

Bobier Property Project

Air Quality and Greenhouse Gas Emissions Technical Report

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1
1.1 Purpose of the Report.....	1
1.2 Project Location	1
1.3 Project Description	1
1.4 Construction Activities and Phasing	1
1.4.1 Construction Best Management Practices	2
2.0 AIR QUALITY	3
2.1 Air Quality Regulatory Setting	3
2.1.1 Air Pollutant Descriptors and Terminology	3
2.1.2 Federal Regulations	5
2.1.3 State Regulations	7
2.1.4 Local Regulations	8
2.1.5 San Diego County Air Pollution Control District Attainment Plan	8
2.1.6 San Diego Air Pollution Control District Rules and Regulations	9
2.2 Air Quality Existing Conditions.....	10
2.2.1 Climate and Meteorology	10
2.2.2 Existing Air Quality	10
2.2.3 Sensitive Receptors.....	11
2.3 Air Quality Methodology	11
2.3.1 Construction Emissions.....	12
2.3.2 Operational Emissions	14
2.4 Air Quality Significance Criteria	14
2.5 Air Quality Impact Analysis	16
2.5.1 Issue 1: Consistency with the Regional Air Quality Plan.....	16
2.5.2 Issue 2: Cumulatively Considerable Net Increase of Nonattainment Criteria Pollutants.....	16
2.5.3 Issue 3: Impacts to Sensitive Receptors.....	19
2.5.4 Issue 4: Odors	20
3.0 GREENHOUSE GAS EMISSIONS	20
3.1 Greenhouse Gas Setting	20
3.1.1 Climate Change Overview.....	20
3.1.2 Greenhouse Gases	21
3.2 Greenhouse Gas Regulatory Setting.....	23
3.2.1 Federal Greenhouse Gas Regulations.....	23
3.2.2 California Greenhouse Gas Regulations	24
3.2.3 Regional Greenhouse Gas Policies and Plans	28
3.2.4 Local Greenhouse Gas Plans	28
3.3 Greenhouse Gas Existing Conditions	29

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
3.3.1 Worldwide and National Greenhouse Gas Inventory.....	29
3.3.2 State Greenhouse Gas Inventories	29
3.3.3 Regional Greenhouse Gas Inventory	30
3.4 Greenhouse Gas Methodology	31
3.4.1 Construction Greenhouse Gas Emissions	31
3.4.2 Operational Greenhouse Gas Emissions.....	31
3.5 Greenhouse Gas Significance Criteria.....	33
3.6 Greenhouse Gas Impact Analysis.....	34
3.6.1 Issue 1: Greenhouse Gas Emissions.....	34
3.6.2 Issue 2: Conflict with Applicable Plans Adopted for the Purpose of Reducing Greenhouse Gas Emissions.....	35
4.0 LIST OF PREPARERS	35
5.0 REFERENCES.....	36

LIST OF APPENDICES

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LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Follows Page</u>
1	Regional Location.....	2
2	Aerial Photograph	2
3	Site Plan	2

TABLE OF CONTENTS (continued)

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Summary of Common Sources and Human Health Effects of Criteria Air Pollutants.....	4
2	Ambient Air Quality Standards	6
3	San Diego Air Basin Attainment Status.....	7
4	Air Quality Monitoring Data.....	11
5	Anticipated Construction Schedule	12
6	Construction Equipment Assumptions	13
7	Screening-Level Thresholds for Air Quality Impact Analysis.....	15
8	Maximum Daily Construction Emissions.....	17
9	Operational Emissions	18
10	Global Warming Potentials and Atmospheric Lifetimes.....	22
11	California Greenhouse Gas Emissions by Sector.....	30
12	San Diego County Greenhouse Gas Emissions by Sector in 2019.....	30
13	City of Vista Greenhouse Gas Emissions by Sector.....	31
14	Operational Greenhouse Gas Emissions.....	34

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ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AAM	Annual Arithmetic Mean
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADT	average daily trips
BMP	best management practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH ₄	methane
City	City of Vista
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
County	County of San Diego
DPM	diesel particulate matter
EMFAC	Mobile Source Emissions Inventory
EO	Executive Order
EPIC	Energy Policy Initiatives Center
GHG	greenhouse gas
g/L	grams per liter
GWP	global warming potential
HFC	hydrofluorocarbon
H ₂ S	hydrogen sulfide

ACRONYMS AND ABBREVIATIONS (continued)

IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LOS	Level of Service
MD	Medium Density Residential
mg/m ³	milligrams per cubic meter
MMT	million metric tons
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO _x	nitrogen oxides
O ₃	ozone
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PFC	perfluorocarbon
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns
PM _{2.5}	particulate matter less than 2.5 microns
ppm	parts per million
project	Bobier Property Project
R-1-B	Single Family Residential
RAQS	Regional Air Quality Strategy
ROG	reactive organic gas
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SF ₆	sulfur hexafluoride

ACRONYMS AND ABBREVIATIONS (continued)

SF	square foot/feet
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TAC	toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
USD	University of San Diego
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

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EXECUTIVE SUMMARY

This report presents an assessment of potential air quality and greenhouse gas (GHG) emissions impacts associated with the proposed Bobier Property Project (project) located in the City of Vista (City), California. The report evaluates the potential for criteria air pollutant and GHG emissions during the construction and operation of the project.

The proposed project involves the construction of 15 single-family residential units on a 1.67-acre vacant lot. The project would be consistent with the site's zoning and land use designation and would not conflict with the San Diego County Air Pollution Control District's (SDAPCD's) 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (Attainment Plan) or the Regional Air Quality Strategy (RAQS). Criteria pollutant and precursor pollutant emissions generated during project construction activities would not exceed the SDAPCD thresholds. However, the construction emissions analysis did not factor in potential emissions associated with blasting, which may occur due to the several large rock outcroppings that occur on the site. With the implementation of mitigation measure MM Air-1, potentially significant impacts from blasting activities would be reduced to a less than significant level. Long-term operational emissions of criteria pollutants and precursors would not exceed the SDAPCD thresholds, and the impacts would be less than significant.

Construction and operation of the project would not expose sensitive receptors to substantial concentrations of toxic air contaminants, including diesel particulate matter emissions from the use of construction equipment. The project's contribution to area traffic would not result in carbon monoxide hotspots. Impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Neither construction activities nor long-term operation of the project would be a source of objectionable odors that would adversely affect a significant number of persons, and odor impacts would be less than significant.

Implementation of the project would result in GHG emissions of 180 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year, including amortized construction and operational GHG emissions. The project's GHG emissions would be below the adjusted threshold of 872 MT CO₂e (the City project level screening threshold, adjusted to demonstrate progress toward the Senate Bill 32 GHG reduction mandates for the project's first full year of operation, 2026), and the GHG emissions impact would be less than significant. The project would not conflict with or obstruct implementation of GHG reduction plans, including the City's Climate Action Plan and the California Air Resource Board's Climate Change Scoping Plan.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential air quality and greenhouse gas (GHG) emissions impacts associated with the proposed Bobier Property Project (project), which includes an evaluation of existing conditions in the project vicinity and an assessment of potential impacts associated with project construction and project operation. As appropriate, the analysis identifies measures that can be taken to avoid adverse air quality and GHG emissions impacts.

1.2 PROJECT LOCATION

The project is proposed on a 1.67-acre site at 552 West Bobier Drive in the City of Vista (City) within the County of San Diego (County). The site is comprised of Assessor's Parcel Number 161-030-07-00 and is located southeast of the intersection of West Bobier Drive and Sports Park Way, directly east of the City's boundary with the City of Oceanside. See Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*.

The existing site is vacant and is comprised of scattered trees, bushes, and several large rock outcroppings. Multi-family residential uses are to the north, and single-family residential uses are to the south and east. The proposed project site is located directly east of the Modera Melrose Mixed-Use Development Project, a mixed-use project comprised of 323 multi-family residential units and ground-level commercial space on a 7.4-acre site in the City of Oceanside. The Modera Melrose project was approved on April 10, 2024, and is currently under construction.

The project site has a General Plan land use designation of Medium Density Residential (MD), which allows for a residential density of up to 10 dwelling units per acre. The project site is zoned Single-Family Residential (R-1-B).

1.3 PROJECT DESCRIPTION

The project proposes the construction of 15 single-family attached residential units. The homes would each be approximately 2,200 square feet (SF). Access would be provided by one driveway north of the project site on West Bobier Drive. Resident parking would be provided via garages along the proposed development's private drive. See Figure 3, *Site Plan*. The project proposes a residential density of 9 dwelling units per acre, which is within the MD allowable density of 10 dwelling units per acre.

Development of the proposed project would also include the construction of utility connections and drainage improvements. On-site improvements would include biofiltration best management practices (BMPs) including biofiltration basins.

1.4 CONSTRUCTION ACTIVITIES AND PHASING

Project construction activities would consist of grading, site preparation, installation of underground utilities, physical building construction, paving, and application of architectural coatings. Construction of the project would commence in April 2025 and be completed in approximately late December 2025 for a total construction duration of approximately 9 months. Site preparation would require the removal of

approximately 200 cubic yards of debris/vegetation. Grading is estimated to require even cut and fill of 6,500 cubic yards with no export. Due to the several large rock outcroppings that occur on the site, blasting may be required. See section 2.3.1 below for additional information regarding construction activity and phasing.

