

Appendix B

17332 IRVINE BOULEVARD RESIDENTIAL PROJECT AIR QUALITY AND GREENHOUSE IMPACT ANALYSIS

City of Tustin

Prepared for
THE OLSON COMPANY
3010 OLD RANCH PARKWAY, SUITE 100
SEAL BEACH, CA 90740

Prepared by



MAT ENGINEERING INC.

17192 MURPHY AVENUE, IRVINE, CALIFORNIA 92623
CONTACT: ALEX TABRIZI, PE, TE ■ 949.344.1828 ■ at@matengineering.com

Alex Tabrizi, PE, TE

May 19, 2026

Project & Doc No. 0012-2025-11.02

TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION & PROJECT DESCRIPTION.....	1
1.1 Purpose of Report & Study Objectives	1
1.2 Site Location & Project Description.....	1
1.3 Sensitive Receptors	1
2.0 ENVIRONMENTAL SETTINGS	2
2.1 Existing Physical Setting	2
2.2 Local Climate & Methodology	2
3.0 AIR QUALITY SETTING	4
3.1 Criteria Air Pollutants	4
3.2 Other Pollutants of Concern.....	5
3.2.1 Toxic Air Contaminants.....	5
3.2.2 Asbestos	6
3.2.3 Attainment Status.....	6
3.3 Greenhouse Gases.....	7
3.3.1 Global Warming Potential	9
4.0 AIR QUALITY STANDARDS	11
4.1 Air Quality Regulatory Standards.....	11
4.1.1 Ambient Air Quality Standards (AAQS)	11
4.1.2 South Coast Air Quality Management District.....	14
4.1.3 Local	17
4.2 Greenhouse Gas Regulatory Settings	19
4.2.1 National.....	19
4.2.3 California.....	20
5.0 MODELING PARAMETERS & ASSUMPTIONS	27
5.1 Construction Assumptions	27
5.1.1 Localized Construction Assumptions	27
5.2 Operational Assumptions.....	29
5.2.1 Localized Operational Assumptions.....	30
6.0 THRESHOLDS OF SIGNIFICANCE	31
6.1 Air Quality Standards of Significance.....	31
6.1.1 Regional Significance Thresholds.....	31
6.1.2 Localized Significance Thresholds.....	32
6.2 Greenhouse Gas Thresholds of Significance	32

7.0 AIR QUALITY IMPACT ANALYSIS	34
Impact Analyses.....	34
7.1 Construction Air Quality Emissions Impact	37
7.1.1 Regional Construction Emissions	37
7.1.2 Fugitive Dust Emissions.....	38
7.1.3 Toxic Air Contaminants – Construction.....	39
7.2 Operational Air Quality Emissions Impact.....	39
7.2.1 Regional Operational Emissions	39
7.2.2 Localized Construction Emissions	40
7.2.3 Localized Operational Emissions	41
7.2.4 Air Quality Health Impacts	41
7.2.5 CO Hot Spot Emissions	42
7.2.6 Operations – Toxic Air Contaminants	43
8.0 GREENHOUSE GAS (GHG) EMISSIONS ANALYSIS.....	44
8.1 Construction GHG Emissions Impact	44
8.2 Operational GHG Emissions Impact	44
8.3 Consistency with GHG Plans, Programs & Policy	45

APPENDIX A: CALEEMOD OUTPUTS

LIST OF TABLES

Table	Page
Table 1 Health Effects of Major Criteria Pollutants	4
Table 2 Attainment Status.....	7
Table 3 Greenhouse Gasses	8
Table 4 Global Warming Potential of Greenhouse Gases	10
Table 5 Ambient Air Quality Standards	12
Table 6 Maximum Area of Disturbance During Construction	28
Table 7 SCAQMD Regional Significance Thresholds	31
Table 8 SCAQMD Localized Significance Thresholds (LST)	32
Table 9 Regional Significance - Construction Emissions (pounds / day)	38
Table 10 Regional Significance – Construction Emissions (pounds / day)	40
Table 11 Local Significance - Construction Emissions (pounds / day)	41
Table 12 Construction Emissions (Metric Tons CO ₂ e).....	44
Table 13 Operational Emissions (Metric Tons CO ₂ e)	45
Table 14 Consistency with the 2022 Scoping Plan	46
Table 15 Consistency with the 2020-2045 RTP/SCS	47

LIST OF EXHIBITS

Exhibit	Follows Page
Exhibit A Proposed Project Site Location	1
Exhibit B Proposed Site Plan.....	1

GLOSSARY

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH ₄	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
MTCO ₂ e	Metric tons of carbon dioxide equivalent
MMTCO ₂ e	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
NO ₂	Nitrogen dioxide
N ₂ O	Nitrous oxide
O ₃	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM ₁₀	Particles that are less than 10 micrometers in diameter
PM _{2.5}	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF ₆	Sulfur hexafluoride
SIP	State Implementation Plan
SO _x	Sulfur Oxides
SRA	Source/Receptor Area
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

1.0 INTRODUCTION & PROJECT DESCRIPTION

1.1 Purpose of Report & Study Objectives

This air quality, greenhouse gas (GHG), and energy analysis was prepared to evaluate whether the estimated criteria pollutants and GHG emissions generated from the proposed 17332 Irvine Boulevard Residential Project (project) would cause a significant impact to the air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

1.2 Site Location & Project Description

The project site is located at 17332 Irvine Boulevard in the City of Tustin. The site is currently occupied by approximately 17,300 square feet of two-story commercial use building and associated parking lot which will be displaced by the proposed project. The project site is surrounded by Irvine Boulevard to the north, residential uses to the south, Mountain View Drive to the east and Yorba Street to the west.

