substation as two parallel transmission lines, before it separates southeast of Pittsburg into two lines of towers. The southernmost line is commonly referred to as the "Contra Costa-Moraga" electrical transmission line that connects the power plant at Antioch with the substation in Moraga, a distance of 27 miles*." This resource was previously evaluated in 2011 by PAR Environmental and again in 2017 by Historic Resource Associates. These two evaluations reached different eligibility findings; PAR found the resource not eligible for the California Register due to a lack of significance (PAR 2011). Historic Resource Associates found the resource eligible as a linear historic district for associative significance with important events (National Register Criterion A) and for its architectural/engineering qualities (National Register Criterion C) (Historic Resource Associates 2017). Please see Appendix A for a California Register-based DPR 523 Continuation Update prepared by LSA for this resource.

The record searches identified six previously recorded resource with 0.50-mile of the project site.

- **P-07-000813; Southern Pacific: Northern Contra Costa Route Spur Line**. This resource was previously evaluated in 1994 as part of the Mojave Natural Gas Pipeline Northern Extension Project. The evaluated segment (SPN-10) is located 0.25-mile south of the Pittsburg-Antioch

Highway and 0.6-mile west of Somersville Road, in Antioch. According to an evaluation prepared in 1994, SPN-10 "*was built after 1968, and because most of the railroad has since been removed, it is not eligible for listing in the National Register*" (Hatoff, Voss, Waechter, Wee and Bente 1995). The Southern Pacific: Northern Contra Costa Route Spur Line resource is not a historical resource for the purposes of CEQA.

- **P-07-002844; 1208 Sunset Drive**. This resource consists of an 1,800 square foot, single-story residence constructed in 1956 at 1208 Sunset Drive in Antioch. This resource was evaluated in 2002 by JRP Historical Consulting who found the resource not eligible the National Register due to a lack of significance (JRP 2002a). The resource at 1208 Sunset Drive is not a historical resource for the purposes of CEQA.

- **P-07-002845; 1214 Sunset Drive**. This resource consists of a single-story residence constructed in 1954 at 1214 Sunset Drive in Antioch. This resource was evaluated in 2002 by JRP Historical Consulting who found the resource not eligible the National Register due to a lack of significance (JRP 2002b). The residence at 1214 Sunset Drive is not a historical resource for the purposes of CEQA.

- **P-07-002892; Bidwell Elementary School**. This resource consists of a "*Modem Style educational complex of four classroom wings and an auditorium wing occupies a 15.21-acre campus adjoined by early postwar subdivisions on the north and west; by a modern apartment complex on the east; and by the [Union Pacific Railroad] tracks on the south*" (Hill and Dobkin 2006). This school, constructed in 1958 was originally the Bidwell Elementary School but was by the time of the 2006 evaluation renamed the Bidwell Education Center. This resource was evaluated by architectural historians Ward Hill and Marjorie Dobkin who found the school "*an exceptional example of the Modem Architecture in the Antioch/Oakley area appears to be eligible under National Register Criterion C and California Register Criterion 3*" (Hill and Dobkin 2006a). The Bidwell Elementary School is a historical resource for the purposes of CEQA.

- **P-07-002893; Lynnwood Estates Subdivision**. This resource consists of a residential subdivision comprised of "*118* [parcels] *in the subdivision are laid out in a modified grid plat. The long central block bordered by Gary and Kean Avenues and the blocks to the north form somewhat oblique angles, so some streets do not intersect at 90-degree angles. The modest Ranch Style houses are all built on a similar plan with an attached garage on the right or left end of the building*." This was evaluated in 2006 by architectural historians Ward Hill and Marjorie Dobkin who found the subdivision not eligible for inclusion in the National Register due to a lack of significance (Hill and Dobkin 2006b). The Lynnwood Estates Subdivision is not a historical resource for the purposes of CEQA.

- **P-07-002952; GANDA Site 02.** This resource consists of a "*diffuse scatter of predominantly glass fragments and red brick*" (Garcia and Associates 2008c).