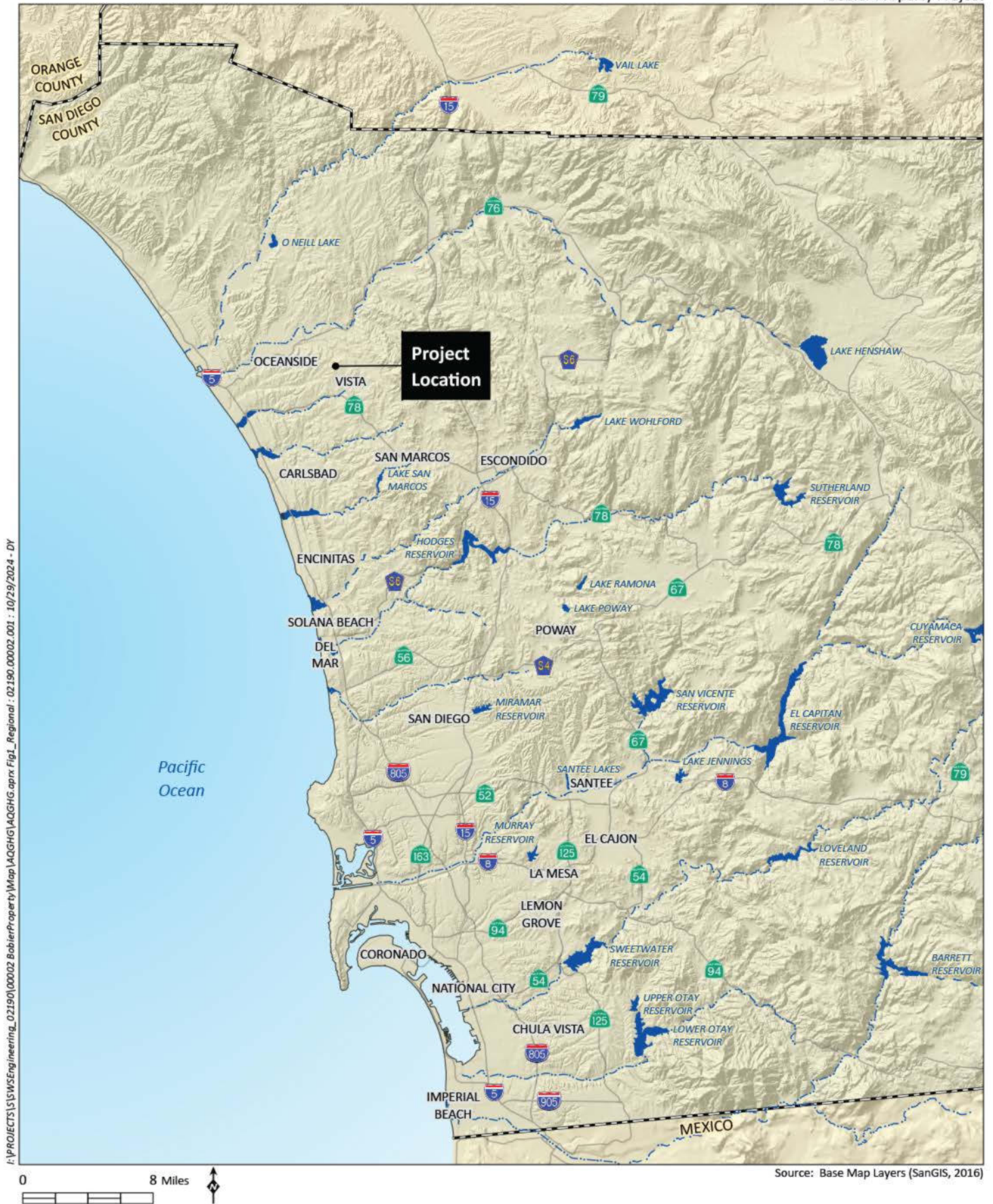
1.4.1 Construction Best Management Practices

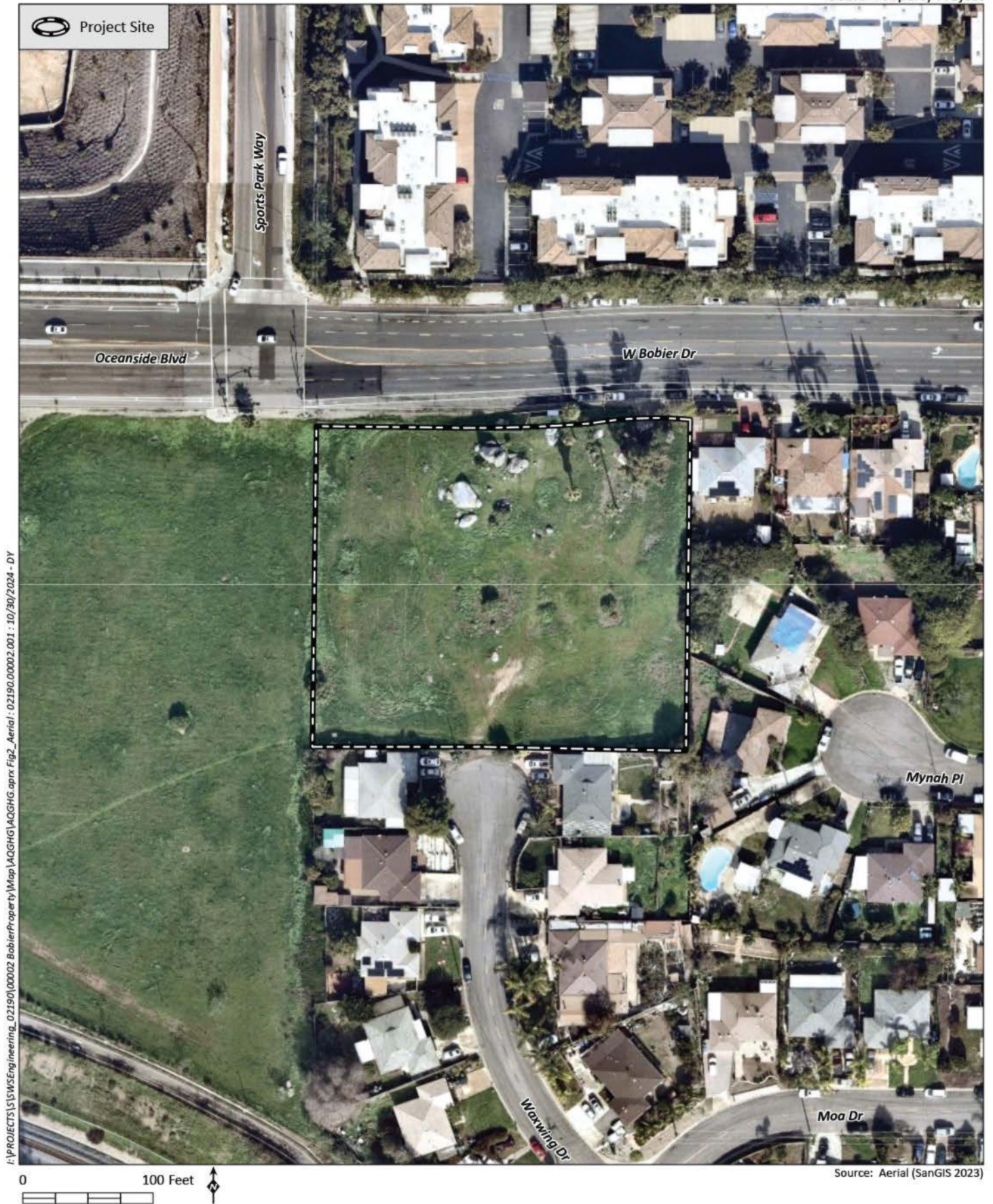
The project would incorporate BMPs during construction to reduce emissions of fugitive dust. San Diego County Air Pollution Control District (SDAPCD) Rule 55 – Fugitive Dust Control states that no dust and/or dirt shall leave the property line. SDAPCD Rule 55 requires the following (SDAPCD 2009):

- (1) **Airborne Dust Beyond the Property Line:** No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.
- (2) **Track-Out/Carry-Out:** Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:
 - (i) be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation:
 - (a) track-out grates or gravel beds at each egress point;
 - (b) wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks;
 - (c) using secured tarps or cargo covering, watering, or treating of transported material; and
 - (ii) be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only PM₁₀-efficient (particulate matter less than 10 microns) street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

The control measures listed below are the BMPs that the project would incorporate for dust control and are included in the modeling:

- A minimum of two applications of water shall be applied during grading between dozer/grader passes;
- Paving, chip sealing, or chemical stabilization of internal roadways shall be applied after completion of grading;
- Grading shall be terminated if winds exceed 25 miles per hour (mph);
- All exposed surfaces shall maintain a minimum soil moisture of 12 percent;







- Dirt storage piles shall be stabilized by chemical binders, tarps, fencing, or other erosion control; and
- Vehicle speeds shall be limited to 15 mph on unpaved roads.

2.0 AIR QUALITY

2.1 AIR QUALITY REGULATORY SETTING

The project site is within the San Diego Air Basin (SDAB). Air quality in the SDAB is regulated by the U.S. Environmental Protection Agency (USEPA) at the federal level, by the California Air Resources Board (CARB) at the state level, and by the SDAPCD at the regional level.

2.1.1 Air Pollutant Descriptors and Terminology

2.1.1.1 Criteria Air Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, criteria air pollutants include the following compounds:

- Ozone (O₃)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO₂)
- Particulate matter (PM), which is further subdivided:
 - Coarse PM, 10 microns or less in diameter (PM₁₀)
 - Fine PM, 2.5 microns or less in diameter (PM_{2.5})
- Sulfur dioxide (SO₂)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO₂, PM₁₀, PM_{2.5}, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants; e.g., ozone, NO₂, PM₁₀, and PM_{2.5}). PM₁₀ and PM_{2.5} can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs])¹ and nitrogen oxides (NO_x).

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 1, *Summary of Common Sources and Human Health Effects of Criteria Air Pollutants*, based on information provided by CARB and USEPA. Specific adverse health effects on individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables such as cumulative concentrations, local meteorology, and atmospheric conditions, and the number and characteristics of exposed individuals (e.g., age, gender). Criteria pollutant precursors (ROG

¹ CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

and NO_x) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO₂ are, therefore, the product of emissions generated by numerous sources throughout a region. Emissions of criteria pollutants from vehicles traveling to or from the project site (mobile emissions) are distributed nonuniformly in location and time throughout the region, wherever the vehicles may travel. As such, specific health effects from these criteria pollutant emissions cannot be meaningfully correlated to the incremental contribution from the project.

Table 1
SUMMARY OF COMMON SOURCES AND HUMAN HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Human-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to climate change and nutrient overloading, which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrogen oxides (NO _x) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM ₁₀ and PM _{2.5})	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and other sources.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO ₂)	A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from oil, or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid, which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CARB 2024a; USEPA 2024a

2.1.1.2 Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye-watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe, and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code §39655, subdivision (a) defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, the CARB identified DPM as a toxic air contaminant based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California’s population—it is estimated that about 70 percent of the total known cancer risk related to air toxics in California is attributable to DPM (CARB 2024b).

2.1.2 Federal Regulations

2.1.2.1 Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to the health and welfare of the general public. The USEPA is responsible for enforcing the CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several criteria pollutants, which are introduced above. Table 2, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards (AAQS) for these pollutants.

Table 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary ¹	Federal Standards Secondary ²
O ₃	1 Hour	0.09 ppm (180 µg/m ³)	–	–
	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	Same as Primary
PM ₁₀	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	AAM	20 µg/m ³	–	Same as Primary
PM _{2.5}	24 Hour	–	35 µg/m ³	Same as Primary
	AAM	12 µg/m ³	9.0 µg/m ³	15.0 µg/m ³
CO	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	–
	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)	–	–
NO ₂	1 Hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	–
	AAM	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as Primary
SO ₂	1 Hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)	–	–
Lead	30-day Avg.	1.5 µg/m ³	–	–
	Calendar Quarter	–	1.5 µg/m ³	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m ³	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m ³	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)	No Federal Standards	No Federal Standards

Source: CARB 2016; USEPA 2024b

¹ National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect public health.

