Appendix AQ-1

Air Quality Assessment

Air Quality Assessment

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Sacramento County, California

Kimley»Horn

Expect More. Experience Better.

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January 2024

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Appendix A: Air Quality Modeling Data

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	lead
µg/m^3	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RS	Resignation Substitution
SACOG	Sacramento Area Council of Governments
SFNA	Sacramento Federal Nonattainment Area
SMAQMD	Sacramento Metropolitan Air Quality Management District
SVAB	Sacramento Valley Air Basin
SB	Senate Bill
sf	square foot
SIP	State Implementation Plan
SO_{4-2}	sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (project). This analysis has been undertaken to analyze whether the proposed project would result in significant environmental impacts. The purpose of this Air Quality Assessment is to document whether any air quality-related impacts would occur based on the proposed project described below pursuant to State California Environmental Quality Act (CEQA).

1.1 Project Location

The project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento; refer to **Figure 1: Regional Map**. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport; see **Figure 2: Local Vicinity Map**. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006 and encompasses approximately 118 acres.

1.2 Project Description

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the project. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below.

Project Facilities

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields; see **Figure 3: Overall Site Plan.**

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices for operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single-story and have a footprint of approximately 3,000 square feet. The second building would include

a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

Site Access

Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

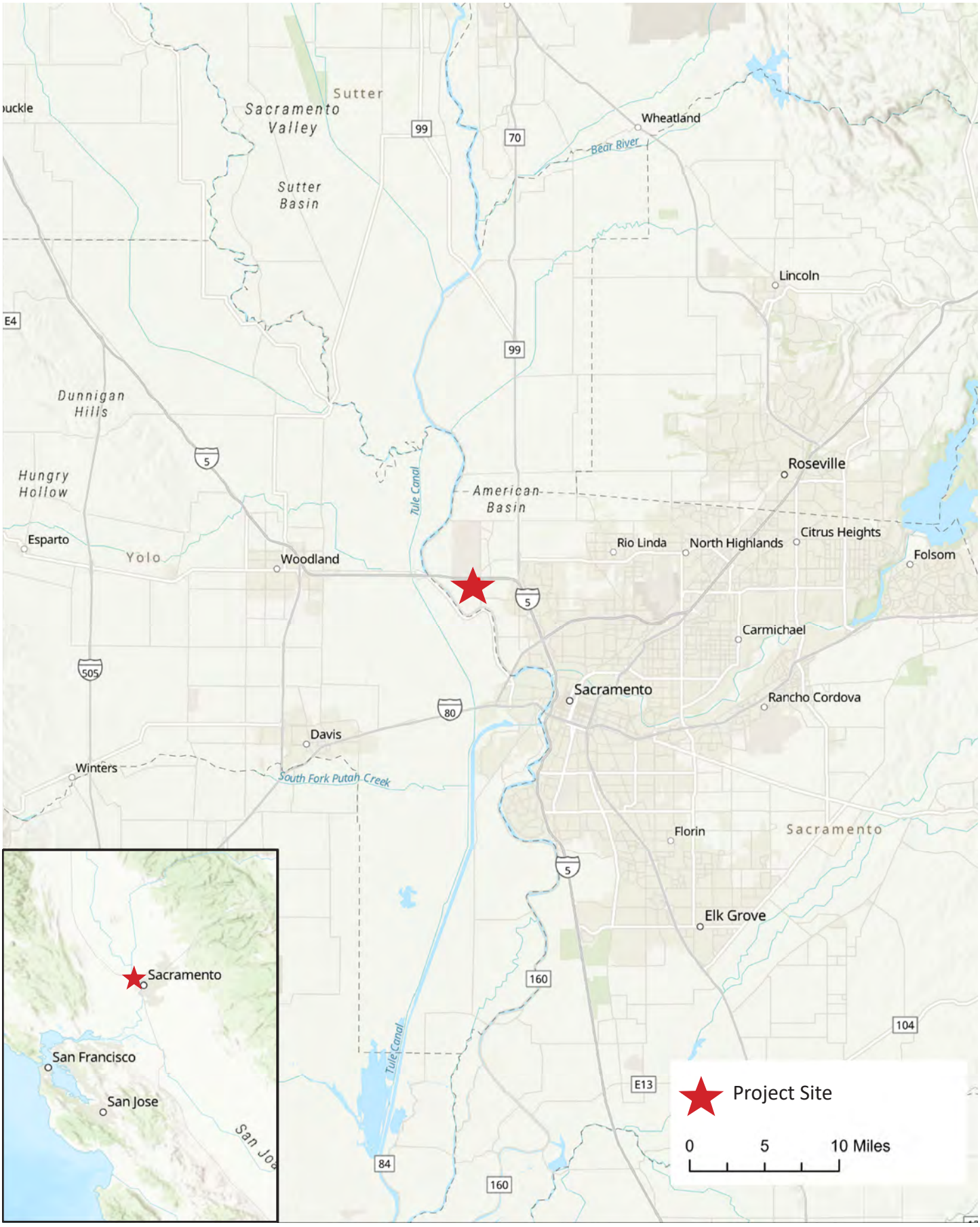
Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.

The proposed project would include construction of a customer-owned substation in coordination with SMUD. The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.