Map Review

LSA reviewed the following maps for historical information about the project site and its vicinity:

- *Mt. Diablo, Calif.*, 15-minute topographic quadrangle (U.S. Geological Survey (USGS) 1896, 1898, and 1943);
- *Antioch, CA.,* 15-minute topographic quadrangle (USGS 1907 and 1908);
- *Lone Tree Valley, CA.*, 15-minute topographic quadrangle (USGS 1916);
- *Collinsville, CA.,* 15-minute topographic quadrangle (USGS 1918);
- *Pittsburg, CA.,* 15-minute topographic quadrangle (USGS 1953);
- *Antioch North, Calif.*, 7.5-minute topographic quadrangle (USGS 1953a, 1968a, and 1978); and
- *Antioch, South, Calif.,* 7.5-minute topographic quadrangle (USGS 1953b, 1968b, 1973, and 1980).

Results. The project site overlaps the boundaries of lands depicted on adjacent USGS topographic quadrangle maps. Accordingly, the project site is unevenly shown among the various maps scales and years published.

The *Mt. Diablo Calif.*, 15-minute quadrangles depict the project site as undeveloped land. No buildings, structures, or objects are shown. An unnamed seasonal/intermittent drainage is depicted northeast of and outside the project area. An unnamed and unpaved road is depicted west of the project site that follows the modern alignment of Hillcrest Avenue. A segment of the Southern Pacific Railroad's *San Francisco & New Orleans Line* (SPRR) is depicted south of the project site (USGS 1896 and 1898).

The *Antioch, CA*., 15-minute topographic quadrangles depict the project site and surrounding areas as undeveloped land. No buildings, structures, or objects are shown (USGS 1907 and 1908).

The *Lone Tree Valley, CA.*, 15-minute topographic quadrangle depicts the same environment and shown in 1896 and 1898 (USGS 1916).

The *Collinsville, CA.,* 15-minute topographic quadrangle depicts the same environment shown in 1907 and 1908 (USGS 1918).

The *Pittsburg, CA.,* 15-minute topographic quadrangle depicts a (unnamed Contra Costa) Substation adjacent to the project site with an unnamed access road off modern Hillcrest Avenue. This map depicts the main substation building as well as four regularly spaced buildings, described in resource records as worker housing, west of the substation fence or boundary. Two power line alignments approximate the locations of the Contra Costa-Moraga Transmission Line and the Contra Costa-Las Positas Transmission Line that cross into and through the project site (USGS 1953). The surrounding area is shown with a mix of residential tract development to the west and low-density development

with orchard crops to the east and south. Modern East 18th Street north of the project site is depicted as the then alignments for state highways 4 and 24 (USGS 1953).

The *Antioch North, Calif.*, and *Antioch South, Calif.*, 7.5-minute topographic quadrangles from 1953 through 1980 depicts the substation and the alignments of the Contra Costa-Moraga Transmission Line and the Contra Costa-Las Positas Transmission Line that cross into and through the project site. The surrounding area is depicted as a landscape in transition from agricultural uses to residential tract development as Antioch expanded south of and away from the San Joaquin River. A spur track off the SPRR's main line is depicted entering the project site and into the substation facility from the east. No additional buildings, structures, or objects associated with the modern facility off Hillcrest Avenue are depicted (USGS 1953a, 1953b, 1968a, 1968b, 1973, 1978, and 1980).

Aerial Photograph Review

USGS topographic quadrangles depicting the project site dated after 1980 are not available, LSA reviewed aerial photographs taken from 1979 to 2002 and available online via Nationwide Environmental Title Research (NETR) for additional information regarding the development of the project site's built environment.

A black and white aerial photograph taken 1979 depicts the Contra Costa-Moraga Transmission Line and the Contra Costa-Las Positas Transmission Line crossing into and through the project site at the far eastern portion of the project site. A small square shaped developed area with paved drives, possibly a construction site or the nascent version of the current Antioch Service Center facility is depicted on the western end of the project site near Hillcrest Avenue (NETR 1979).

A color aerial photograph taken 1982 depicts most of the current built environment within the project site, including the office s and administrative spaces with a landscaped verge facing Hillcrest Avenue, as well as outlying smaller buildings and structures presumably in place to support maintenance and storage of materials (NETR 1982).

A color aerial photograph taken 1984 depicts most of the same built environment configuration and spatial relationships as shown two years earlier (NETR 1984).