² National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

O₃ = ozone; ppm: parts per million; µg/m³ = micrograms per cubic meter; PM₁₀ = particulate matter 10 microns or less in diameter; AAM = Annual Arithmetic Mean; PM_{2.5} = fine particulate matter 2.5 microns or less in diameter; CO = carbon monoxide; mg/m³ = milligrams per cubic meter; NO₂ = nitrogen dioxide; SO₂ = sulfur dioxide; km = kilometer; – = No Standard.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide (H₂S), vinyl chloride, and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a

particular pollutant are “nonattainment areas” for that pollutant. Effective July 2, 2021, the SDAB was classified as a Severe 15 nonattainment area for the 2015 8-hour NAAQS for ozone (USEPA 2021). The SDAB is an attainment area for the NAAQS for all other criteria pollutants including PM₁₀ and PM_{2.5}. The SDAB is currently classified as a nonattainment area under the CAAQS for ozone, PM₁₀, and PM_{2.5} (SDAPCD 2024a). Table 3, *San Diego Air Basin Attainment Status*, lists the federal and state attainment status of the SDAPCD for criteria pollutants.

Table 3
SAN DIEGO AIR BASIN ATTAINMENT STATUS

Pollutant	Federal Attainment Status	State of California Attainment Status
Ozone (1-hour)	(No federal standard)	Nonattainment
Ozone (8-hour)	Nonattainment	Nonattainment
Coarse Particulate Matter (PM ₁₀)	Nonattainment	Nonattainment
Fine Particulate Matter (PM _{2.5})	Attainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Lead	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified ¹	No Federal Standard
Visibility Reducing Particles	Unclassified ¹	No Federal Standard

Source: SDAPCD 2024a

¹ At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

2.1.3 State Regulations

2.1.3.1 California Clean Air Act

CARB has established the more stringent CAAQS for the seven criteria air pollutants listed above through the CCAA and has also established CAAQS for additional pollutants, including sulfates, H₂S, vinyl chloride, and visibility-reducing particles (see Table 2). Areas that do not meet the CAAQS for a particular pollutant are considered to be “nonattainment areas” for that pollutant. The SDAB is currently classified as a nonattainment area under the CAAQS for ozone (1-hour and 8-hour), PM₁₀, and PM_{2.5} (SDAPCD 2024a). The current state attainment status for the SDAB is provided in Table 3, above.

CARB is the state regulatory agency with the authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The SDAPCD is responsible for developing and implementing the rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, developing air quality management plans, and adopting and enforcing air pollution regulations for San Diego County.

2.1.3.2 State Implementation Plan

The CAA requires areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). SIPs

are comprehensive plans that describe how an area will attain the NAAQS. The 1990 amendments to the CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are not single documents—they are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls. Many of California's SIPs rely on a core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards the SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists the items that are included in the California SIP (CARB 2024c). At any one time, several California submittals are pending USEPA approval.

2.1.3.3 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space and water heating) results primarily in GHG emissions. The California Energy Code is discussed in further detail in Section 3, below.

2.1.4 Local Regulations

2.1.5 San Diego County Air Pollution Control District Attainment Plan

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for the attainment and maintenance of the AAQS in the SDAB. The regional air quality plan for San Diego County is SDAPCD's 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (Attainment Plan; SDAPCD 2020). The Attainment Plan, which would be a revision to the SIP, outlines SDAPCD's plans and control measures designed to attain the NAAQS for ozone. For the attainment of the CAAQS, the SDAPCD must prepare an updated State Ozone Attainment Plan to identify possible new actions to further reduce emissions. Initially adopted in 1992, the Regional Air Quality Strategy (RAQS) identifies measures to reduce emissions from sources regulated by the SDAPCD, primarily stationary sources such as industrial operations and manufacturing facilities. The RAQS is periodically updated to reflect updated information on air quality, emission trends, and new feasible control measures, and was last updated in 2023 (SDAPCD 2024b). These plans accommodate emissions from all sources, including natural sources, through the implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and RAQS. The Attainment Plan and RAQS, in combination with local plans from all other California nonattainment areas with serious (or worse) air quality problems, are submitted to the CARB, which develops the SIP.

The Attainment Plan and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County, to estimate future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth

projections are based on population and vehicle trends and land use plans developed by the cities and the County of San Diego. While SANDAG collaborates with the SDAPCD on the development of the portion of the SIP applicable to the SDAB, the SDAPCD is the lead agency. As such, the SDAPCD is responsible for projecting all future mobile source emissions (using CARB's mobile source emissions inventory EMFAC [CARB 2020]).

2.1.6 San Diego Air Pollution Control District Rules and Regulations

Future development pursuant to the project would be required to comply with SDAPCD Rules and Regulations which require the incorporation of BMPs during construction to reduce emissions of fugitive dust.

2.1.6.1 Rule 50 (Visible Emissions)

Particulate matter pollution impacts the environment by decreasing visibility (haze). These particles vary greatly in shape, size, and chemical composition, and come from a variety of natural and manmade sources. Some haze-causing particles are directly emitted to the air such as windblown dust and soot. Others are formed in the air from the chemical transformation of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of PM_{2.5}. These fine particles, caused largely by the combustion of fuel, can travel hundreds of miles causing visibility impairment.

Visibility reduction is probably the most apparent symptom of air pollution. Visibility degradation is caused by the absorption and scattering of light by particles and gases in the atmosphere before it reaches the observer. As the number of fine particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range. Light absorption by gases and particles is sometimes the cause of discolorations in the atmosphere but usually does not contribute very significantly to visibility degradation. Scattering by particulates impairs visibility much more readily. SDAPCD Rule 50 (Visible Emissions) sets emission limits based on the apparent density or opacity of the emissions using the Ringelmann scale (SDAPCD 1997).

2.1.6.2 Rule 51 (Nuisance)

SDAPCD Rule 51 (Nuisance) states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. The provisions of the rule do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowls or animals (SDAPCD 1976).

2.1.6.3 Rule 55 (Fugitive Dust Control)

SDAPCD Rule 55 (Fugitive Dust Control) requires action to be taken to limit dust from construction and demolition activities from leaving the property line. Similar to Rule 50 (Visible Emissions), Rule 55 (Fugitive Dust Control) places limits on the amount of visible dust emissions in the atmosphere beyond the property line. It further stipulates that visible dust on roadways as a result of track-out/carry-out shall be minimized through the implementation of control measures and removed at the conclusion of each workday using street sweepers (SDAPCD 2009).

2.1.6.4 Rule 67.0.1 (Architectural Coatings)

Construction of development within the County is required to comply with SDAPCD Rule 67.0.1 (Architectural Coatings) which requires residential interior/exterior flat coatings to be less than or equal to 50 grams per liter VOC content and interior/exterior non-flat coatings to be less than or equal to 100 grams per liter VOC content (SDAPCD 2021).

2.2 AIR QUALITY EXISTING CONDITIONS

2.2.1 Climate and Meteorology

The climate in southern California, including the SDAB, is controlled largely by the large-scale meteorological condition that dominates the west coast of the United States: a seasonally semi-permanent high-pressure cell centered over the northeastern Pacific Ocean, called the Pacific high, which keeps most storms from affecting the California coast. Areas within 30 miles of the coast in the San Diego region, including the project site, experience moderate temperatures and comfortable humidity.

Temperature inversion layers (inversions; layers of warmer air over colder air) affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). The highest air pollutant concentrations in the SDAB generally occur during inversions. During the summer, air quality problems in the SDAB are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons (VOCs) and NO_x react under the strong, abundant sunlight in the San Diego region, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to CO and NO_x emissions. High NO_x levels usually occur during autumn or winter, on days with summer-like conditions.

The predominant wind direction in the vicinity of the project site is from the southwest and the average wind speed is approximately six mph (Iowa Environmental Mesonet 2024). The annual average maximum temperature in the project area is approximately 74 degrees Fahrenheit (°F), and the annual average minimum temperature is approximately 52°F. Total precipitation in the project area averages approximately 13 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center 2016).

2.2.2 Existing Air Quality

The SDAPCD operates a network of ambient air monitoring stations throughout the County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The Camp Pendleton Monitoring Station, located approximately 8 miles west of the project site, is the closest to and most representative of the climatological and topographical conditions at the project site. The Camp Pendleton Monitoring Station has representative data for O₃, PM_{2.5}, and NO₂. No monitoring station in San Diego County has PM₁₀ monitoring data for the sampled period. Data reported by the Camp Pendleton Monitoring Station are shown in Table 4, *Air Quality Monitoring Data*.

Table 4
AIR QUALITY MONITORING DATA

Pollutant Standard	2021	2022	2023
Ozone (O₃)			
Maximum concentration 1-hour period (ppm)	0.074	0.076	0.090
Maximum concentration 8-hour period (ppm)	0.059	0.067	0.077
Days above 1-hour state standard (>0.09 ppm)	0	0	0
Days above 8-hour state/federal standard (>0.070 ppm)	0	0	1
Fine Particulate Matter (PM_{2.5})			
Maximum 24-hour concentration (µg/m ³)	*	17.0	26.5
Measured Days above 24-hour federal standard (>35 µg/m ³)	*	0	0
Annual average (µg/m ³)	*	*	7.8
Exceed federal annual standard (12 µg/m ³)	No	No	No
Nitrogen Dioxide (NO₂)			
Maximum 1-hour concentration (ppm)	0.059	0.050	0.063
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	0	0	0
Annual average (ppm)	*	0.005	0.005
Exceed annual federal standard (0.053 ppm)	No	No	No
Exceed annual state standard (0.030 ppm)	No	No	No

Source: CARB 2024d

ppm = parts per million; µg/m³ = micrograms per cubic meter, * = insufficient data available.

2.2.3 Sensitive Receptors

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The closest existing sensitive receptors to the project site are the single and multi-family residences located to the north, east, and south of the project site, and the future residents of the Modera Melrose Mixed-Use Development directly to the west of the project site. The closest existing school is Maryland Elementary School, located approximately 0.4 miles southwest of the project site.

2.3 AIR QUALITY METHODOLOGY

Criteria pollutant emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology,

source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and default input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices (CAPCOA 2022). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. CalEEMod output files for the project are included in Appendix A of this report.

2.3.1 Construction Emissions

2.3.1.1 Construction Activities

Construction emissions were estimated based on the timeline provided by the project applicant, which assumes construction would begin in April 2025 and would be completed in late December 2025, for a total construction period of approximately nine months. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Construction activities would include grading, site preparation, installation of underground utilities, physical building construction, paving, and architectural coatings. Construction is assumed to occur five days per week with equipment operating up to eight hours per day. The construction schedule assumed in the modeling is shown in Table 5, *Anticipated Construction Schedule*.