Source: ESRI, 2023

Figure 1: Regional Map

WattEV Innovative Freight Terminal (SWIFT) Project

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Source: ESRI, 2023

Figure 2: Local Vicinity Map

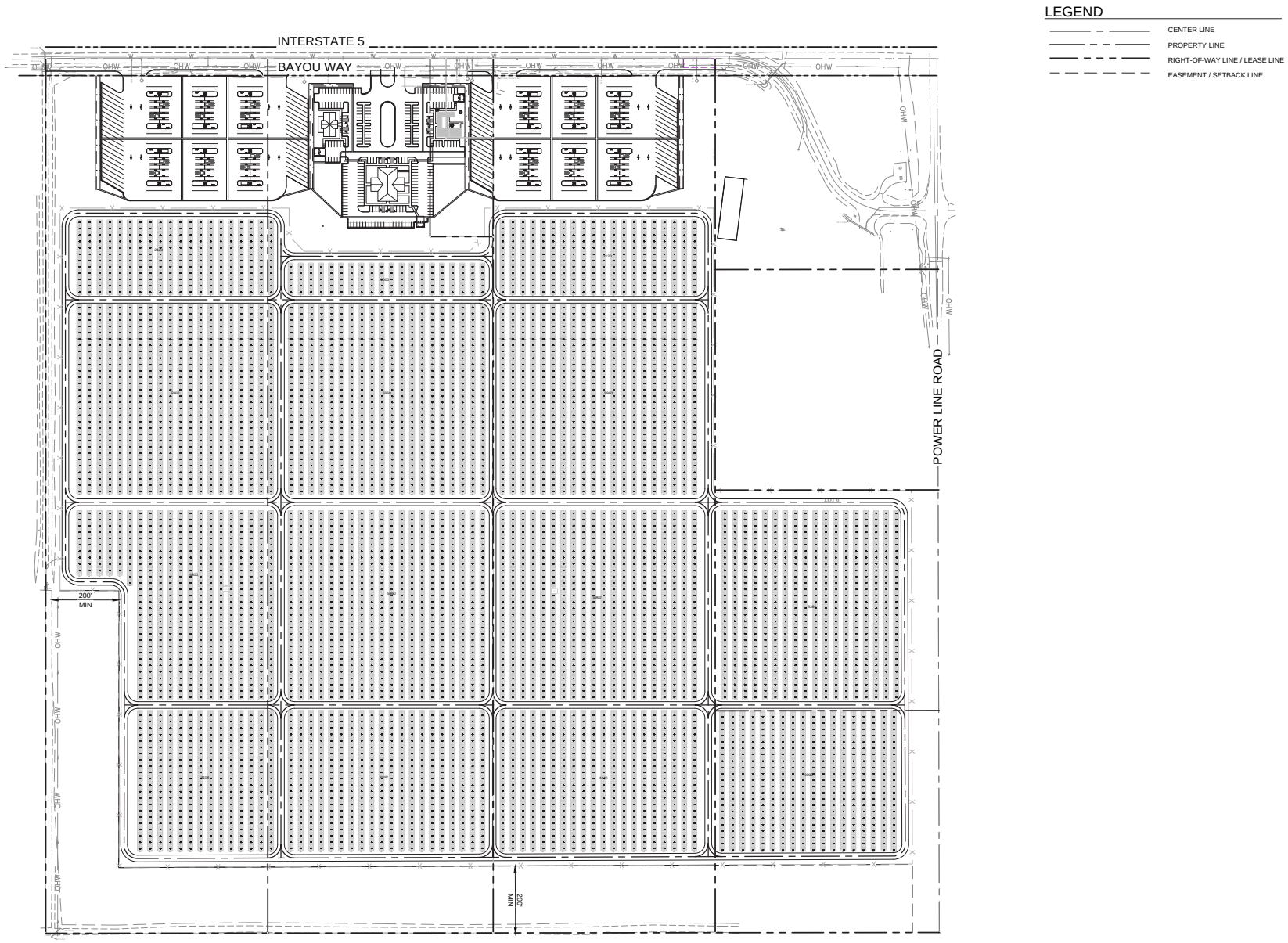

Figure 3: Overall Site Plan

WattEV Innovative Freight Terminal (SWIFT) Project

Not to scale

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2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project is located within the Sacramento Valley Air Basin (SVAB), which includes Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, Yuba, portions of Placer and Solano counties, as well as Sacramento County. The SVAB is bounded by the North Coast Ranges on the west and the Northern Sierra Nevada Mountains on the east.[1] The intervening terrain is flat. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SVAB has a Mediterranean climate, characterized by hot dry summers and mild rainy winters. The annual average temperature in SVAB ranges from 20 to 115 degrees Fahrenheit with summer highs around 90 degrees and winter lows occasionally below freezing. The average annual rainfall in SVAB is usually about 20 inches in the winter and spring with snowfall being rare. Wind in this air basin are moderate in strength and the breezes vary from moist to dry land flows from the north. The average wind speed is about 8 miles per hour at SMF and the predominate wind directions are from the south-southeast in the spring, summer, and fall, trending to the north-northwest in the winter.[2]

The mountains surrounding SVAB create a barrier to airflow, which can create inversion layers, trapping air pollutants in the Sacramento Valley when meteorological conditions are right. Inversion layers are formed when temperature increases with elevation above ground, or when a mass of warm dry air settles over a mass of cooler air near the ground. During the winter, surface inversions (0 to 500 feet) occur and subsidence inversions (1,000 to 2,000 feet) occur during the summer.

Ozone season in the SVAB occurs in the months of May through October and is characterized by steady morning air or light winds with the Delta sea breeze arriving in the afternoon and out of the southwest. The evening breezes usually transport airborne pollutants to the north out of the SVAB. From July to September, a phenomenon called the “Schultz Eddy” prevents this from occurring half of the days in July to September. The Schultz Eddy would cause the wind pattern and pollutants to circle back southward instead of allowing for the prevailing wind patterns to move north carrying pollutants out of the SVAB. This phenomenon exacerbates pollution levels in the SVAB and increases the likelihood of violating federal and state air quality standards.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by state and federal laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter

[1] Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.
[2] Sacramento International Airport Master Plan Draft EIR, 2007.

($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1: Air Contaminants and Associated Public Health Concerns**. P

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. 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.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. 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.
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 O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), Health Effects, http://www.capcoa.org/health-effects/, Accessed October 2023.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e. chronic, carcinogenic or cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the project are documented by measurements made by the Sacramento Metropolitan Air Quality Management District (SMAQMD), the air pollution regulatory agency in the SVAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in Sacramento County include O_3, PM_{10}, and $PM_{2.5}$. The closest air monitoring station to the project that monitors ambient concentrations of these pollutants is the Sacramento-T Street Monitoring Station (located approximately 12 miles to the south). Local air quality data from 2020 to 2022 are provided in **Table 2: Ambient Air Quality Data**, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data

Criteria Pollutant	2020	2021	2022
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.112	0.091	0.106
8-hour Maximum Concentration (ppm)	0.076	0.080	0.079
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	1	0	0
NAAQS 8-hour (>0.070 ppm)	3	1	3

Table 2: Ambient Air Quality Data			
Criteria Pollutant	**2020**	**2021**	**2022**
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	52.1	55.8	50.1
Number of Days Standard Exceeded			
NAAQS 1-hour (>100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10}) [1]			
National 24-hour Maximum Concentration	298.7	132.6	60.2
State 24-hour Maximum Concentration	292.8	142.6	61.3
State Annual Average Concentration (CAAQS=20 µg/m^3)	31.2	23.5	21.0
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m^3)	4	0	0
CAAQS 24-hour (>50 µg/m^3)	59	12	6
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$) [1]			
National 24-hour Maximum Concentration	111.0	89.1	33.1
State 24-hour Maximum Concentration	150.4	89.1	33.1
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m^3)	6	4	0

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter; – = not measured

[1] Measurements taken at the Sacramento-T Street Monitoring Station at 1309 T Street, Sacramento, CA 95814 (CARB# 34295)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses nearest to the project are shown in **Table 3: Sensitive Receptors**.

Table 3: Sensitive Receptors	
Receptor Description	**Distance and Direction from the Project[1]**
Single-Family Residential Community	3,830 feet southeast
Single-Family Residential Community	5,240 feet southeast
Paso Verde School	6,680 feet east

Notes:
1. Distance measured from the project site to the receiver property line.

Source: Google Earth Pro, 2023.

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (U.S. EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the U.S. EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The U.S. EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in **Table 4: State and Federal Ambient Air Quality Standards**.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)
	1 Hour	0.09 ppm (180 µg/m^3)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m^3)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m^3
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
Sulfates (SO_{4-2})	24 Hour	25 µg/m^3	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m^3	NA
	Calendar Quarter	NA	1.5 µg/m^3
	Rolling 3-Month Average	NA	0.15 µg/m^3
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m^3)	NA

ppm = parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; – = no information available.

[1] California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]

[2] National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3.

[3] Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the U.S. EPA at levels determined to be protective of public health with an adequate margin of safety.

[4] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. U.S. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

[5] The national 1-hour O_3 standard was revoked by the U.S. EPA on June 15, 2005.