A black and white aerial photograph taken 1993 depicts the further expansion and number of built environment elements within the western portion of the project site. The rear, or eastern portion of the project site remains essentially undeveloped excepting the Contra Costa-Moraga Transmission Line and the Contra Costa-Las Positas Transmission Line crossing into and through this portion of the project site (NETR 1993).

A color aerial photograph taken 2002 depicts the same built environment as shown nine years earlier (NETR 2002).

FIELD REVIEW

LSA architectural historian Michael Hibma reviewed the segment of the Contra Costa-Moraga Transmission line in the project site and vicinity on May 23, 2023. The purpose of the review was to

characterize construction type and materials used, identify alterations, and obtain environmental information regarding past land use patterns.

Results. The project site contains numerous buildings and structures of various size and objects as well as vehicle storage areas associated with the maintenance and operations of PG&E's Antioch Service Center. At the southwestern corner of the project sire is an area where various materials such as topsoil, gravel, and other covering or fill materials are sorted and stored. The PG&E Contra Costa Substation itself is secured behind metal post and chain link fencing. An approximately 1,250-foot-long segment of the Contra Costa-Moraga Transmission Line crosses into the project site (APN 051-160-002-5) from the northeast corner of the project site and in a southwesterly direction passes through the project site.

HISTORICAL AND ARCHITECTURAL CONTEXT

Please see Appendix B for DPR 523 Series forms for a Continuation Sheet-based update of the existing DPR 523 from record that includes 1,250-foot segment of the Contra Costa-Moraga Transmission Line (P-07-004688) in the project site.

ELIGIBILITY EVALUATION

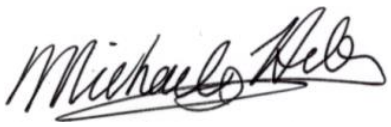
Background research, including a records search, a literature review, archival research, and a field review by an architectural historian identified a previously recorded built environment cultural resource more than 50 years old within the project site: a 1,250-foot segment of the Contra Costa-Moraga Transmission Line (P-07-004688). Please see Appendix B for a DPR 523 Series form update for a California Register-based eligibility evaluation of the segment in the project site (APN 051-160-002-5).

CONCLUSION

The segment of the Contra Costa-Moraga Transmission Line (P-07-004688) was previously evaluated in 2011 and in 2017 and created conflicting determinations of eligibility and a contradictory status as a historical resource for the purposes of CEQA. LSA prepared this supplemental evaluation to resolve the conflicting eligibility findings as it pertains to an approximately 1,250-foot-long segment of this liner resource within the project site (APN 051-160-002-5). Based on background research and a field survey, LSA concludes the segment of the Contra Costa-Moraga Transmission Line (P-07-004688) in the project site does not appear significant under any evaluative criteria of the California Register, accordingly its integrity was not assessed. For these reasons, LSA concludes that an approximately 1,250-foot-long segment of the Contra Costa-Moraga Transmission Line (P-07-004688) does not appear eligible for inclusion in the California Register under any level of significance either individually or as part of historic district and does not appear to qualify as a historical resource for the purposes of CEQA (PRC §21084.1).

Sincerely,

LSA Associates, Inc.



Michael Hibma, M.A., AICP
Associate/Architectural Historian

Attached:

	Appendix A	Figures 1 and 2
	Appendix B	DPR 523 Series Form – P-07-004688; Contra Costa-Moraga Transmission Line (Continuation Update)

REFERENCES CONSULTED[1]

California Office of Historic Preservation (OHP)

1988 *Five Views: An Ethnic Historic Site Survey for California*. California Department of Parks and Recreation, Sacramento.

1992 *California Points of Historical Interest*. California Department of Parks and Recreation, Sacramento.

1996 *California Historical Landmarks*. California Department of Parks and Recreation, Sacramento.

2001 *California Environmental Quality Act (CEQA) and Historical Resources*. California Department of Parks and Recreation, Sacramento.

2023a *California Historical Landmarks: Contra Costa*. Electronic document, https://ohp.parks.ca.gov/?page_id=21415, accessed various.

2023b Built Environment Resources Directory (BERD) – Contra Costa County. Electronic document, https://ohp.parks.ca.gov/?page_id=30338, accessed various.

Cerny, Susan Dinkelspiel

2007 *An Architectural Guidebook to San Francisco and the Bay Area*. Gibbs Smith Publisher, Santa Barbara, California.