Table 5
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Construction Period Number of Working Days
Grading	4/1/2025	5/1/2025	23
Site Preparation	7/1/2025	8/1/2025	24
Underground Utilities	7/1/2025	11/3/2025	90
Building Construction	7/1/2025	12/31/2025	132
Paving	12/15/2025	12/31/2025	13
Architectural Coatings	9/29/2025	12/31/2025	68

Source: CalEEMod

The modeling assumes default values for architectural coatings to comply with SDAPCD Rule 67, as described in Section 2.1.4, which limits the VOC content of architectural coatings to 50 grams per liter (g/L) for flat coating and 100 g/L for non-flat coatings and pavement traffic marking. Interior paint was assumed to be flat coatings and exterior paint was assumed to be non-flat coatings. The modeling also assumes fugitive dust control in accordance with the SDAPCD Rule 55 and the BMPs, described in Section 1.4.1, specifically watering exposed areas twice per day, enforcing a 15-mph speed limit on unpaved surfaces, and maintaining a minimum moisture content of 12 percent for unpaved roads.

Due to the several large rock outcroppings that occur on the site, rock excavation is anticipated as part of grading activity during construction. The ease, or difficulty, of excavating the rock would depend on if the rock encountered is fractured or not. Rock that is not fractured and has a high compressive strength is considered non-rippable and may require mechanical means or controlled blasting to remove. It is anticipated that rock encountered which is non-rippable would be excavated utilizing mechanical means such as a rock breaker or a rock breaker in combination with a rotary cutting head. However, if the rock cannot be excavated utilizing mechanical means, controlled blasting would be required. At the current stage of planning, exact blasting requirements are unknown, including the associated quantities of blasts, blast fuel, holes per blast and area per blast.

2.3.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Construction equipment estimates are based on default values in CalEEMod and information from the project developer. Table 6, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 6
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Equipment	Horsepower	Number	Hours/Day
Grading			
Tractors/Loaders/Backhoes	84	2	7
Excavators	36	2	8
Site Preparation			
Graders	148	1	8
Rubber Tired Dozer	367	1	7
Tractors/Loaders/Backhoes	84	1	8
Underground Utilities			
Tractors/Loaders/Backhoes	84	2	8
Building Construction			
Cranes	367	1	6
Forklifts	82	1	6
Generator Sets	14	1	8
Tractors/Loaders/Backhoes	84	1	6
Welders	46	3	8
Paving			
Tractors/Loaders/Backhoes	84	1	8
Pavers	81	1	6
Paving Equipment	89	1	8
Rollers	36	7	7
Cement and Mortar Mixers	10	6	1
Architectural Coatings			
Air Compressors	37	1	6

Source: CalEEMod (complete data is provided in Appendix A of this report).

2.3.1.3 Construction On-Road Trips

Worker commute trips and vendor delivery trips were modeled based on CalEEMod defaults. Worker trips are anticipated to vary between 1 and 19 trips per day, depending on construction activity.

Exporting vegetation from the site during site preparation would result in approximately 24 one-way haul trips (an average of approximately 1 one-way trip per workday). No haul truck trips would be required during grading as there would be no export of material. The CalEEMod default worker, vendor and haul trip distances were used in the model.

2.3.2 Operational Emissions

2.3.2.1 Area Source Emissions

Area sources include emissions from landscaping equipment, the use of consumer products, the reapplication of architectural coatings for maintenance, and hearths. Emissions associated with area sources were estimated using the CalEEMod default values with the exception of hearths, as the project would not include wood-burning stoves or fireplaces.

2.3.2.2 Energy Emissions

Development within the project would use electricity for lighting, heating, and cooling. Natural gas and electricity would be supplied by San Diego Gas and Electric. The gas-fired devices that may be utilized for the project include furnaces, hot water heaters, stoves, and ovens. As with all fossil fuel combustion, the substances emitted include GHGs, criteria pollutants, and toxic substances.

Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which is then transmitted to end users. A building's electricity use is thus associated with the off-site or indirect emission of GHGs at the source of electricity generation (power plant) and is included in the GHG analysis in Section 3, below.

The 2022 Title 24 standards include the requirement for on-site solar electricity generation which would be applicable to the project. However, the total system capacity is currently not known and therefore no energy use reductions resulting from project solar panels were included in the modeling, resulting in a conservative analysis. CalEEMod default energy use assumptions were used in this analysis.

2.3.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile sources are associated with project-generated vehicle trips. Based on SANDAG's trip generation guide (SANDAG 2002), the proposed project's 15 single-family homes would generate 150 average daily trips (ADT) with 12 morning peak trips and 15 afternoon peak trips. CalEEMod default vehicle speeds, trip purposes, and trip lengths were applied to these vehicle trips.

2.4 AIR QUALITY SIGNIFICANCE CRITERIA

Thresholds used to evaluate potential air quality and odor impacts are based on applicable criteria in the State's California Environmental Quality Act (CEQA) Guidelines Appendix G. A significant air quality and/or odor impact could occur if the implementation of the proposed project would:

1. Conflict with or obstruct implementation of an applicable air quality plan;
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is non-attainment under an applicable NAAQS or CAAQS;
3. Expose sensitive receptors to substantial pollutant concentrations; or

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

To determine whether the project would result in a cumulatively considerable net increase of PM₁₀, PM_{2.5}, or the ozone precursors NO_x and VOCs, emissions were evaluated based on the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (SDAPCD 2019).

For CEQA purposes, these screening criteria were used as numeric methods to determine if the project would result in a significant impact on air quality or an adverse effect on human health. The screening thresholds are shown in Table 7, *Screening-level Thresholds for Air Quality Impact Analysis*.

Table 7
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions (Pounds/Day)			
Respirable Particulate Matter (PM ₁₀)	100		
Fine Particulate Matter (PM _{2.5})	67		
Oxides of Nitrogen (NO _x)	250		
Oxides of Sulfur (SO _x)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	137		
Operational Emissions			
	Pounds per Hour	Pounds per Day	Tons per Year
Respirable Particulate Matter (PM ₁₀)	---	100	15
Fine Particulate Matter (PM _{2.5})	---	67	10
Oxides of Nitrogen (NO _x)	25	250	40
Oxides of Sulfur (SO _x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	137	15
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: SDAPCD 2019

T-BACT = Toxics-Best Available Control Technology

SDAPCD Rule 51 (Nuisance) prohibits emissions from any source whatsoever in such quantities of air contaminants or other material, which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. It is generally accepted that the considerable number of persons requirement in Rule 51 is normally satisfied when 10 different individuals/households have made separate complaints within 90 days. Odor complaints from a “considerable” number of persons or businesses in the area would be a significant, adverse odor impact.

2.5 AIR QUALITY IMPACT ANALYSIS

2.5.1 Issue 1: Consistency with the Regional Air Quality Plan

The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. The Attainment Plan outlines SDAPCD's plans and control measures designed to attain the NAAQS for ozone. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the CalEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and RAQS.

The RAQS and Attainment Plan rely on information from CARB and SANDAG, including projected growth in the San Diego County, and mobile, area, and all other source emissions to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. CARB's mobile source emission projections and SANDAG's growth projections are based on population, employment and transportation trends, and land use plans developed by the local governments. Accordingly, projects that propose development that is consistent with the population and employment growth anticipated by these land use plans would be consistent with the RAQS and Attainment Plan. If a project proposes development that results in growth greater than that anticipated in the adopted land use plans and SANDAG's growth projections upon which the plans are based, the project may conflict with the RAQS and Attainment Plan and could have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the project and the surrounding projects would exceed the growth projections used in the RAQS and Attainment Plan for the specific subregional area.

The project site is designated as Medium Density Residential (MD) in the City's General Plan and is zoned as R-1-B, which allows for a residential density of 10 dwelling units per acre. The project proposes a single-family residential development with a density of approximately 9 dwelling units per acre, which is below the 10 dwelling units per acre density allowed by the project site's land use designation and zoning. The project would be consistent with the land use plans and growth projections upon which the RAQS and Attainment Plan are based. As such, residential growth resulting from the project and associated changes in regional emissions are accounted for in the SIP, which is crafted to bring the basin into attainment for all criteria pollutants. Additionally, as detailed in Section 2.5.2 below, the project would not result in any construction or operational period emissions above established thresholds. Therefore, the proposed project would not conflict with or obstruct implementation of the RAQS or Attainment Plan and impacts would be less than significant.

2.5.2 Issue 2: Cumulatively Considerable Net Increase of Nonattainment Criteria Pollutants

The project would generate criteria pollutants in the short-term during construction and the long-term during operation. To determine whether a project would result in a cumulatively considerable net increase in criteria pollutant emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SDAPCD (as shown in Table 7).

2.5.2.1 Construction Criteria Pollutant and Precursor Emissions

The project's temporary construction emissions were estimated using CalEEMod as described in Section 2.3. The results of the modeling of the project's construction emissions of criteria pollutants and ozone precursors are shown in Table 8, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SDAPCD thresholds. The tables do not present emissions from blasting, as the specifics of blasting are unknown at the current level of project design. The complete CalEEMod output is provided in Appendix A to this report.

Table 8
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Year/Season	Pollutant Emissions (pounds per day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2025/Summer	4.5	23.5	26.9	<0.1	3.6	2.1
2025/Winter	4.8	14.6	18.5	<0.1	0.7	0.6
Maximum Daily Emissions	4.8	23.5	26.9	<0.1	3.6	2.1
<i>SDAPCD Thresholds</i>	<i>137</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>67</i>
Exceed Thresholds?	No	No	No	No	No	No

Source: CalEEMod (output data is provided in Appendix A)

VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides;

PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter;

SDAPCD = San Diego County Air Pollution Control District

As shown in Table 8, the project's temporary construction-related criteria pollutant and precursor emissions would be below the SDAPCD's significance thresholds.

As discussed in Section 2.3, blasting may occur due to the several large rock outcroppings that occur on the site. Blasting involves drilling small holes into the rock and placing explosives. Flyrock protection is installed prior to blasting, and seismographs are placed to measure and record peak particle velocity and air blast levels at various distances from the blast site. However, the type and quantity of explosive material used, and the potential timing and need for blasts cannot be determined at this time because this information depends on the site-specific conditions and requirements of each location. As such, details regarding blasting for project components are unavailable at the current level of project design, and analysis of impacts associated with blasting would be speculative and likely inaccurate. Where blasting may be used, dust control measures are also implemented and include a combination of steel plate covers, geo-textile fabric with chain link fence covering, and wetting of the blasting surface. In the event that blasting is utilized, the blasting contractor would be required to obtain a blasting permit and explosive permit. However, a site-specific analysis would be necessary to ensure that emissions from blasting activities would be within the daily SDAPCD emission limits. Therefore, impacts associated with blasting for the project are assessed as potentially significant.

Mitigation Measures

The following mitigation measure is required if the project will require blasting during construction.