[6] In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

[7] The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

[8] On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.

[9] In December 2012, U.S. EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m^3. In December 2014, the U.S. EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

[10] CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

[11] National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

Conformity

Conformity is defined as conformity to the SIPs (or Federal Implementation Plans [FIPs]) purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It requires that federal activities will not:

1. Cause or contribute to any new violation of any standard in any area;

2. Increase the frequency or severity of any existing violation of any standard in any area; or

3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The General Conformity Rule was published in the Federal Register on November 30, 1993, and amended on April 5, 2010. The General Conformity Rule established a process based on emissions analysis to determine whether a federal action conforms to the SIP. The rule defines emissions as "direct" or "indirect" (see 40 CFR § 93.152). Actions that do not meet the definitions of direct or indirect emissions are exempt from the General Conformity Rule. "Direct emissions" are those that occur at the same time and place as the federal action. The definition of "indirect emissions" contains four criteria, all of which must be met. As stated in 40 CFR § 93.152, indirect emissions means those emissions of a criteria pollutant or its precursors:

- that are caused or initiated by the federal action and originate in the same nonattainment
- or maintenance area but occur at a different time or place from the action;
- that are reasonably foreseeable;
- that the agency can practically control; and
- for which the agency has continuing program responsibility.

When developing the General Conformity Rule, the EPA recognized that many actions conducted by federal agencies do not result in substantial increases in air pollutant emissions in nonattainment and maintenance areas. Therefore, the EPA established threshold levels (also referred to as *de minimis* levels) for emissions of each of the criteria pollutants. When the sum of the increases in direct and indirect emissions caused by a project would be less than the *de minimis* levels, a project would not require a general conformity determination.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in **Table 5**, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the U.S. EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in **Table 5**.

3.3 Regional

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the air pollution control agency for Sacramento County. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SVAB. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SMAQMD rules and regulations in effect at the time of construction.

The SMAQMD is also the lead agency in charge of developing attainment plans, with input from the U.S. EPA, the Sacramento Area Council of Governments (SACOG) and CARB. The attainment plans are comprehensive plans that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SACOG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The Sacramento Federal Nonattainment Area (SFNA) was designated as "severe" nonattainment for the 1979 1-Hour ozone NAAQS. The 1-Hour standard was revoked when the U.S. EPA published the Final Phase 1 Rule (69 FR 23951) implementing a more stringent 1997 8-Hour ozone NAAQS. On October 18, 2012, the U.S. EPA determined that the SFNA attained the revoked 1-Hour ozone standard. The EPA issued Determination of Attainment on 10/18/2012 (77 FR 64036) but the Sacramento Federal Ozone Nonattainment Area has not yet been redesignated to Attainment.

The latest attaintment plans (*Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*) for the Sacramento O_3 nonattainment area was adopted by the SMAQMD on July 24, 2017, and the four other air districts that comprise the SFNA (Yolo-Solano AQMD, Feather River AQMD, Placer County APCD, and El Dorado County AQMD). The purpose of the attainment plans is to set forth regulations that govern how the region and State would comply with the FCAA requirements and lead the SFNA into compliance with the federal 2008 8-hour Ozone air quality standard of 75 ppb by an attainment year of 2024. The attainment plans incorporate the latest scientific and technological information and planning assumptions, including the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS) and updated emission inventory methodologies for various source categories. Some elements of the attainment plans were updated in 2018 and included in the 2018 Updates to the California State Implementation Plan, which updated SIP elements for nonattainment areas throughout the State, as needed. These updates were adopted by CARB in October 2018.

In February 2021, the SMAQMD published the *Guide to Air Quality Assessment in Sacramento County* to provide to help local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA). The guidance document also provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the *Guide to Air Quality Assessment in Sacramento County* and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SMAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SACOG is the regional planning agency for Sacramento metropolitan region and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SACOG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The state and federal attainment status designations for Sacramento County are summarized in **Table 5: Sacramento County Attainment Status**. Sacramento County is currently designated as a nonattainment area with respect to the State 1-hour and 8-hour O_3, 24-hour PM_{10} standards, as well as the national 8-hour O_3 and 24-hour $PM_{2.5}$ standards. Sacramento County is designated as attainment or unclassified for the remaining state and federal standards.

Table 5: Sacramento County Attainment Status		
Pollutant	**State**	**Federal**
Ozone (O_3) (1 Hour Standard)	Non-Attainment	-
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Attainment	Attainment
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	Attainment	–
Lead (Pb) (3 Month Standard)	–	Attainment
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–
Source: Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2018.		

The following is a list of SMAQMD rules that are required of construction activities associated with the project:[3]

- **Rule 201 (General Permit Requirements) -** This rule provides an orderly procedure for the review of new sources of air pollution and modification and operation of existing sources through issuance of permits. For any projects that include the use of equipment capable of releasing emissions to the atmosphere, permits may be required from SMAQMD prior to operation.

- **Rule 401 (Ringlemann Chart)** - A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is: as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States

[3] Sacramento Metropolitan Air Quality Management District, *Sac Metro Air District Rules & Regulations Statement*, October 2020.

Bureau of Mines, or of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than does smoke described in Subsection 301.1 of this rule.

- **Rule 402 (Nuisance)** – This rule prohibits the 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. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce fugitive dust emissions into the atmosphere. This rule does not apply to emissions emanating from agricultural operations, unworked land designated as reclaimed for agriculture, or unpaved roads for public travel.

- **Rule 404 (Particulate Matter) –** This rule is intended to limit the quantity of particulate matter in the atmosphere through establishment of an emission concentration limit.

- **Rule 405 (Dust and Condensed Fumes)** – This rule is intended to limit the discharge of dust and condensed fumes into the atmosphere by establishing emission rates based on process weight.

- **Rule 442 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

- **Rule 453 (Cutback and Emulsified Asphalt Paving Materials)** – This rule is to limit emissions of volatile organic compounds from the use of cutback and emulsified asphalt in paving materials, paving and maintenance operations.

3.4 Local

County of Sacramento General Plan

The County of Sacramento General Plan is a roadmap that encompasses the hopes, aspirations, values and dreams of the community. The General Plan has goals and policies to improve air quality in the Air Element. Since there are limited project-relevant policies specific to air quality, related policies are mentioned in this section. Where inconsistencies exist, if any, they are addressed in the respective impact analysis below. General Plan policies that directly address reducing and avoiding natural resources impacts include the following:

Goal 1: Improve air quality to promote the public health, safety, welfare, and environmental quality of the community.

Policy AQ-3: Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The California Air Resources Board's "Air Quality and Land Use Handbook: A Community Health Perspective", and the County of Sacramento General Plan 2 Air Quality Element Amended September 26, 2017 AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.

Policy AQ-4: Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.

Policy AQ-11: Encourage contractors operating in the county to procure and to operate low-emission vehicles, and to seek low emission fleet status for their off-road equipment.

Policy AQ-16: Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in any one-hour period.

Policy AQ-19: Require all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway construction projects.