Garcia and Associates

2008a California Department of Parks and Recreation Series 523 form record for P-07-002950; Contra Costa Substation. Garcia and Associates, San Anselmo, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

2008b California Department of Parks and Recreation Series 523 form record for P-07-002951; Contra Costa-Las Positas Transmission Line. Garcia and Associates, San Anselmo, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

2008c California Department of Parks and Recreation Series 523 form record for P-07-002952; GANDA Site 02. Garcia and Associates, San Anselmo, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

Glaser, Leah S.

1997 Nice Towers, eh? Evaluating a Transmission Line in Arizona. *Cultural Resources Management*, No. 14; pages 23-24, 1997. Electronic copy on file at LSA, Point Richmond, California.

[1] For a full set of references consulted, please see the DPR 523 forms in Appendix B of this report.

Hatoff, Brian, Barb Voss, Sharon Waechter, Stephen Wee, and Vance Bente
1995 *Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project*. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

Historic Resource Associates
2017 California Department of Parks and Recreation Series 523 form record for P-07-004688; Contra Costa-Moraga Transmission Line. Historic Resource Associates, El Dorado Hills, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

Hill, Ward, and Marjorie Dobkin
2006a California Department of Parks and Recreation Series 523 form record for P-07-002892; Bidwell Elementary School. Archaeological/Historical Consultants, Oakland, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

2006b California Department of Parks and Recreation Series 523 form record for P-07-002893; Lynwood Estates Subdivision. Archaeological/Historical Consultants, Oakland, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

JRP Historical Consulting
2002a California Department of Parks and Recreation Series 523 form record for P-07-002844; 1208 Sunset Drive. JRP Historical Consulting, Davis, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

2002a California Department of Parks and Recreation Series 523 form record for P-07-002845; 1214 Sunset Drive. JRP Historical Consulting, Davis, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

Nationwide Environmental Title Research
1979-2002 Aerial photographs of 2111 Hillcrest Avenue, Antioch, California. Electronic document, https://www.historicaerials.com/viewer, accessed various.

PAR Environmental Services
2011 California Department of Parks and Recreation Series 523 form record for P-07-004688; Contra Costa-Moraga Transmission Line. PAR Environmental Services, Sacramento, California. On file at Northwest Information Center, Sonoma State University, Rohnert Park, California.

ParcelQuest
2023 Assessor's Parcel Information. Electronic document, http://www.parcelquest.com/, accessed various.

U.S. Geological Survey (USGS)
1896 *Mt. Diablo, CA*., 15-minute topographic quadrangle. USGS, Washington, D.C.

1898 *Mt. Diablo, CA*., 15-minute topographic quadrangle. USGS, Washington, D.C.

1907 *Antioch, CA*., 15-minute topographic quadrangle. USGS, Washington, D.C.

1908 *Antioch, CA*., 15-minute topographic quadrangle. USGS, Washington, D.C.

1916 *Lone Tree Valley, CA.*, 15-minute topographic quadrangle. USGS, Washington, D.C.

1918 *Collinsville, CA.,* 15-minute topographic quadrangle. USGS, Washington, D.C.

1943 *Mt. Diablo, CA*., 15-minute topographic quadrangle. USGS, Washington, D.C.

1953 *Pittsburg, CA.,* 15-minute topographic quadrangle. USGS, Washington, D.C.

1953a *Antioch North, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C

1953b *Antioch South, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C.

1968a *Antioch North, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C.

1968b *Antioch South, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C.

1973 *Antioch South, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C.

1978 *Antioch North, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C.

1980 *Antioch South, Calif.,* 7.5-minute topographic quadrangle. USGS, Washington, D.C.

PREPARER'S QUALIFICATIONS

Michael Hibma, M.A., AICP, prepared this HRE. Mr. Hibma is an architectural historian at LSA's Point Richmond office and has over 16 years of experience in cultural resources management. He holds an M.A. in History from California State University, Sacramento; meets the Secretary of the Interior's *Professional Qualifications Standards* as an architectural historian and historian (Title 36 CFR Part 61); and is certified by the American Institute of Certified Planners (AICP #32009).