MM Air-1 Site-specific Analysis Related to Blasting. Prior to the commencement of blasting activities, the Applicant shall require the preparation of a project-specific air quality impact analysis by a qualified air quality consultant for any project activities that requires blasting to verify that blasting emissions are less than the daily SDAPCD

significance thresholds listed in Table 7. If blasting results in exceedances of emissions thresholds, the Applicant shall implement additional measures to reduce emissions to within SDAPCD daily screening level thresholds. These measures may include reducing the size, extent, or number of blasting events on a given day. The specific additional measures, if required, shall be determined by the qualified air quality consultant based on the results of the final air quality analysis. If the measures are unable to reduce emissions to within SDAPCD daily screening level thresholds, no blasting shall occur. In this scenario, any substitute method for blasting shall also have an air quality analysis performed as described above that demonstrates the emissions would be within SDAPCD screening level thresholds.

Significance After Mitigation

Implementation of mitigation measure MM Air-1 would reduce potentially significant impacts from blasting activities to a less than significant level, because emissions would be required to implement measures (if needed) to ensure that air pollutant emissions would not exceed the daily SDAPCD significance thresholds.

2.5.2.2 Operation Criteria Pollutant and Precursor Emissions

The project's long-term maximum daily and annual operational emissions were estimated using CalEEMod as described in Section 2.3. The results of the modeling of the project's operational emissions of criteria pollutants and precursors are shown in Table 9, *Operational Emissions*. The data are presented as the maximum anticipated daily emissions and annual emissions for comparison with the SDAPCD thresholds. The complete CalEEMod output is provided in Appendix A to this report.

**Table 9
OPERATIONAL EMISSIONS**

Source	Pollutant Emissions					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Daily Emissions (pounds per day)						
Mobile	0.6	0.4	3.7	<0.1	0.8	0.2
Area	0.8	-	0.9	<0.1	<0.1	<0.1
Energy	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Total Project Emissions^{1, 2}	1.4	0.5	4.6	<0.1	0.8	0.2
<i>SDAPCD Daily Thresholds</i>	<i>137</i>	<i>250</i>	<i>550</i>	<i>250</i>	<i>100</i>	<i>67</i>
Exceed Daily Threshold?	No	No	No	No	No	No
Annual Emissions (tons per year)						
Mobile	<0.1	<0.1	0.6	<0.1	0.1	<0.1
Area	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Project Emissions¹	0.2	<0.1	0.7	<0.1	0.1	<0.1
<i>SDAPCD Annual Thresholds</i>	<i>15</i>	<i>40</i>	<i>100</i>	<i>40</i>	<i>15</i>	<i>10</i>
Exceed Annual Threshold?	No	No	No	No	No	No

Source: CalEEMod (output data is provided in Appendix A)

¹ Totals may not sum due to rounding.

² Maximum daily emissions of VOC and CO occur during summer, maximum daily emission of NO_x occur during winter, emissions of SO_x, PM₁₀ and PM_{2.5} are not seasonally dependent.

VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides;
PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter;
SDAPCD = San Diego County Air Pollution Control District

As shown in Table 9, the project's long-term emissions of criteria pollutants and precursors would not exceed the SDAPCD daily or annual screening thresholds. Therefore, the project's operational activities would not result in a cumulatively considerable net increase of criteria pollutants that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, and the impact would be less than significant.

2.5.3 Issue 3: Impacts to Sensitive Receptors

Impacts to sensitive receptors are typically analyzed for operational period CO hotspots and exposure to TACs. An analysis of the project's potential to expose sensitive receptors to these pollutants is provided below.

2.5.3.1 Construction Diesel Particulate Matter Emissions

Implementation of the project would result in the use of heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles. These vehicles and equipment could generate the TAC DPM. Generation of DPM from construction projects typically occurs in a localized area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed would also vary throughout the construction period. During some equipment-intensive phases such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has to the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for the evaluation of long-duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations throughout the project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial DPM concentrations. Therefore, this impact would be less than significant.

2.5.3.2 Localized Carbon Monoxide Hotspots

A CO hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. Vehicle exhaust is the primary source of CO. In an urban setting, the highest CO concentrations are generally found within close proximity to congested intersections.

Under typical meteorological conditions, CO concentrations tend to decrease as the distance from the emissions source (i.e., congested intersection) increases. Project-generated traffic has the potential of contributing to localized “hot spots” of CO off-site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections, where the level of service (LOS) is severely degraded.

As discussed in Section 2.3.2, the project would generate approximately 12 morning peak trips and 15 afternoon peak trips. No LOS analysis was available for the intersection in the project vicinity. However, the peak hour trips generated by the project would not be enough to substantially affect the roadway network. The project would not contribute to a CO hotspot and impacts would be less than significant.

2.5.4 Issue 4: Odors

As discussed above, the State of California Health and Safety Code Sections 41700 and 41705, and SDAPCD Rule 51, prohibit emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. Any unreasonable odor discernible at the property line of the project site will be considered a significant odor impact.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations (SCAQMD 1993). The project, involving a residential development, would not include any of these uses nor are there any of these land uses in the project vicinity.

Emissions from construction equipment, such as diesel exhaust, and VOCs from architectural coatings and paving activities may generate odors; however, these odors would be temporary, intermittent, and not expected to affect a substantial number of people. Additionally, noxious odors would be confined to the immediate vicinity of construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of the odor-producing materials. Long-term operation of the project would not be a substantial source of objectionable odors. Therefore, the project would not create objectionable odors affecting a substantial number of people, and the impact would be less than significant.

3.0 GREENHOUSE GAS EMISSIONS

3.1 GREENHOUSE GAS SETTING

3.1.1 Climate Change Overview

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth’s atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with the most recent ten-year period marking the warmest years on record since 1880 (National Aeronautics and Space Administration [NASA] 2024). The newest release in long-term warming trends announced 2023 ranked as the warmest year on record with an increase of 2.11 °F compared to the late 19th-century (1850-1900) average (NASA 2024). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2021). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a “high confidence” that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to preindustrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalents (CO₂e) by the year 2100 (IPCC 2021).

3.1.2 Greenhouse Gases

The GHGs defined under California’s Assembly Bill (AB) 32 include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Carbon Dioxide. CO₂ is the most important and common anthropogenic GHG. CO₂ is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO₂ include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO₂ concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO₂ concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of September 2024, the CO₂ concentration exceeded 422 ppm (National Oceanic and Atmospheric Administration [NOAA] 2024).

Methane. CH₄ is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N₂O is produced by both natural and human-related sources. N₂O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N₂O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Hydrofluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth’s surface). Chlorofluorocarbons were first synthesized in 1928 for use as refrigerants, aerosol propellants,

and cleaning solvents. Because hydrofluorocarbons destroy stratospheric ozone, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur Hexafluoride. SF₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO₂. For example, because methane and N₂O are approximately 29 and 273 times more powerful than CO₂, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 29 and 771, respectively (CO₂ has a GWP of 1). CO₂e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO₂e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report. In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (IPCC 2007). In 2013 and again in 2021, the IPCC updated the GWP values based on the latest science in its Fifth and Sixth Assessment Reports, respectively (IPCC 2013 and 2021). However, the United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the Fourth Assessment Report. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using Fourth Assessment Report GWP values. Therefore, statewide and national GHG inventories have not yet updated their GWP values to the Sixth Assessment Report values.

By applying the GWP ratios, project-related CO₂e emissions can be tabulated in metric tons (MT) per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over 100 years is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 10, *Global Warming Potentials and Atmospheric Lifetimes*.

Table 10
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO ₂)	50-200	1
Methane (CH ₄)	12	25
Nitrous Oxide (N ₂ O)	114	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

Source: IPCC 2007

HFC: hydrofluorocarbon; PFC: perfluorocarbon

3.2 GREENHOUSE GAS REGULATORY SETTING

All levels of government have some responsibility for the protection of air quality, and each level (federal, State, and regional/local) has specific responsibilities relating to air quality regulation. GHG emissions and the regulation of GHGs is a relatively new component of air quality management.

3.2.1 Federal Greenhouse Gas Regulations

3.2.1.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO₂ is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO₂, CH₄, N₂O, HFC, PFC, and SF₆) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

On June 30, 2022, the U.S. Supreme Court decision published in *West Virginia v. U.S. Environmental Protection Agency* overturned the USEPA's Clean Power Plan rule which cited Section 111(d) of the CAA for authority to set limits on CO₂ emissions from existing coal- and natural-gas-fired power plants. The June 30, 2022 decision does not overturn the April 2, 2007 decision; however, it may limit the USEPA's authority to develop rules limiting GHG emissions without clear congressional authorization.

3.2.1.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve the fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025.

In December 2021, USEPA issued a new rule formally adopting standards previously proposed in August 2021 for model years 2023 and 2024 and finalizing more stringent standards than previously proposed for model years 2025 and 2026. The rule assumes a 17 percent electric vehicle market penetration by 2026. Although this is a departure from the NHTSA CAFE standards, USEPA did coordinate with NHTSA during development of the new standards. On April 12, 2023, USEPA announced new, more ambitious proposed standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027. The proposal builds upon USEPA's final standards for federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 and leverages advances in clean car technology to result in benefits to Americans ranging from reducing climate pollution, to improving public health, to saving drivers money through reduced fuel and maintenance costs. The proposed standards would phase in over model years 2027 through 2032.

3.2.2 California Greenhouse Gas Regulations

There are numerous State plans, policies, regulations, and laws related to GHG emissions and global climate change. Following is a discussion of some of these plans, policies, and regulations that (1) establish overall State policies and GHG emission reduction targets; (2) require State or local actions that result in direct or indirect GHG emission reductions for the proposed project; and (3) require CEQA analysis of GHG emissions.

3.2.2.1 California Energy Code

CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space and water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Title 24 standards went into effect on January 1, 2023. The 2022 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The update particularly emphasizes heat pumps for space heating and water heating and extends the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combinations with heat pumps to enable California buildings to be responsive to climate change. This Energy code also strengthens ventilation standards to improve indoor air quality. (California Energy Commission [CEC] 2022).

The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards—the energy budgets—that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

3.2.2.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for all nonresidential buildings (including industrial buildings) and residential buildings for which no other state agency has authority to adopt green building standards. The current 2022 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2023 (California Building Standards Commission [CBSC] 2022).

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how

best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

3.2.2.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

3.2.2.4 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that the CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

3.2.2.5 Senate Bill 375

Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPOs). CARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate Alternative Planning Strategy to meet the targets. The Alternative Planning Strategy is not a part of the RTP. Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

The SANDAG is San Diego's local MPO and has responded to the requirements of SB 375 with the preparation of an RTP/SCS. The 2021 Regional Plan (SANDAG 2021) is discussed in greater detail in Section 3.2.3, below.

3.2.2.6 Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changes transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California. Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. According to the legislative intent contained in SB 743, these changes to current practice were necessary to balance the needs of congestion management more appropriately with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions.

3.2.2.7 Senate Bill 97

SB 97 required the Governor's Office of Planning and Research to develop recommended amendments to the State CEQA Guidelines for addressing GHG emissions, including the effects associated with transportation and energy consumption. The amendments became effective on March 18, 2010.