Policy AQ-21: Support SMAQMD's particulate matter control measures for residential wood burning and fugitive dust.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable state or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

SMAQMD Thresholds

The significance criteria established by SMAQMD may be relied upon to make the above determinations. According to the SMAQMD, an air quality impact is considered significant if the project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SMAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 6: Sacramento Metropolitan Air Quality Management District Emissions Thresholds**.

Table 6: Sacramento Metropolitan Air Quality Management District Emissions Thresholds[3]

	Construction Phase	Operational Phase
Mass Emission Thresholds		
NO_X (ozone precursor)	85 lbs/day	65 lbs/day
ROG (VOC) (ozone precursor)	None	65 lbs/day
PM_{10}	Zero (0). If all feasible BACT[1]/BMPs[2] are applied, then 80 lbs/day and 14.6 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 80 lbs/day and 14.6 tons/year
$PM_{2.5}$	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year
1. BACT – Best Available Control Technology 2. BMP – Best Management Practices 3. Greenhouse Gas thresholds and emissions are discussed in the Greenhouse Gas Assessment.		
Source: Sacramento Metropolitan Air Quality Management District, SMAQMD Thresholds of Significance Table, 2020.		

The SMAQMD has established emission thresholds for PM_{10} and $PM_{2.5}$ and ozone precursors because the Sacramento Region does not meet State and federal particulate matter and ozone ambient air quality standards. Emissions of particulate matter and ozone precursors from an individual project could contribute to the cumulative non-attainment problem. A “considerable” or "substantial" contribution means one that exceeds the mass emissions threshold levels.[4]

[4] Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.

The construction and operational mass emissions thresholds for ozone precursors correlate to the NO_X and ROG reductions from heavy-duty vehicles and land use project emission reduction requirements committed to in the 2008 Ozone Attainment Plan for the Sacramento Federal Ozone Nonattainment Area. These thresholds were adopted by the District's Board of Directors in March 2002 and are based on the SMAQMD's document Foundation for a Threshold: Justification for Air Quality Thresholds of Significance in the Sacramento Federal Nonattainment Area.

SMAQMD recommends that projects anticipated to emit 65 pounds or more of NO_X per day, 65 pounds or more of ROG per day, 80 pounds or more of PM_{10} per day or 82 pounds or more of $PM_{2.5}$ per day are considered operationally significant for CEQA purposes and should apply feasible mitigation.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the project would also be subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the project are above state and federal CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). Sacramento County has been designated as attainment under the 1-hour and 8-hour standards.

Toxic Air Contaminants

SMAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to single sources of TACs. The "substantial" TAC threshold defined by SMAQMD is any exposure of a sensitive receptor to an individual emissions source resulting in an excess cancer risk level of more than 10 in 1 million or a non-cancer (i.e., chronic or acute) hazard index (HI) greater than 1.0. These threshold levels should be used to determine whether a project's TAC emissions are cumulatively considerable.[5]

4.2 Methodology

This air quality impact analysis considers construction and operational impacts associated with the project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SMAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

[5] Sacramento Metropolitan Air Quality Management District. 2020. SMAQMD Thresholds of Significance Table. Last updated in April 2020. Available: http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

Project operations would result in emissions of area sources (consumer products), energy sources (electricity), and mobile sources (motor vehicles from project generated vehicle trips). Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the project was obtained from the Project's Local Transportation Analysis, Access, and Safety Evaluation (Traffic Evaluation) prepared by Kimley-Horn (October 2023). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use and stationary source activity data.

As discussed above, the SMAQMD provides significance thresholds for emissions associated with proposed project construction and operations. The proposed project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a project's impact on regional air quality.

Air Quality Mitigation Plan

SMAQMD has developed guidance to mitigate operational emissions for projects subject to CEQA. SMAQMD recommends that project applicants prepare an Air Quality Mitigation Plan for all projects that exceed SMAQMD's operational significant thresholds of 65 pounds per day (ppd) for ROG and/or 65 ppd for NO_X.

For projects that are included in the current SIP, SMAQMD recommend a 15 percent reduction of ozone precursor mobile source emissions. For projects not considered in the SIP, SMAQMD recommends a 35 percent reduction of ozone precursors. These reductions would be considered feasible mitigation and should be included in an AQMP.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold 5.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

As described in the regulatory framework section above, applicable air quality plans include the latest attainment plans, as well as the air district rules, and the County General Plan. As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The project is located within the SVAB, which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. To reduce such emissions, the SMAQMD drafted the latest attainment plan (*Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*). The attainment plans establish rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The attainment plans are a regional and multi-agency effort including the SMAQMD, the CARB, the SACOG, and the U.S. EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SACOG's 2020 MTP/SCS, updated emission inventory methodologies for various source categories, and SACOG's latest growth forecasts. SACOG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed project was assessed to determine if impacts associated with implementation of the proposed project would conflict with or obstruct the implementation of the applicable attainment plan. Based on the SMAQMD CEQA Guide, by exceeding the SMAQMD's mass emission thresholds for operational emissions of ROG, NO_x, PM_{10} or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of SMAQMD air quality planning efforts.

As discussed below, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed SMAQMD thresholds of significance. Operational emissions associated with the proposed project would also not exceed SMAQMD established significance thresholds for ROG, NO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, the proposed project would not conflict with the SMAQMD's ability to achieve emissions reductions as part of their air quality attainment plans at the project level.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable state or federal ambient air quality standard?

The SVAB is designated as nonattainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3 and PM_{10} for State standards. The SMAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SMAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Construction Emissions

Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include O_3-precursor pollutants (i.e. ROG and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Construction results in the temporary generation of emissions during site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the project are estimated to last approximately 12 months. Site Preparation is anticipated to occur in March 2024, followed by an 11 month construction phase between April 2024 and March 2025. The project's construction-related emissions were calculated using the SMAQMD-approved CalEEMod 2022.1 computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Project grading, construction, and paving are anticipated to begin in April 2024 and last approximately 10 months. Architectural coating activities were modeled to be completed March 2025. The exact construction timeline is unknown; however, to be conservative, earlier dates were utilized in the modeling. This approach is conservative given that emissions factors decrease in future years due to regulatory and technological improvements and fleet turnover. See **Appendix A: Air Quality Data** for additional information regarding the construction assumptions used in this analysis. The project's predicted maximum daily construction-related emissions are summarized in **Table 7: Project Construction-Related Emissions**. Construction of the proposed project would be required to comply with various SMAQMD rules, including Rule 402 (Nuisance) and Rule 403 (Fugitive Dust).

Table 7: Project Construction-Related Emissions

Construction Year	Emissions (Maximum Pounds per Day)[1,2,3,4]				
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2024	3.86	49.17	36.98	9.44	5.45
2025	9.57	10.86	13.37	0.53	0.43
Maximum Emissions	**9.57**	**49.17**	**36.98**	**9.44**	**5.45**
Threshold[3]	*None*	*85*	*None*	*80*	*82*
Exceed Threshold?	**N/A**	**No**	**N/A**	**No**	**No**

Notes:
1. SMAQMD Rule 403 Fugitive Dust is applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Refer to Appendix A for Model Data Outputs.
2. Total values are from CalEEMod and may not add up 100% due to rounding.
3. Included additional paving equipment to represent emissions associated with the project's off-site improvements.
4. Maximum daily emissions shown would not occur on the same day.
5. Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table*, 2020.