APPENDIX A

MAPS

Figure 1: Regional Location

Figure 2: Project Location

These figures are redact

APPENDIX B

CALIFORNIA DEPARETMENT OF PARKS AND RECREATION SERIES 523 FORM RECORD

P-07-004688; Contra Costa-Moraga Transmission Line

LSA Update

June 2023

This information is redact

APPENDIX F

NOISE MEASUREMENT SHEETS

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Noise Measurement Survey – 24 HR

Project Number: CAN2203 Test Personnel: Moe Abushanab
Project Name: Antioch PG&E Service Center Equipment: Spark 706RC (SN:18572)

Site Number: LT-1 Date: 6/8/23 Time: From 4:00 p.m. To 4:00 p.m.

Site Location: Located near northeast corner of project site, on the 2nd pole by the wall.

Primary Noise Sources: Background traffic

Comments:

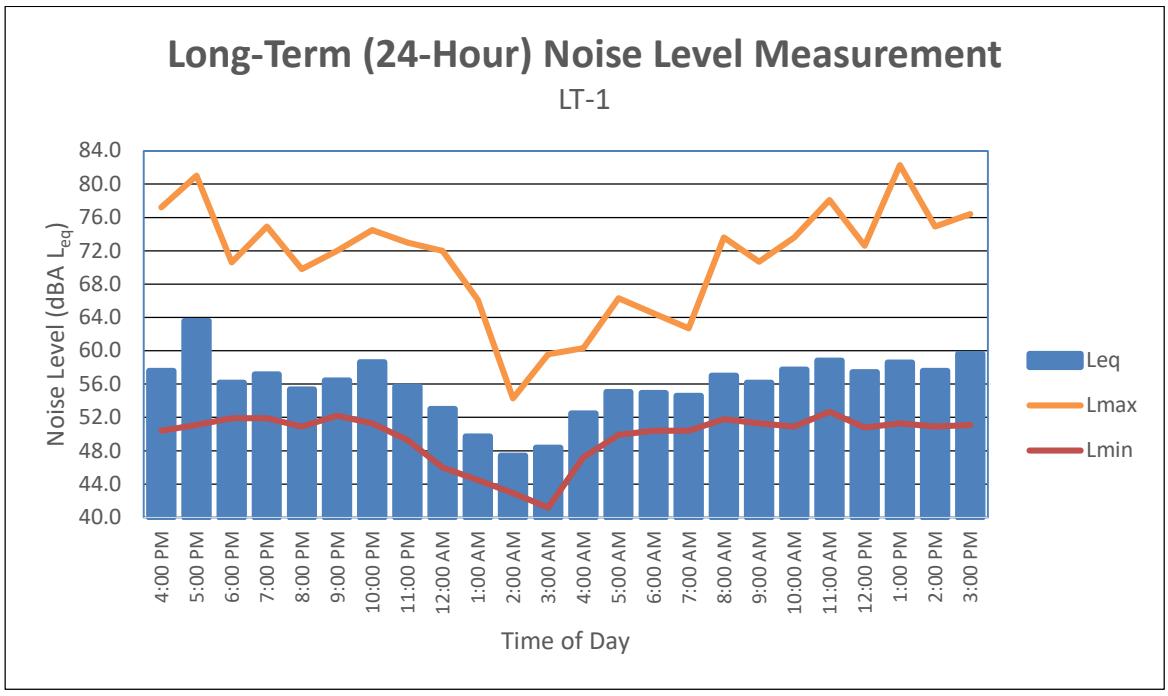
Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-1

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
4:00 PM	6/8/23	57.6	77.2	50.4
5:00 PM	6/8/23	63.6	81.0	51.1
6:00 PM	6/8/23	56.2	70.6	51.9
7:00 PM	6/8/23	57.2	74.9	51.9
8:00 PM	6/8/23	55.4	69.8	50.9
9:00 PM	6/8/23	56.4	72.0	52.2
10:00 PM	6/8/23	58.6	74.5	51.3
11:00 PM	6/8/23	55.7	73.0	49.3
12:00 AM	6/9/23	53.0	72.0	46.0
1:00 AM	6/9/23	49.7	66.1	44.5
2:00 AM	6/9/23	47.4	54.3	42.9
3:00 AM	6/9/23	48.4	59.6	41.2
4:00 AM	6/9/23	52.5	60.3	47.2
5:00 AM	6/9/23	55.0	66.3	49.9
6:00 AM	6/9/23	54.9	64.5	50.4
7:00 AM	6/9/23	54.6	62.7	50.4
8:00 AM	6/9/23	57.0	73.6	51.8
9:00 AM	6/9/23	56.2	70.7	51.3
10:00 AM	6/9/23	57.7	73.6	50.9
11:00 AM	6/9/23	58.8	78.1	52.7
12:00 PM	6/9/23	57.4	72.6	50.8
1:00 PM	6/9/23	58.6	82.3	51.3
2:00 PM	6/9/23	57.6	74.9	50.9
3:00 PM	6/9/23	59.6	76.4	51.1