3.2.2.8 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union. The emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

3.2.2.9 Senate Bill 32 and Assembly Bill 197

As a follow-up to AB 32 and in response to EO-B-30-15, SB 32 was passed by the California legislature in August 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030 and requires the State to invest in the communities most affected by climate change. AB 197 establishes a legislative committee on climate change policies to help continue the State's activities to reduce GHG emissions.

3.2.2.10 Assembly Bill 1279

Approved by Governor Newsom on September 16, 2022, AB 1279, *The California Climate Crisis Act*, declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of CO₂ from the atmosphere (carbon capture), and almost complete transition away from fossil fuels.

3.2.2.11 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG

emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal CAFE rules for passenger vehicles (CARB 2024e). In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2024e).

3.2.2.12 Assembly Bill 341

The State legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the solid waste diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The final regulation was approved by the Office of Administrative Law on May 7, 2012, and went into effect on July 1, 2012.

3.2.2.13 Executive Order S-01-07 – Low Carbon Fuel Standard

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. As a result, CARB continues to implement the LCFS statewide.

3.2.2.14 California Air Resources Board: Climate Change Scoping Plan

The Scoping Plan is a strategy CARB develops and updates at least one every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG emissions targets (CARB 2008).

The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants. The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030. On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in short-lived climate pollutants; support for sustainable

development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022).

3.2.3 Regional Greenhouse Gas Policies and Plans

3.2.3.1 San Diego Association of Government's Regional Plan

SANDAG's 2021 Regional Plan (Regional Plan; SANDAG 2021) is the long-range planning document developed to address the region's housing, economic, transportation, environmental, and overall quality-of-life needs. The purpose is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region. The Regional Plan is a 30-year plan that considers how the community will grow, where residents will live, and how residents and visitors will move around the region. It combines the RTP, SCS, and Regional Comprehensive Plan. As such, the Regional Plan must comply with specific state and federal mandates. These include an SCS, per SB 375, that achieves GHG emissions reduction targets set by the CARB; compliance with federal civil rights requirements (Title VI); environmental justice considerations; air quality conformity; and public participation.

3.2.4 Local Greenhouse Gas Plans

3.2.4.1 City of Vista Climate Action Plan

The City has developed the Climate Action Plan (CAP) to address the issues of climate change as it relates to growth in the City, and to protect the environment for visitors and residents alike (City 2012). The CAP was adopted in December of 2013 and was last updated in October of 2021 (City 2021). The intent of the plan is to reduce traffic congestion and solid waste generation, improve air quality, increase safety for pedestrians and cyclists, and encourage more efficient use of energy and water. Additionally, this CAP requires meaningful GHG reductions by 2030, in accordance with the guidelines of SB 32, the Governor's EO S-3-05, and CEQA guidelines, which will help improve the quality of life in the City. The implementation of the CAP will also help lead agencies to assess cumulative impacts of a project and provide a means for future projects to address GHG impacts under CEQA. A lead agency may conclude that a project's GHG impact is not cumulatively significant if the project demonstrates consistency with the City's CAP (CEQA Guidelines Section 15183.5[h][3]), thereby reducing overall project costs.

Through the CAP, the City has established goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste reduction, economic development and open space and natural habitats to further their commitment. The development of the 2013 CAP coincided with City's General Plan Update and included a community-wide emissions inventory calculated using the socioeconomic growth rates from the General Plan Update. The 2021 CAP provides the city with an updated GHG inventory and new and updated measures aimed at reducing GHG emissions citywide.

3.2.4.2 City of Vista Municipal Code

Chapter 13.17 of the City Municipal Code, Construction and Demolition Debris Recycling, requires all construction, demolition, and remodeled projects within the City which have a total project value equal

to or greater than \$75,000 to divert at least 50 percent of the total construction and demolition debris generated by the project via reuse or recycling.

3.3 GREENHOUSE GAS EXISTING CONDITIONS

3.3.1 Worldwide and National Greenhouse Gas Inventory

In 2020, total anthropogenic GHG emissions worldwide were estimated at 49,800 million metric tons (MMT) of CO₂e emissions (PBL 2022). The five largest emitting countries and the European Union, together account for about 60 percent of total global GHG emissions: China (27 percent), the United States (12 percent), the European Union (about 7 percent), India (7 percent), the Russian Federation (4.5 percent) and Japan (2.4 percent). These countries also have the highest CO₂ emission levels (PBL 2022).

Per the USEPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2020, total United States GHG emissions were approximately 5,981 MMT CO₂e in 2020 (USEPA 2022). The primary GHG emitted by human activities in the United States was CO₂, which represented approximately 76.4 percent of total GHG emissions (4,760 MMT CO₂e). The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8 percent of CO₂ emissions in 2018 (5,031.8 MMT CO₂e). Relative to 1990, gross United States GHG emissions in 2020 are lower by 7.3 percent, down from a high of 15.2 percent above 1990 levels in 2007. GHG emissions decreased from 2019 to 2020 by 10.6 percent and overall, net emissions in 2020 were 21.4 percent below 2005 levels (USEPA 2022).

3.3.2 State Greenhouse Gas Inventories

CARB performed statewide inventories for the years 1990 to 2021, as shown in Table 11, *California State Greenhouse Gas Emissions by Sector*. The inventory is divided into six broad sectors of economic activity: agriculture, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO₂e.

As shown in Table 11, statewide GHG source emissions totaled 431 MMT CO₂e in 1990, 471 MMT CO₂e in 2000, 449 MMT CO₂e in 2010, and 381 MMT CO₂e in 2021. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

Table 11
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	1990 Emissions (MMT CO ₂ e)	2000 Emissions (MMT CO ₂ e)	2010 Emissions (MMT CO ₂ e)	2021 Emissions (MMT CO ₂ e)
Agriculture and Forestry	18.9 (4%)	31.0 (7%)	33.7 (8%)	30.5 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	22.88 (6%)
Electricity Generation	110.5 (26%)	105.4 (22%)	90.6 (20%)	61.01 (16%)
Industrial	105.3 (24%)	105.8 (22%)	101.8 (23%)	83.89 (22%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.5 (8%)
Transportation	150.6 (35%)	183.2 (39%)	170.2 (38%)	148.71 (39%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	3.81 (1%)
TOTAL	430.7	471.1	448.5	381.3

Source: CARB 2007 and CARB 2024f

MMT = million metric tons; CO₂e = carbon dioxide equivalent

3.3.3 Regional Greenhouse Gas Inventory

A San Diego regional emissions inventory that was prepared by the University of San Diego (USD) Energy Policy Initiatives Center (EPIC) accounted for the unique characteristics of the region (USD EPIC 2023). The 2019 emissions inventory for Unincorporated San Diego County is presented in Table 12, *San Diego County Greenhouse Gas Emissions by Sector in 2019*. The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Table 12
SAN DIEGO COUNTY GREENHOUSE GAS EMISSIONS BY SECTOR IN 2019

Sector	2019 Emissions MMT CO ₂ e (% total) ¹
On-Road Transportation	1.33 (45%)
Electricity	0.60 (20%)
Natural Gas Consumption	0.48 (16%)
Solid Waste	0.19 (6%)
Agriculture	0.13 (4%)
Propane	0.12 (4%)
Off-Road Transportation	0.07 (2%)
Water	0.04 (1%)
Wastewater	0.02 (1%)
TOTAL	2.98

Source: USD EPIC 2023. Unincorporated County of San Diego 2019 Greenhouse Gas Emissions Inventory and Projections. Prepared by the University of San Diego School Energy Policy Initiatives Center (EPIC) and Ascent.

¹ Percentages may not total 100 due to rounding.

MMT = million metric tons; CO₂e = carbon dioxide equivalent

A CAP was prepared for the City in 2012 and updated in 2021. The CAP includes the GHG emissions by sector for 2012 and the percent change from 2012 to 2014, as shown in Table 13, *City of Vista Emissions by Sector*.

Table 13
CITY OF VISTA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	2012 Emissions MMT CO ₂ e (% total) ¹	2013 Emissions MMT CO ₂ e (% total)	2014 Emissions MMT CO ₂ e (% total)
On-Road Transportation	0.297 (49%)	.297 (49%)	.296 (46%)
Electricity	0.185 (31%)	.177 (29%)	.155 (27%)
Natural Gas	0.082 (14%)	.086 (14%)	.075 (13%)
Off-road Transportation	0.017 (3%)	.017 (3%)	.016 (3%)
Solid Waste	0.014 (2%)	.015 (2%)	.015 (3%)
Waste	0.006 (1%)	.007 (1%)	.007 (1%)
Wastewater	0.003 (0.5%)	.003 (0.5%)	.003 (0.5%)
TOTAL	0.603	0.602	0.567
Percent Change from 2012	-	-0.17%	-5.97%

Source: City of Vista 2021 Climate Action Plan Appendix A

¹ Percentages may not total 100 due to rounding.

MMT = million metric tons; CO₂e = carbon dioxide equivalent

3.4 GREENHOUSE GAS METHODOLOGY

The project's GHG emissions were calculated using CalEEMod, as described in Section 2.3.

3.4.1 Construction Greenhouse Gas Emissions

Construction of the project would result in emissions of GHGs from the use of diesel-powered equipment, from worker vehicles traveling to and from the project site, and from trucks hauling material to and from the project site. The anticipated construction equipment and vehicle trips required for project construction are described in Section 2.3.

3.4.2 Operational Greenhouse Gas Emissions

3.4.2.1 Area Sources

This CalEEMod module estimates the GHG emissions that would occur from the use of hearths (e.g., wood or gas fireplaces and wood stoves), and landscaping equipment. This module also estimates emissions due to the use of consumer products and architectural coatings that have VOCs; however, these sources do not emit GHGs. The project would not include wood burning or natural gas fireplaces or woodstoves.

The use of landscape equipment emits GHGs associated with the equipment's fuel combustion. CalEEMod estimates the number and type of equipment needed based on the number of summer days given the project's location as entered in the project characteristics module. The model defaults for landscaping equipment were assumed.

3.4.2.2 Vehicular (Mobile) Sources

Operational emissions from mobile sources are associated with project-generated vehicle trips. Based on SANDAG's trip generation guide (SANDAG 2002), the daily trip generation for single-family residential land uses is 10 trips per dwelling unit. Therefore, for the proposed project's 15 single-family homes, the

anticipated trip generation is 150 ADT. CalEEMod default vehicle speeds, trip purposes, and trip lengths were applied to these vehicle trips.

3.4.2.3 Energy Sources

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are generated during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect and are calculated in CalEEMod as associated with a building's operation.

Energy source emissions were calculated using CalEEMod default values, which are based on the CEC-sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies, which identify energy use by building type and climate zone. Each land use type input to the land use module is mapped in the energy module to the appropriate California Commercial End Use Survey and Residential Appliance Saturation Survey building type.