Source: CalEEMod version 2021.1. Refer to Appendix A for model outputs.

Fugitive Dust Emissions

Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. The SMAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. The project would implement the SMAQMD Basic Construction Emissions Control Practices as a Best Management Practice (BMP) to control dust at the project site during all phases of construction.

Best Management Practices

Application of SMAQMD Basic Construction Emission Control Practices. Consistent with SMAQMD Basic Construction Emission Control Practices (Best Management Practices [BMPs]), the following controls shall be included as specifications for the proposed project and implemented at the construction site:

- Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff.
- All exposed surfaces shall be watered two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- Wet power vacuum street sweepers shall be used to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling time shall be minimized either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Clear signage shall be provided that posts this requirement for workers at the entrances to the site.
- Current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1] shall be provided.
- All construction equipment shall be maintained in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. As previously addressed, the SMAQMD recommends the implementation of all Basic Construction Emissions Control Practices, whether or not construction-related emissions exceed applicable significance thresholds. See the above listed BMPs. As detailed in **Table 7**, project construction emissions would not exceed the SMAQMD thresholds and construction emissions would not result in a potentially significant impact.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SMAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. The highest concentration of ROG emissions would be generated from architectural coating beginning in winter 2025 and last approximately one month. This phase includes the interior and exterior painting as well as striping of all paved parking areas and driveways. Paints would be required to comply with SMAQMD Rule 442: Architectural Coating, provides specifications on painting practices and regulates the ROG content of paint.

Summary

As shown in **Table 7**, all criteria pollutant emissions would remain below their respective thresholds. SMAQMD considers fugitive dust emissions to be potentially significant without implementation of the Construction Control Measures which help control fugitive dust. NO_X emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting. The use of newer construction equipment with better emissions controls would reduce construction-related NO_X emissions. With implementation of the BMPs identified above, project condition of approval, the proposed project's construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated due to electricity usage associated with the project. Additionally, operational emissions would result from daily routine and maintenance activities, such as panel washing. As shown in **Table 8,** the project's emissions would not exceed SMAQMD thresholds.

Table 8: Project Operational Emissions

Emissions Source	Emissions (Pounds per Day)[1]				
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area	0.56	0.00	0.57	0.00	0.00
Energy	0.01	0.09	0.08	0.01	0.01
Mobile[2]	0.25	0.61	3.45	25.91	6.59
Stationary	0.00	0.03	0.03	0.00	0.00
Total Emissions	**0.82**	**0.73**	**4.13**	**25.92**	**6.60**
Threshold[3]	*65*	*65*	*N/A*	*80*	*82*
Exceed Threshold?	**No**	**No**	**N/A**	**N/A**	**No**

Notes:
1. Total values are from CalEEMod and may not add up 100% due to rounding.
2. Mobile trips associated with EV chargers were assumed to be all electric vehicles.
3. Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table*, 2020.

Source: CalEEMod version 2021.1. Refer to Appendix A for model outputs.

Area Source Emissions

Area source emissions would be generated due to the use of consumer products, architectural coating, and landscaping.

Energy Source Emission

Energy source emissions would be generated as a result of electricity usage associated with the project. The primary use of electricity by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport PM_{10} and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source. Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the Traffic Evaluation prepared by Kimley-Horn (2023). Based on the traffic analysis, the project would result in a total of 1,769 daily vehicle trips. Approximately 1,726 trips are anticipated to be for EV charging and 43 trips for the office building. The trips associated with the EV chargers are assumed to be all EV with fugitive dust emissions but no tailpipe emissions.

Stationary Source Emissions

Stationary source emissions would be generated due to the operation of a septic tank pump which would be used clean a septic tank on-site.

Total Operational Emissions

As seen in **Table 8**, net project operational emissions would not exceed SMAQMD thresholds. As noted above, the SMAQMD has set its CEQA significance threshold based on the trigger levels for the federal NSR Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, the project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur. Project operational emissions would be less than significant.

Cumulative Short-Term Emissions

As shown in the Sacramento County General Plan, parcels surrounding the project site are anticipated to be used for industrial and public land uses. Sacramento County is designated nonattainment for O_3 and PM_{10}, for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. The SMAQMD's significance thresholds are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SVAB. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SVAB would not be cumulatively considerable. As discussed above, the project's construction-related emissions by themselves would not exceed SMAQMD significance thresholds for criteria pollutants. Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. Compliance with SMAQMD construction-related rules would reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The SMAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SMAQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SVAB's existing air quality conditions. Therefore, a project that exceeds the SMAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in **Table 8**, project emissions (primarily from mobile sources) would not exceed any SMAQMD criteria air pollutant threshold. As a result, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Therefore, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The Friant Ranch project was a 942-acre Specific Plan that involved a commercial master planned community of approximately 2,500 dwelling units and extensive commercial supporting development. The anticipated air quality impacts resulting from this development included significant and unavoidable emissions of multiple criteria pollutants (including significant emissions of both primary O_3 precursors [NO_X and ROGs]) at levels that exceeded the daily thresholds of significance. As noted above, implementation of the proposed project would not exceed SMAQMD daily emissions thresholds.

NO_X and ROG are precursor emissions that form O_3 in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O_3 may be formed at a distance downwind from the sources. Breathing ground-level O_3 can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily O_3 concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that O_3 can make asthma symptoms worse and can increase sensitivity to asthma triggers.

There is currently no methodology available that can meaningfully quantify regional health effects from CO, NO_2 or O_3 exposure associated with an individual project's ROG or NO_X emissions. The South Coast Air Quality Management District (SCAQMD) reached a similar conclusion in its *Amicus Curiae* brief filed with the California Supreme Court in the case of *Sierra Club v. County of Fresno*, when, speaking about ozone, the SCAQMD stated that it does not know of a way to accurately quantify health impacts caused by emissions produced on a scale as small as individual projects.[6] One existing tool, U.S. EPA's Environmental Benefits Mapping and Analysis Program (BenMAP), calculates the number and economic value of air pollution-related deaths and illnesses resulting from changes in O_3 and $PM_{2.5}$ concentrations[7]. However, the expected changes in regional O_3 concentrations associated with the proposed project would be so low that BenMAP would likely produce estimates of health effects that are near zero.

The SMAQMD prepared a Draft Guidance to Address the Friant Ranch Ruling for CEQA projects in the Sac Metro Air District (revised June 2020). The guidance provides screening health information for projects at

[6] SCAQMD, Application of the South Coast Air Quality Management District for Leave to File Brief of *Amicus Curiae* in Support of Neither Party and [Proposed] Brief of *Amicus Curiae*. In the Supreme Court of California. *Sierra Club v. County of Fresno*. Supreme Court Case No. S219783. April 13, 2015.
[7] U.S. EPA, Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE), https://www.epa.gov/benmap. Website accessed June 2020.

or below regional CEQA thresholds of significance emissions levels and selected strategic areas above thresholds of significance emissions levels. Modeling guidance for large projects located outside strategic areas is also included.