Source: Compiled by LSA Associates, Inc. (2023).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: CAN2203
Project Name: Antioch PG&E Service Center

Test Personnel: Moe Abushanab
Equipment: Spark 706RC (SN:18571)

Site Number: LT-2 Date: 6/8/23

Time: From 4:00 p.m. To 4:00 p.m.

Site Location: Located north of PG&E entrance, on a tree, approximately 80 feet from Hillcrest Avenue centerline.

Primary Noise Sources: Vehicle traffic noise on Hillcrest Avenue.

Comments:

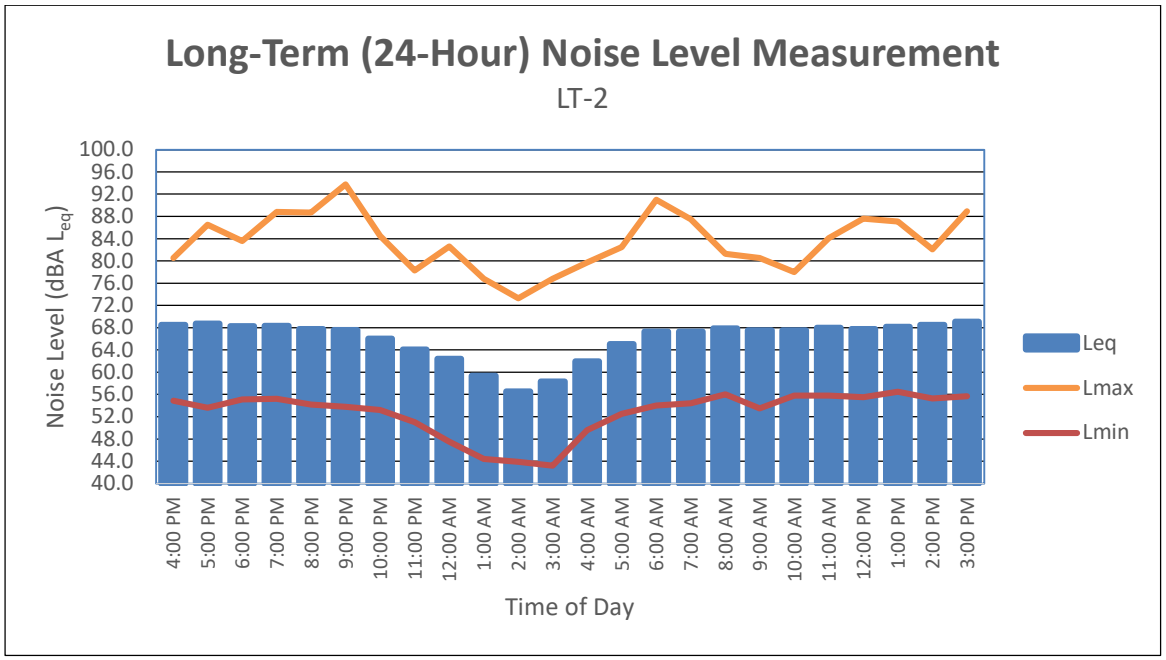
Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-2