The 2022 Title 24 standards include the requirement for on-site solar electricity generation which would be applicable to the project. However, the total system capacity is currently not known and therefore no energy use reductions resulting from project solar panels were included in the modeling, resulting in a conservative analysis. The project's energy use was modeled using CalEEMod defaults.

3.4.2.4 Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. Solid waste source emissions were calculated using CalEEMod default values.

3.4.2.5 Water and Wastewater Sources

The amount of water used, and wastewater generated, by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit methane and nitrous oxide.

CalEEMod uses default electricity intensity values for various phases of supplying and treating water from CEC's Refining Estimates of Water-Related Energy Use in California. The model estimates water/wastewater emissions by multiplying the total projected water/wastewater demand by the applicable water electricity intensities and by the utility intensity GHG factors. The default CalEEMod water use assumptions were used for the GHG emissions estimates.

3.4.2.6 Refrigerants

CalEEMod calculates GHG emissions associated with refrigerants (typically HFCs or blends of gases containing HFCs) which are emitted through leakage or maintenance from project refrigeration systems, freezers, and air conditioning systems. Refrigerant emissions were calculated using CalEEMod defaults.

3.5 GREENHOUSE GAS SIGNIFICANCE CRITERIA

Given the relatively small levels of emissions generated by a typical project in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, considering the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The determination of significance is governed by CEQA Guidelines 15064.4, entitled “Determining the Significance of Impacts from Greenhouse Gas Emissions.” CEQA Guidelines 15064.4(a) states, “[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to ... [use a quantitative model or qualitative model]” (emphasis added). In turn, CEQA Guidelines 15064.4(b) clarifies that a lead agency should consider “Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.” Therefore, consistent with CEQA Guidelines 15064.4, the GHG analysis for the project appropriately relies upon a threshold based on the exercise of careful judgement and believed to be appropriate in the context of this particular project.

Following the methods described by the CAPCOA in their report entitled “CEQA & Climate Change,” dated January 2008, the City conducted a review of projects within the City to determine a 90 percent capture rate. As identified in the City’s *Interim Guidance Memorandum on Assessing GHG Emissions from Projects Subject to CEQA*, it was determined that a level of 1,185 MT CO₂e would capture 90 percent of the City’s emissions that are attributable to development projects (City 2016).

The interim threshold was developed to meet the statewide GHG emissions reduction target of achieving 1990 emissions levels by 2020 and be on track to meet the 80 percent below 1990 levels by 2050 target in accordance with SB 32 and EO S-3-05. The City has not adopted guidance or revised thresholds to account for GHG reduction target beyond 2020. Therefore, this analysis compares the project’s emissions to a reduced threshold corresponding to the SB 32 reduction target of emissions 40 percent below 1990 levels by 2030. Accordingly, a threshold reduced by 4.98 percent for each year between 2020 and 2030 would meet the mandates of SB 32. The first full year of operation for the project is anticipated to be 2026. Therefore, a threshold 26 percent below the City threshold of 1,185 MT CO₂e per service population per year, or 872 MT, is used in this analysis.

Neither the SDAPCD nor the City have adopted thresholds for determining the significance of a project's temporary construction GHG emissions. To be conservative in accounting for all the project's GHG emissions, the construction period emissions were amortized (i.e., averaged) over the anticipated 30-year lifespan of the project buildings and added to the project's operational emissions.

3.6 GREENHOUSE GAS IMPACT ANALYSIS

3.6.1 Issue 1: Greenhouse Gas Emissions

3.6.1.1 Construction Greenhouse Gas Emissions

The project's temporary construction emissions were estimated using CalEEMod as described in Section 2.3. The results of the modeling of the project's GHG emissions show that construction of the project would generate a total of 183.7 MT of CO₂e. For construction emissions, SCAQMD guidance recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 6.1 MT CO₂e emissions per year. The CalEEMod output is included as Appendix A to this report.

3.6.1.2 Operational Greenhouse Gas Emissions

The GHG emissions associated with the long-term operation of the project were estimated using CalEEMod as described in Section 2.3 and Section 3.4. The results of the modeling of the project's operational GHG emissions are shown in Table 14, *Operational GHG Emissions*. The data are presented as the maximum anticipated operational GHG emissions for the first full year of operation (2026) and compared to the City threshold (adjusted for the year 2026).

Table 14
OPERATIONAL GREENHOUSE GAS EMISSIONS

Source	Emissions (MT CO ₂ e/year)
Vehicular (Mobile)	145.0
Area	0.2
Energy	24.7
Water and Wastewater	0.8
Solid Waste	3.1
Refrigerants	<0.1
Total Annual Emissions¹	173.9
<i>Amortized Construction Emissions</i>	6.1
Total Amortized Construction + Operational Emissions	180.0
<i>2026 Adjusted Threshold</i>	872.0
Exceed Threshold?	No

Source: CalEEMod, output data is provided in Appendix A

¹ Totals may not sum due to rounding.

MT = metric ton; CO₂e = carbon dioxide equivalent

As shown in Table 14, the project's GHG emissions would be approximately 180 MT CO₂e per year, which is below the 2026 adjusted City threshold of 872 MT CO₂e per year. Therefore, the project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant.

3.6.2 Issue 2: Conflict with Applicable Plans Adopted for the Purpose of Reducing Greenhouse Gas Emissions

The project, by achieving the City’s threshold, would not conflict with the goals of the City’s CAP and may be seen to exceed its fair share in achieving the state’s reduction target. Through compliance with AB 341 and Chapter 13.17 of the City’s Municipal Code, the project would be consistent with CAP measure W-1, Reduce Solid Waste Disposal, and Increase Recycling. The project would be constructed in accordance with the energy-efficiency standards, water reduction goals, and other “green” standards contained in the CALGreen Building Standards, including the requirement for onsite solar electricity generation. As such, the project would be consistent with local plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Therefore, the project would not conflict with applicable plans, policies, and regulations related to GHG emission reductions, and the impact would be less than significant.

4.0 LIST OF PREPARERS

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Appendix A

CalEEMod Output

Bobier Property Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year, Unmitigated
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 3. Construction Emissions Details
 - 3.1. Site Preparation (2025) - Unmitigated
 - 3.3. Grading (2025) - Unmitigated
 - 3.5. Building Construction (2025) - Unmitigated
 - 3.7. Paving (2025) - Unmitigated
 - 3.9. Architectural Coating (2025) - Unmitigated

3.11. Underground Infrastructure/Utilities (2025) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Bobier Property
Construction Start Date	4/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	20.2
Location	33.22076297350365, -117.25550846167357
County	San Diego
City	Vista
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6259
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.28

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
Single Family Housing	15.0	Dwelling Unit	1.67	33,000	3,300	—	42.0	—

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.	4.78	4.49	23.5	26.9	0.04	0.98	2.62	3.60	0.90	1.22	2.11	—	4,731	4,731	0.19	0.06	0.90	4,755
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.19	4.85	14.6	18.5	0.03	0.56	0.17	0.73	0.51	0.04	0.55	—	3,137	3,137	0.13	0.04	0.02	3,151
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.30	1.18	5.17	6.37	0.01	0.20	0.21	0.40	0.18	0.09	0.27	—	1,105	1,105	0.05	0.01	0.10	1,110
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.21	0.94	1.16	< 0.005	0.04	0.04	0.07	0.03	0.02	0.05	—	183	183	0.01	< 0.005	0.02	184

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.78	4.49	23.5	26.9	0.04	0.98	2.62	3.60	0.90	1.22	2.11	—	4,731	4,731	0.19	0.06	0.90	4,755

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.19	4.85	14.6	18.5	0.03	0.56	0.17	0.73	0.51	0.04	0.55	—	3,137	3,137	0.13	0.04	0.02	3,151
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.30	1.18	5.17	6.37	0.01	0.20	0.21	0.40	0.18	0.09	0.27	—	1,105	1,105	0.05	0.01	0.10	1,110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.24	0.21	0.94	1.16	< 0.005	0.04	0.04	0.07	0.03	0.02	0.05	—	183	183	0.01	< 0.005	0.02	184

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.	1.48	1.43	0.49	4.77	0.01	0.02	0.78	0.80	0.02	0.20	0.21	6.38	1,072	1,079	0.71	0.04	3.31	1,112
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.39	1.34	0.52	3.74	0.01	0.02	0.78	0.80	0.02	0.20	0.21	6.38	1,029	1,036	0.71	0.04	0.32	1,066
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.41	1.35	0.51	4.04	0.01	0.02	0.75	0.77	0.02	0.19	0.21	6.38	1,012	1,019	0.71	0.04	1.53	1,050
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.25	0.09	0.74	< 0.005	< 0.005	0.14	0.14	< 0.005	0.03	0.04	1.06	168	169	0.12	0.01	0.25	174

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	0.63	0.58	0.38	3.87	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	921	921	0.05	0.04	3.08	936
Area	0.84	0.84	0.01	0.85	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.28
Energy	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	148	148	0.02	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Waste	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	1.48	1.43	0.49	4.77	0.01	0.02	0.78	0.80	0.02	0.20	0.21	6.38	1,072	1,079	0.71	0.04	3.31	1,112
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.62	0.57	0.41	3.70	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	880	880	0.05	0.04	0.08	893
Area	0.76	0.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	148	148	0.02	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Waste	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	1.39	1.34	0.52	3.74	0.01	0.02	0.78	0.80	0.02	0.20	0.21	6.38	1,029	1,036	0.71	0.04	0.32	1,066
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.59	0.55	0.40	3.58	0.01	0.01	0.75	0.76	0.01	0.19	0.20	—	862	862	0.05	0.04	1.29	876
Area	0.80	0.80	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.12	1.12	< 0.005	< 0.005	—	1.13
Energy	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	148	148	0.02	< 0.005	—	149
Water	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Waste	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	1.41	1.35	0.51	4.04	0.01	0.02	0.75	0.77	0.02	0.19	0.21	6.38	1,012	1,019	0.71	0.04	1.53	1,050

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.11	0.10	0.07	0.65	< 0.005	< 0.005	0.14	0.14	< 0.005	0.03	0.04	—	143	143	0.01	0.01	0.21	145
Area	0.15	0.15	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.6	24.6	< 0.005	< 0.005	—	24.7
Water	—	—	—	—	—	—	—	—	—	—	—	0.17	0.08	0.25	0.02	< 0.005	—	0.80
Waste	—	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.11
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	0.26	0.25	0.09	0.74	< 0.005	< 0.005	0.14	0.14	< 0.005	0.03	0.04	1.06	168	169	0.12	0.01	0.25	174

3. Construction Emissions Details

3.1. Site Preparation (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	1.56	1.31	12.1	12.1	0.02	0.56	—	0.56	0.52	—	0.52	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	2.44	2.44	—	1.17	1.17	—	—	—	—	—	—	—
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	0.10	0.09	0.80	0.80	< 0.005	0.04	—	0.04	0.03	—	0.03	—	136	136	0.01	< 0.005	—	136
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—	—	—	—	—	—	—
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	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.35	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	71.2	71.2	< 0.005	< 0.005	0.27	72.2
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	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.8	74.8	< 0.005	0.01	0.16	78.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.46	4.46	< 0.005	< 0.005	0.01	4.52