The SMAQMD provided five potential strategic area project locations for use in the health effects screening modeling. These five locations are intended to be used as proxy locations for nearby projects exceeding the thresholds of significance. The Sacramento Strategic Area is applicable to the proposed project. The screening modeling addressed hypothetical sources at each of the five strategic area project locations at emission levels that were two times (2x) and 8 times (8x) the maximum threshold of significance level. The SMAQMD developed a Strategic Area Projects Health Effects Screening Tool spreadsheet that can be used to estimate health effects for potential projects with emissions below the 8x threshold of significance level. The project's anticipated operational emissions (see **Table 8**) were input into the SMAQMD health effects screening tool. It should be noted that the project's operational emissions were less than the 2x threshold of significance. Based on the results of the tool, the percent of background health indices would be less than one percent (i.e., no more than 0.003 percent); refer to **Appendix A**. Therefore, the health effects associated with the project would be negligible.

Carbon Monoxide Hotspots

The Sacramento Valley Air Basin is attainment for CO. An analysis of CO "hot spots" is needed in nonattainment or maintenance areas to determine whether the change in the level of service (LOS) of an intersection resulting from the project would have the potential to result in exceedances of the CAAQS or NAAQS. As the SVAB is attainment for CO, the following discussion is provided for informational purposes.

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

Emissions and ambient concentrations of CO have decreased dramatically in the SVAB with the introduction of the catalytic converter emission control technology for on-road motor vehicles in 1975 and reformulated fuels required by the 1990 Clean Air Act amendments. The Sacramento Region is currently designated as attainment for both the 1-Hour and 8-Hour state and federal standards. A maintenance plan was developed for CO in 1996. The *2004 Revision to the California State Implementation Plan for Carbon Monoxide* is the most recent SIP that addresses CO concentrations and extends the 1996 CO maintenance plan demonstration to 2018. No exceedances of the CAAQS or NAAQS for CO have been recorded at a monitoring station in Sacramento County since 1993.

The preliminary screening methodology provided by the SMAQMD provides lead agencies with a conservative indication of whether project-generated vehicle trips will result in the generation of CO emissions that contribute to an exceedance of the thresholds of significance. The SMAQMD's recommended screening criteria are divided into two tiers. The screening criteria have been developed to help lead agencies analyze potential CO impacts and identify when site-specific CO dispersion modeling is not necessary.

According to the SMAQMD, a project will result in a less than significant impact to air quality for local CO if:

- Traffic generated by the project will not result in deterioration of intersection LOS to LOS E or F; and
- The project will not contribute to additional traffic to an intersection that already operates at LOS of E or F.

The project would not satisfy this first tier of screening criteria. As identified in the project's Traffic Evaluation, there is one intersection that would be affected by the project such that the project would contribute additional traffic to some intersections that already operate at LOS of E or F. Therefore, the project would not satisfy the first tier of the SMAQMD's recommended screening criteria.

The SMAQMD guidance states that, if the first tier of screening criteria is not met, then a second tier of screening criteria shall be examined. The second tier of screening criteria is listed below. According to the SMAQMD, the project would result in a less than significant impact to air quality for local CO if all of the following criteria are met:

- The project will not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project will not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The project meets each of these three criteria. The project does not result in an affected intersection experiencing more than 31,600 vehicles per hour, would not contribute traffic at a location where horizontal or vertical mixing of air would be substantially limited, and the mix of vehicles types at the intersection would not be substantially different than the County average. The SMAQMD does not maintain a mass emissions threshold for CO. Therefore, since the project passes the SMAQMD screening criteria for CO hotspots, the potential for a CO hotspot impact represents a less than significant impact.

Construction Carcinogenic Risk

Construction-related activities would result in project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g. demolition, clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

Table 9: Construction Carcinogenic Risk Assessment shows the health risk for construction of the project. Project construction would occur for a period of approximately 12 months. As shown in **Table 9**, the construction risk at residential and worker receptors would be 0.56 and 1.19 in one million, respectively. Therefore, the maximum construction cancer risk at the residential and worker receptor would not exceed the SMAQMD threshold of 10 in one million threshold and impacts associated with carcinogenic risk would be less than significant.

Table 9: Construction Carcinogenic Risk Assessment			
Exposure Scenario	**Risk per Million**		**Exceeds Significance Threshold?**
	Cancer Risk[1]	**Significance Threshold**	
Residential Receptors (southeast of site)	0.56	10	No
Worker Receptors (east of site)	1.20	10	No
1. The reported annual pollutant concentration is at the closest maximally exposed individual (MEI) to the project site.			
Source: Refer to the SWIFT Project Health Risk Assessment.			

Construction Non-Carcinogenic Hazard

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. RELs are designed to protect sensitive individuals within the population. The primary TAC emitted during construction is DPM. According to OEHHA, the REL for DPM is 5 and the target organ is the respiratory system.

Chronic and acute non-carcinogenic impacts are shown in **Table 10: Construction Chronic Hazard Assessment**. A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the reference exposure level. The chronic hazard was calculated based on the highest annual average concentration at the maximally exposed individual receptor. It should be noted that there is no acute REL for DPM and acute health risk cannot be calculated. **Table 10** shows that the non-carcinogenic hazards associated with proposed project would not exceed the acceptable limits of 1.0.

Table 10: Construction Chronic Hazard Assessment		
Exposure Scenario	**Annual Concentration (µg/m^3)[1]**	**Chronic Hazard**
Residential Receptors (southeast of site)	0.005	0.001
Worker Receptors (east of site)	0.012	0.002
SMAQMD Threshold	*N/A*	*1.0*
Threshold Exceeded?	**N/A**	**No**
1. The reported pollutant concentration is at the closest receptor (maximally exposed individual). 2. DPM is the primary TAC occurring during construction. There is no acute REL for DPM and acute health risk cannot be calculated.		
Source: Refer to the SWIFT Project Health Risk Assessment.		

Operation -Related Diesel Particulate Matter

Operational emissions from the proposed project would result from mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated due to electricity usage associated with the project. Additionally, operational emissions would result from daily routine and maintenance activities, such as panel washing. As discussed in the Air Quality Assessment (Kimley-Horn, 2024), the majority of these emissions would be generated by vehicle travel occurring off-site from light-duty vehicles trips by staff and customers to and from the project site and would generally not be proximate to the nearest sensitive receptors located 400 feet southeast of the project site. Light duty vehicles are not substantial sources of TAC emissions (e.g., DPM), which are primarily associated with diesel fueled vehicles. Furthermore, the project is intended to provide charging stations for EV trucks and DPM

emissions associated with EV trucks would be negligible. Therefore, operational emissions would not be considered a substantial source of TACs and this impact related to operational TAC emissions would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The SMAQMD *CEQA Guide to Air Quality Assessment* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The project would not include any of the land uses that have been identified by the SMAQMD as odor sources.