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
4:00 PM	6/8/23	68.5	80.5	54.9
5:00 PM	6/8/23	68.8	86.5	53.6
6:00 PM	6/8/23	68.3	83.6	55.1
7:00 PM	6/8/23	68.3	88.8	55.2
8:00 PM	6/8/23	67.7	88.7	54.2
9:00 PM	6/8/23	67.6	93.8	53.8
10:00 PM	6/8/23	66.0	84.5	53.2
11:00 PM	6/8/23	64.1	78.3	51.0
12:00 AM	6/9/23	62.4	82.6	47.5
1:00 AM	6/9/23	59.3	76.8	44.4
2:00 AM	6/9/23	56.6	73.3	43.9
3:00 AM	6/9/23	58.3	76.8	43.2
4:00 AM	6/9/23	62.0	79.7	49.6
5:00 AM	6/9/23	65.1	82.5	52.5
6:00 AM	6/9/23	67.3	91.0	54.0
7:00 AM	6/9/23	67.3	87.5	54.4
8:00 AM	6/9/23	67.9	81.3	56.0
9:00 AM	6/9/23	67.6	80.5	53.5
10:00 AM	6/9/23	67.5	78.0	55.8
11:00 AM	6/9/23	68.0	84.1	55.8
12:00 PM	6/9/23	67.8	87.6	55.5
1:00 PM	6/9/23	68.2	87.1	56.5
2:00 PM	6/9/23	68.5	82.1	55.3
3:00 PM	6/9/23	69.1	88.9	55.7

Source: Compiled by LSA Associates, Inc. (2023).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



Noise Measurement Survey – 24 HR

Project Number: CAN2203
Project Name: Antioch PG&E Service Center

Test Personnel: Moe Abushanab
Equipment: Spark 706RC (SN:17815)

Site Number: LT-3 Date: 6/8/23

Time: From 4:00 p.m. To 4:00 p.m.

Site Location: Located near southwest corner of project site, at the fence, approximately 80 feet from Hillcrest Avenue centerline.

Primary Noise Sources: Vehicle traffic noise on Hillcrest Avenue, Sunset Drive, and SR-4

Comments:

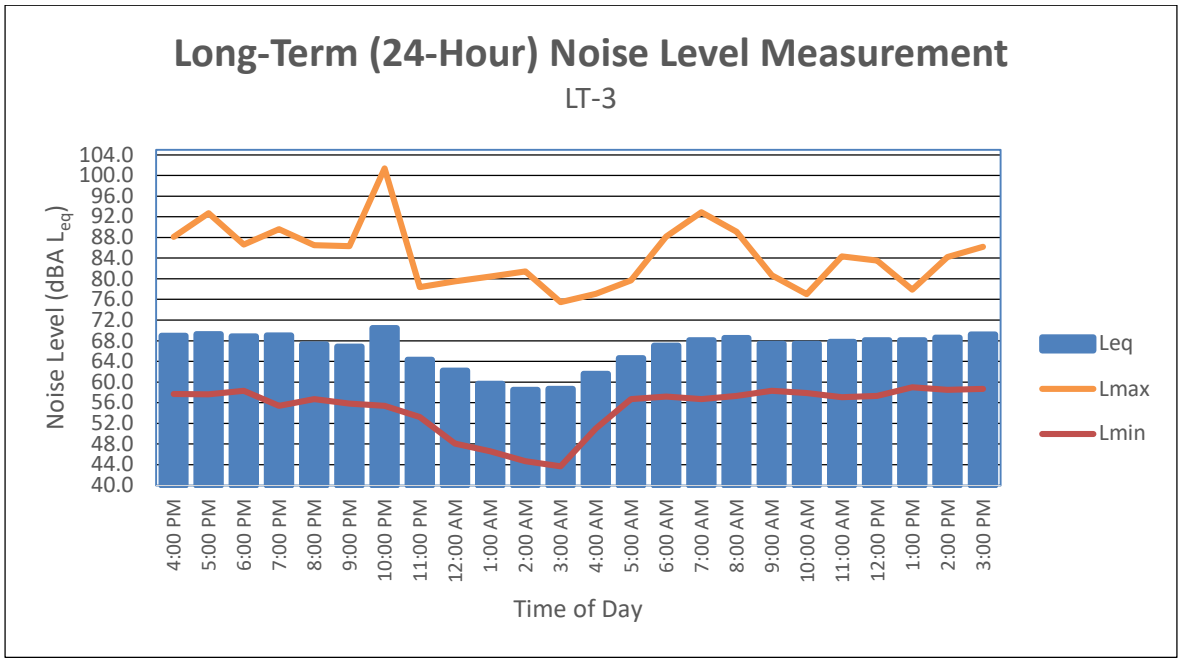
Photo:



Long-Term (24-Hour) Noise Level Measurement Results at LT-3

Start Time	Date	Noise Level (dBA)		
		L_{eq}	L_{max}	L_{min}
4:00 PM	6/8/23	69.0	88.1	57.7
5:00 PM	6/8/23	69.3	92.7	57.6
6:00 PM	6/8/23	68.9	86.6	58.3
7:00 PM	6/8/23	69.0	89.6	55.4
8:00 PM	6/8/23	67.3	86.5	56.7
9:00 PM	6/8/23	66.9	86.3	55.8
10:00 PM	6/8/23	70.4	101.4	55.4
11:00 PM	6/8/23	64.3	78.4	53.2
12:00 AM	6/9/23	62.2	79.5	48.1
1:00 AM	6/9/23	59.7	80.4	46.6
2:00 AM	6/9/23	58.5	81.4	44.7
3:00 AM	6/9/23	58.7	75.5	43.7
4:00 AM	6/9/23	61.6	77.1	51.0
5:00 AM	6/9/23	64.6	79.7	56.7
6:00 AM	6/9/23	67.1	88.2	57.2
7:00 AM	6/9/23	68.1	92.9	56.7
8:00 AM	6/9/23	68.5	89.1	57.3
9:00 AM	6/9/23	67.4	80.7	58.3
10:00 AM	6/9/23	67.4	77.0	57.9
11:00 AM	6/9/23	67.8	84.3	57.1
12:00 PM	6/9/23	68.1	83.5	57.3
1:00 PM	6/9/23	68.1	77.9	59.0
2:00 PM	6/9/23	68.6	84.2	58.5
3:00 PM	6/9/23	69.2	86.2	58.7

Source: Compiled by LSA Associates, Inc. (2023).
dBA = A-weighted decibel
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum measured sound level



APPENDIX G

CONSTRUCTION EQUIPMENT CALCULATIONS

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Construction Calculations

Phase: Demolition

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Concrete Saw	1	90	20	50	0.5	90	83
Excavator	3	81	40	50	0.5	81	82
Dozer	2	82	40	50	0.5	82	81
					Combined at 50 feet	**91**	**87**
					Combined at Receptor 580 feet	**70**	**66**

Phase: Site Preparation

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Dozer	3	82	40	50	0.5	82	83
Tractor	4	84	40	50	0.5	84	86
					Combined at 50 feet	**86**	**88**
					Combined at Receptor 580 feet	**65**	**66**

Phase: Grading

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Excavator	2	81	40	50	0.5	81	80
Grader	1	85	40	50	0.5	85	81
Dozer	1	82	40	50	0.5	82	78
Scraper	2	84	40	50	0.5	84	83
Tractor	2	84	40	50	0.5	84	83
					Combined at 50 feet	**90**	**88**
					Combined at Receptor 580 feet	**69**	**67**
					Combined at Receptor 1350 feet	**62**	**60**

Phase:Building Construstion

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Crane	1	81	16	50	0.5	81	73
Man Lift	3	75	20	50	0.5	75	73
Generator	1	81	50	50	0.5	81	78
Tractor	3	84	40	50	0.5	84	85
Welder / Torch	1	74	40	50	0.5	74	70
					Combined at 50 feet	**82**	**76**
					Combined at Receptor 580 feet	**61**	**55**

Phase:Paving

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Paver	2	77	50	50	0.5	77	77
All Other Equipment > 5 HP	2	85	50	50	0.5	85	85
Roller	2	80	20	50	0.5	80	76
					Combined at 50 feet	**87**	**86**
					Combined at Receptor 580 feet	**65**	**65**

Phase:Architectural Coating

Equipment	Quantity	Reference (dBA) 50 ft Lmax	Usage Factor[1]	Distance to Receptor (ft)	Ground Effects	Noise Level (dBA) Lmax	Noise Level (dBA) Leq
Compressor (air)	1	78	40	50	0.5	78	74
					Combined at 50 feet	**78**	**74**
					Combined at Receptor 580 feet	**57**	**53**

Sources: RCNM

[1]- Percentage of time that a piece of equipment is operating at full power.
dBA – A-weighted Decibels
Lmax- Maximum Level
Leq- Equivalent Level