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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.92	4.92	< 0.005	< 0.005	< 0.005	5.16
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.74	0.74	< 0.005	< 0.005	< 0.005	0.75
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.81	0.81	< 0.005	< 0.005	< 0.005	0.86

3.3. Grading (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	0.45	0.38	3.59	5.37	0.01	0.13	—	0.13	0.12	—	0.12	—	792	792	0.03	0.01	—	794
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	0.03	0.02	0.23	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.9	49.9	< 0.005	< 0.005	—	50.1
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	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.26	8.26	< 0.005	< 0.005	—	8.29
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	0.04	0.04	0.03	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	94.9	94.9	< 0.005	< 0.005	0.36	96.3
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.70	5.70	< 0.005	< 0.005	0.01	5.78
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.96
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. 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	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
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	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
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	0.46	0.39	3.23	3.63	0.01	0.12	—	0.12	0.11	—	0.11	—	651	651	0.03	0.01	—	654
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	0.07	0.59	0.66	< 0.005	0.02	—	0.02	0.02	—	0.02	—	108	108	< 0.005	< 0.005	—	108
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	0.02	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.19	52.0
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.1	40.1	< 0.005	0.01	0.10	42.0
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	0.02	0.02	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	48.4	48.4	< 0.005	< 0.005	< 0.005	49.0
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.2	40.2	< 0.005	0.01	< 0.005	41.9
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	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.03	17.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	0.02	15.2
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	—	2.92	2.92	< 0.005	< 0.005	< 0.005	2.97
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.40	2.40	< 0.005	< 0.005	< 0.005	2.51
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

3.7. Paving (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.63	6.50	0.01	0.20	—	0.20	0.19	—	0.19	—	992	992	0.04	0.01	—	995
Paving	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 Equipm ent	0.02	0.02	0.16	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.3	35.3	< 0.005	< 0.005	—	35.4
Paving	< 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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipm ent	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.85	5.85	< 0.005	< 0.005	—	5.87
Paving	< 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	0.05	0.05	0.04	0.51	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	112	112	0.01	< 0.005	0.01	113
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	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.02	4.02	< 0.005	< 0.005	0.01	4.08
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.67	0.67	< 0.005	< 0.005	< 0.005	0.68
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

3.9. Architectural Coating (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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.04	3.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.04	3.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.16	0.21	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	25.0
Architectural Coatings	0.57	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.12	4.12	< 0.005	< 0.005	—	4.13
Architectural Coatings	0.10	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.04	10.4
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.68	9.68	< 0.005	< 0.005	< 0.005	9.80
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	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
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

3.11. Underground Infrastructure/Utilities (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	0.26	0.21	2.20	3.82	0.01	0.08	—	0.08	0.08	—	0.08	—	581	581	0.02	< 0.005	—	583
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	0.26	0.21	2.20	3.82	0.01	0.08	—	0.08	0.08	—	0.08	—	581	581	0.02	< 0.005	—	583
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	0.06	0.05	0.54	0.94	< 0.005	0.02	—	0.02	0.02	—	0.02	—	143	143	0.01	< 0.005	—	144
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	0.01	0.01	0.10	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.7	23.7	< 0.005	< 0.005	—	23.8
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	0.02	0.02	0.02	0.23	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	47.4	47.4	< 0.005	< 0.005	0.18	48.2
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	0.02	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.8	44.8	< 0.005	< 0.005	< 0.005	45.4
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	—	11.1	11.1	< 0.005	< 0.005	0.02	11.3
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	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.87
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.63	0.58	0.38	3.87	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	921	921	0.05	0.04	3.08	936
Total	0.63	0.58	0.38	3.87	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	921	921	0.05	0.04	3.08	936
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.62	0.57	0.41	3.70	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	880	880	0.05	0.04	0.08	893
Total	0.62	0.57	0.41	3.70	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	880	880	0.05	0.04	0.08	893
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.11	0.10	0.07	0.65	< 0.005	< 0.005	0.14	0.14	< 0.005	0.03	0.04	—	143	143	0.01	0.01	0.21	145
Total	0.11	0.10	0.07	0.65	< 0.005	< 0.005	0.14	0.14	< 0.005	0.03	0.04	—	143	143	0.01	0.01	0.21	145

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.4	0.01	< 0.005	—	11.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.4	0.01	< 0.005	—	11.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.4	0.01	< 0.005	—	11.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	11.4	11.4	0.01	< 0.005	—	11.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1.88	1.88	< 0.005	< 0.005	—	1.97
Total	—	—	—	—	—	—	—	—	—	—	—	—	1.88	1.88	< 0.005	< 0.005	—	1.97

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	137	137	0.01	< 0.005	—	137
Total	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	137	137	0.01	< 0.005	—	137
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	137	137	0.01	< 0.005	—	137
Total	0.01	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	137	137	0.01	< 0.005	—	137
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.7	22.7	< 0.005	< 0.005	—	22.8
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	22.7	22.7	< 0.005	< 0.005	—	22.8

4.3. Area Emissions by Source

4.3.1. 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	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipm	0.08	0.08	0.01	0.85	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.28
Total	0.84	0.84	0.01	0.85	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.76	0.76	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19
Total	0.15	0.15	< 0.005	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.19	0.19	< 0.005	< 0.005	—	0.19

4.4. Water Emissions by Land Use

4.4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Total	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Total	—	—	—	—	—	—	—	—	—	—	—	1.01	0.48	1.49	0.10	< 0.005	—	4.84
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.17	0.08	0.25	0.02	< 0.005	—	0.80
Total	—	—	—	—	—	—	—	—	—	—	—	0.17	0.08	0.25	0.02	< 0.005	—	0.80

4.5. Waste Emissions by Land Use

4.5.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8

Total	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8
Total	—	—	—	—	—	—	—	—	—	—	—	5.37	0.00	5.37	0.54	0.00	—	18.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.11
Total	—	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.11

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04

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)

Equipm ent 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)

Equipm ent 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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)

Equipm ent 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
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[illegible]

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
Site Preparation	Site Preparation	7/1/2025	8/1/2025	5.00	24.0	—
Grading	Grading	4/1/2025	5/1/2025	5.00	23.0	—
Building Construction	Building Construction	7/1/2025	12/31/2025	5.00	132	—
Paving	Paving	12/15/2025	12/31/2025	5.00	13.0	—
Architectural Coating	Architectural Coating	9/29/2025	12/31/2025	5.00	68.0	—
Underground Infrastructure/Utilities	Trenching	7/1/2025	11/3/2025	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
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Back	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Underground Infrastructure/Utilities	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	1.04	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	5.40	12.0	LDA,LDT1,LDT2

Building Construction	Vendor	1.60	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.08	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Underground Infrastructure/Utilities	—	—	—	—
Underground Infrastructure/Utilities	Worker	5.00	12.0	LDA,LDT1,LDT2
Underground Infrastructure/Utilities	Vendor	—	7.63	HHDT,MHDT
Underground Infrastructure/Utilities	Hauling	0.00	20.0	HHDT
Underground Infrastructure/Utilities	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

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	66,825	22,275	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	200	22.5	0.00	—
Paving	0.00	0.00	0.00	0.00	0.22

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.22	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	540	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
Single Family Housing	150	143	128	53,256	1,109	1,058	948	393,754

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)
66825	22,275	0.00	0.00	—

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)
Single Family Housing	92,119	45.1	0.0330	0.0040	427,754

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	526,996	60,275

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	9.96	—

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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

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
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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
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5.16.2. Process Boilers

Equipment Type					
----------------	--	--	--	--	--

5.17. User Defined

Equipment Type	Fuel Type
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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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.38	annual days of extreme heat
Extreme Precipitation	3.30	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	11.8	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	35.1
AQ-DPM	61.7
Drinking Water	52.8
Lead Risk Housing	54.7
Pesticides	0.00
Toxic Releases	13.1
Traffic	38.9
Effect Indicators	—

CleanUp Sites	22.6
Groundwater	43.8
Haz Waste Facilities/Generators	47.4
Impaired Water Bodies	43.8
Solid Waste	52.9
Sensitive Population	—
Asthma	33.7
Cardio-vascular	40.8
Low Birth Weights	79.2
Socioeconomic Factor Indicators	—
Education	90.4
Housing	0.24
Linguistic	47.1
Poverty	48.0
Unemployment	15.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	27.87116643
Employed	89.43924034
Median HI	44.16784294
Education	—
Bachelor's or higher	9.547029385
High school enrollment	100
Preschool enrollment	4.439881945
Transportation	—

Auto Access	88.68215065
Active commuting	18.58077762
Social	—
2-parent households	55.56268446
Voting	33.46593096
Neighborhood	—
Alcohol availability	37.13589118
Park access	27.66585397
Retail density	45.96432696
Supermarket access	70.97395098
Tree canopy	11.00988066
Housing	—
Homeownership	39.81778519
Housing habitability	31.36147825
Low-inc homeowner severe housing cost burden	32.144232
Low-inc renter severe housing cost burden	90.79943539
Uncrowded housing	22.40472219
Health Outcomes	—
Insured adults	21.19851148
Arthritis	84.5
Asthma ER Admissions	46.7
High Blood Pressure	91.1
Cancer (excluding skin)	85.3
Asthma	46.1
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	59.8
Diagnosed Diabetes	48.6
Life Expectancy at Birth	46.1

Cognitively Disabled	87.2
Physically Disabled	84.3
Heart Attack ER Admissions	70.7
Mental Health Not Good	29.3
Chronic Kidney Disease	35.4
Obesity	33.0
Pedestrian Injuries	76.1
Physical Health Not Good	39.2
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	8.3
Current Smoker	34.8
No Leisure Time for Physical Activity	31.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	43.1
Elderly	79.3
English Speaking	5.7
Foreign-born	66.5
Outdoor Workers	12.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	28.5
Traffic Density	48.2
Traffic Access	69.4
Other Indices	—
Hardship	64.5
Other Decision Support	—

2016 Voting	57.5
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7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	43.0
Healthy Places Index Score for Project Location (b)	39.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Project information was updated per information provided by the project developer.
Construction: Construction Phases	The phases and schedule were changed from defaults per information provided by the project developer.
Construction: Off-Road Equipment	Equipment type/amount added for grading and underground infrastructure phases per information provided by the project developer.
Construction: Dust From Material Movement	The amount of material expected to be exported during site preparation was provided by the project developer.
Operations: Hearths	Fireplaces and wood stoves were removed to reflect the absence of them in the project.

Operations: Energy Use	—
Construction: Paving	The amount of paved area was provided by the project developer.
Operations: Vehicle Data	Weekday trips were changed to reflect the SANDAG trip generation rates for single-family residential land uses (10 ADT).