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. The project would not include any of the land uses that have been identified by the SMAQMD as odor sources. Therefore, the project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

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Appendix A

Air Quality Modeling Data

SWIFT Watt EV - AQ Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SWIFT Watt EV - AQ
Construction Start Date	2/19/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	37.6
Location	38.668893303853594, -121.58015224137901
County	Sacramento
City	Unincorporated
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	602
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

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

General Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Government Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Convenience Market (24 hour)	7.00	1000sqft	0.16	7,000	0.00	—	—	—
User Defined Industrial	94.0	User Defined Unit	94.0	0.00	0.00	—	—	—
Parking Lot	23.7	Acre	23.7	0.00	355,013	—	—	—

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.	5.28	3.86	49.2	37.0	0.16	1.59	5.81	7.40	1.47	2.01	3.48	—	14,762	14,762	1.03	1.34	17.5	15,204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.41	9.57	36.0	33.8	0.05	1.60	7.84	9.44	1.47	3.98	5.45	—	5,476	5,476	0.22	0.05	0.02	5,496
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.72	1.51	15.1	13.4	0.04	0.56	1.50	2.06	0.51	0.58	1.10	—	3,871	3,871	0.23	0.26	1.48	3,956
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.31	0.28	2.75	2.45	0.01	0.10	0.27	0.38	0.09	0.11	0.20	—	641	641	0.04	0.04	0.25	655

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.28	3.86	49.2	37.0	0.16	1.59	5.81	7.40	1.47	2.01	3.48	—	14,762	14,762	1.03	1.34	17.5	15,204
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.41	3.71	36.0	33.8	0.05	1.60	7.84	9.44	1.47	3.98	5.45	—	5,476	5,476	0.22	0.05	0.02	5,496
2025	1.39	9.57	10.9	13.4	0.02	0.44	0.10	0.53	0.40	0.02	0.43	—	2,649	2,649	0.12	0.05	0.02	2,668
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.72	1.51	15.1	13.4	0.04	0.56	1.50	2.06	0.51	0.58	1.10	—	3,871	3,871	0.23	0.26	1.48	3,956
2025	0.10	1.12	0.78	0.97	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	182	182	0.01	< 0.005	0.02	183
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.31	0.28	2.75	2.45	0.01	0.10	0.27	0.38	0.09	0.11	0.20	—	641	641	0.04	0.04	0.25	655
2025	0.02	0.20	0.14	0.18	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	30.1	30.1	< 0.005	< 0.005	< 0.005	30.3

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.	11.7	10.8	14.2	138	0.31	0.24	25.9	26.1	0.23	6.58	6.81	17.9	33,583	33,601	2.64	1.22	1,572	35,605

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7	9.83	16.7	109	0.29	0.24	25.9	26.1	0.23	6.58	6.81	17.9	30,784	30,802	2.73	1.34	1,454	32,725
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.8	9.86	15.6	111	0.29	0.24	25.3	25.5	0.23	6.43	6.65	17.9	31,364	31,382	2.67	1.29	1,504	33,337
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	1.80	2.85	20.2	0.05	0.04	4.61	4.66	0.04	1.17	1.21	2.96	5,193	5,196	0.44	0.21	249	5,519

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	11.6	10.2	14.0	138	0.31	0.23	25.9	26.1	0.22	6.58	6.80	—	32,045	32,045	1.14	1.21	121	32,555
Area	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	11.7	10.8	14.2	138	0.31	0.24	25.9	26.1	0.23	6.58	6.81	17.9	33,583	33,601	2.64	1.22	1,572	35,605
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.36	16.6	109	0.29	0.23	25.9	26.1	0.22	6.58	6.80	—	29,248	29,248	1.22	1.33	3.14	29,678

Area	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	10.7	9.83	16.7	109	0.29	0.24	25.9	26.1	0.23	6.58	6.81	17.9	30,784	30,802	2.73	1.34	1,454	32,725
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.33	15.5	110	0.29	0.23	25.3	25.5	0.22	6.43	6.65	—	29,829	29,829	1.17	1.27	52.3	30,291
Area	0.07	0.53	< 0.005	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	0.00	0.01
Total	10.8	9.86	15.6	111	0.29	0.24	25.3	25.5	0.23	6.43	6.65	17.9	31,364	31,382	2.67	1.29	1,504	33,337
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.95	1.70	2.83	20.1	0.05	0.04	4.61	4.66	0.04	1.17	1.21	—	4,939	4,939	0.19	0.21	8.66	5,015
Area	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	252	252	0.01	< 0.005	—	252
Water	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13
Waste	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	1.96	1.80	2.85	20.2	0.05	0.04	4.61	4.66	0.04	1.17	1.21	2.96	5,193	5,196	0.44	0.21	249	5,519

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.97	1.80	< 0.005	0.09	—	0.09	0.08	—	0.08	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.36	0.33	< 0.005	0.02	—	0.02	0.01	—	0.01	—	48.0	48.0	< 0.005	< 0.005	—	48.2

Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.83	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.02	182
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.02	10.3
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	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
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

3.3. Grading (2024) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.62	3.62	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	6.11	5.37	0.01	0.26	—	0.26	0.24	—	0.24	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.25	0.25	—	—	—	—	—	—	—
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	0.14	0.11	1.11	0.98	< 0.005	0.05	—	0.05	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	1.30	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	232	232	0.01	0.01	0.95	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.00	0.25	14.8	5.51	0.09	0.14	1.99	2.13	0.14	0.53	0.67	—	7,932	7,932	0.75	1.28	16.5	8,348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.6	37.6	< 0.005	< 0.005	0.07	38.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.18	0.04	2.79	0.99	0.02	0.03	0.35	0.37	0.03	0.09	0.12	—	1,412	1,412	0.13	0.23	1.27	1,485
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.22	6.22	< 0.005	< 0.005	0.01	6.31
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	0.03	0.01	0.51	0.18	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	234	234	0.02	0.04	0.21	246

3.5. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.27	3.82	0.01	0.15	—	0.15	0.13	—	0.13	—	699	699	0.03	0.01	—	702
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	0.06	0.60	0.70	< 0.005	0.03	—	0.03	0.02	—	0.02	—	116	116	< 0.005	< 0.005	—	116
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	0.01	0.27	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	48.2	48.2	< 0.005	< 0.005	0.20	48.9
Vendor	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.16	65.8
Hauling	0.02	< 0.005	0.28	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.32	159
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	—	42.8	42.8	< 0.005	< 0.005	0.01	43.3
Vendor	0.01	< 0.005	0.13	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	< 0.005	65.6
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.01	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.02	19.2
Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.1	44.1	< 0.005	0.01	0.04	46.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	< 0.005	3.17
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.68

3.7. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.82	< 0.005	0.03	—	0.03	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
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	0.01	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.9	41.9	< 0.005	< 0.005	< 0.005	42.5
Vendor	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.6	61.6	< 0.005	0.01	< 0.005	64.4
Hauling	0.02	< 0.005	0.29	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	148	148	0.01	0.02	0.01	156
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	—	2.69	2.69	< 0.005	< 0.005	< 0.005	2.73
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.86	3.86	< 0.005	< 0.005	< 0.005	4.04
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.28	9.28	< 0.005	< 0.005	0.01	9.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.61

3.9. Paving (2024) - Unmitigated

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

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

Off-Road Equipment	1.52	1.28	11.7	15.0	0.02	0.58	—	0.58	0.54	—	0.54	—	2,267	2,267	0.09	0.02	—	2,275
Paving	—	2.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.80	1.03	< 0.005	0.04	—	0.04	0.04	—	0.04	—	155	155	0.01	< 0.005	—	156
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.11	0.10	0.07	1.46	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.07	265
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	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.03	16.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.69	2.69	< 0.005	< 0.005	0.01	2.73
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. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	9.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	—	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.38	8.38	< 0.005	< 0.005	< 0.005	8.49
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	< 0.005	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.28	0.25	0.33	3.34	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	775	775	0.03	0.03	2.94	787
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	< 0.005	0.27	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.32	161
Parking Lot	11.3	9.96	13.4	134	0.30	0.23	25.2	25.5	0.21	6.41	6.62	—	31,117	31,117	1.10	1.16	118	31,607
Total	11.6	10.2	14.0	138	0.31	0.23	25.9	26.1	0.22	6.58	6.80	—	32,045	32,045	1.14	1.21	121	32,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Governm Office Building	0.26	0.23	0.40	2.64	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	707	707	0.03	0.03	0.08	717
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	160
Parking Lot	10.5	9.13	15.9	106	0.28	0.23	25.2	25.5	0.21	6.41	6.62	—	28,388	28,388	1.18	1.27	3.06	28,800
Total	10.7	9.36	16.6	109	0.29	0.23	25.9	26.1	0.22	6.58	6.80	—	29,248	29,248	1.22	1.33	3.14	29,678
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.05	0.04	0.07	0.49	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	119	119	< 0.005	0.01	0.21	121
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.3	25.3	< 0.005	< 0.005	0.02	26.5
Parking Lot	1.90	1.66	2.71	19.6	0.05	0.04	4.50	4.54	0.04	1.14	1.18	—	4,794	4,794	0.19	0.20	8.43	4,867
Total	1.95	1.70	2.83	20.1	0.05	0.04	4.61	4.66	0.04	1.17	1.21	—	4,939	4,939	0.19	0.21	8.66	5,015

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	56.5	56.5	< 0.005	< 0.005	—	56.6
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	154	154	0.01	< 0.005	—	154
Total	—	—	—	—	—	—	—	—	—	—	—	—	234	234	0.01	< 0.005	—	234

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Government Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Convenience Market (24 hour)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.49
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.1

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	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.10	0.09	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Total	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.19	0.25	0.43	< 0.005	< 0.005	—	0.57
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.21	0.27	0.48	< 0.005	< 0.005	—	0.64
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.18	0.24	0.42	< 0.005	< 0.005	—	0.56
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	1.36	1.36	< 0.005	< 0.005	—	1.36
Total	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.88	0.00	1.88	0.19	0.00	—	6.57
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	3/4/2024	3/31/2024	5.00	20.0	—
Grading	Grading	4/1/2024	6/30/2024	5.00	65.0	—
Building Construction	Building Construction	8/5/2024	2/1/2025	5.00	130	—
Paving	Paving	7/1/2024	8/2/2024	5.00	25.0	—
Architectural Coating	Architectural Coating	2/3/2025	3/30/2025	5.00	40.0	—

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	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	3.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	3.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	105	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4.16	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	2.13	8.80	HHDT,MHDT

Building Construction	Hauling	2.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	22.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.83	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	19,500	6,500	61,946

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	30.0	0.00	—
Grading	54,500	—	195	0.00	—
Paving	0.00	0.00	0.00	0.00	23.7

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
General Office Building	0.00	0%
Government Office Building	0.00	0%
Convenience Market (24 hour)	0.00	0%
User Defined Industrial	0.00	0%
Parking Lot	23.7	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	375	0.01	< 0.005
2025	0.00	375	0.01	< 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
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	43.0	43.0	43.0	15,695	886	886	886	323,437
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	2.00	2.00	2.00	730	41.2	41.2	41.2	15,044
Parking Lot	1,726	1,726	1,726	629,990	35,569	35,569	35,569	12,982,601

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	19,500	6,500	61,946

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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)
General Office Building	69,073	375	0.0129	0.0017	99,809
Government Office Building	69,073	375	0.0129	0.0017	99,809
Convenience Market (24 hour)	332,091	375	0.0129	0.0017	140,829
User Defined Industrial	0.00	375	0.0129	0.0017	0.00
Parking Lot	904,417	375	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	533,201	0.00
Government Office Building	595,979	0.00
Convenience Market (24 hour)	518,508	0.00
User Defined Industrial	0.00	0.00
Parking Lot	0.00	4,958,234

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	2.79	—
Government Office Building	2.79	—

Convenience Market (24 hour)	21.0	—
User Defined Industrial	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	1.00	1.00	2.00	3.00	0.73

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

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	25.0	annual days of extreme heat
Extreme Precipitation	4.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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 ¾ 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	3	0	0	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	0	0	0	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	3	1	1	3
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	55.4
AQ-PM	25.1
AQ-DPM	28.0
Drinking Water	51.5
Lead Risk Housing	1.68
Pesticides	76.8
Toxic Releases	30.9
Traffic	58.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	48.0
Cardio-vascular	66.7
Low Birth Weights	62.1
Socioeconomic Factor Indicators	—
Education	30.0
Housing	5.22
Linguistic	41.4
Poverty	2.60
Unemployment	4.89

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	86.17990504
Employed	97.69023483
Median HI	84.07545233
Education	—
Bachelor's or higher	88.66931862
High school enrollment	100
Preschool enrollment	36.28897729
Transportation	—
Auto Access	64.27563198
Active commuting	7.378416528
Social	—
2-parent households	63.49287822
Voting	80.91877326
Neighborhood	—
Alcohol availability	97.0101373
Park access	62.10701912
Retail density	3.862440652
Supermarket access	8.122674195
Tree canopy	28.94905685
Housing	—
Homeownership	66.14910817
Housing habitability	90.47863467
Low-inc homeowner severe housing cost burden	33.44026691
Low-inc renter severe housing cost burden	96.31720775
Uncrowded housing	96.93314513

Health Outcomes	—
Insured adults	83.67765944
Arthritis	93.0
Asthma ER Admissions	54.2
High Blood Pressure	62.1
Cancer (excluding skin)	71.8
Asthma	72.9
Coronary Heart Disease	96.0
Chronic Obstructive Pulmonary Disease	94.6
Diagnosed Diabetes	91.9
Life Expectancy at Birth	78.1
Cognitively Disabled	28.0
Physically Disabled	90.7
Heart Attack ER Admissions	51.9
Mental Health Not Good	80.9
Chronic Kidney Disease	93.4
Obesity	68.0
Pedestrian Injuries	62.9
Physical Health Not Good	93.2
Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	70.0
No Leisure Time for Physical Activity	89.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	67.0
Elderly	69.3
English Speaking	54.0
Foreign-born	48.6
Outdoor Workers	96.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	50.2
Traffic Density	60.3
Traffic Access	23.0
Other Indices	—
Hardship	9.2
Other Decision Support	—
2016 Voting	70.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	26.0
Healthy Places Index Score for Project Location (b)	87.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Per Project Description
Construction: Construction Phases	Per Construction Questionnaire
Operations: Vehicle Data	Per Trip Generation
Construction: Off-Road Equipment	Additional Paving equipment added to account for off-site road widening improvements
Operations: Fleet Mix	Watering Trucks anticipated to be HHD
Construction: Trips and VMT	Anticipated number of hauling trips for solar friends - 210 trips for entire phase