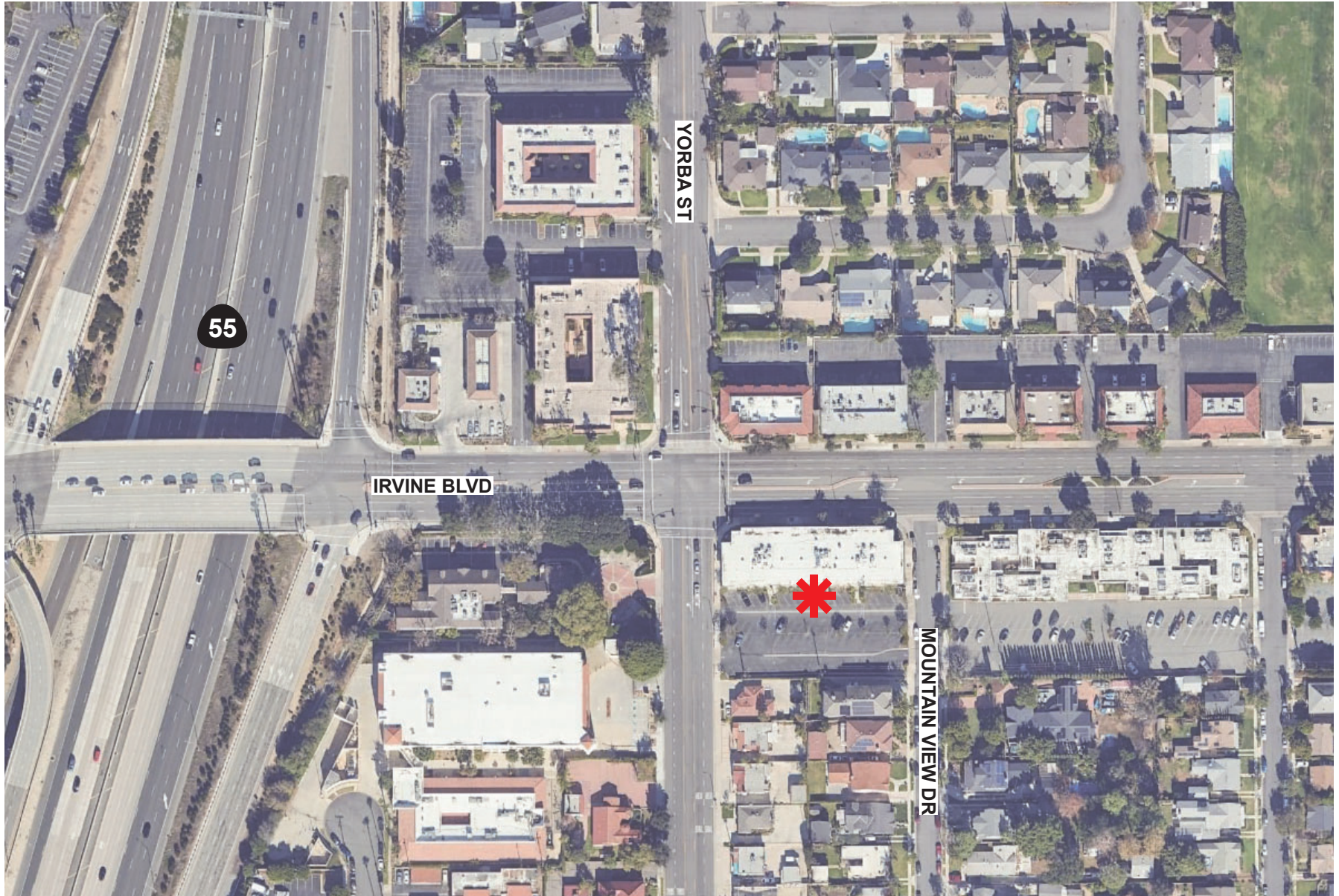
The proposed project consists of construction and operation of 15 single-family residential dwelling units. The project construction activities are expected to begin in April 2027, and the project will be operational in the year 2028. The project site would not involve an import/export of earthwork materials and would be balanced on-site.

Exhibit A shows the project site location. Exhibit B shows the proposed site plan.

1.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc.).

The closest existing sensitive receptors (to the site area) are residential uses located immediately to the south of the project site. There is also an existing Health South Tustin Rehabilitation Hospital located approximately 160 feet to the west of the project site.



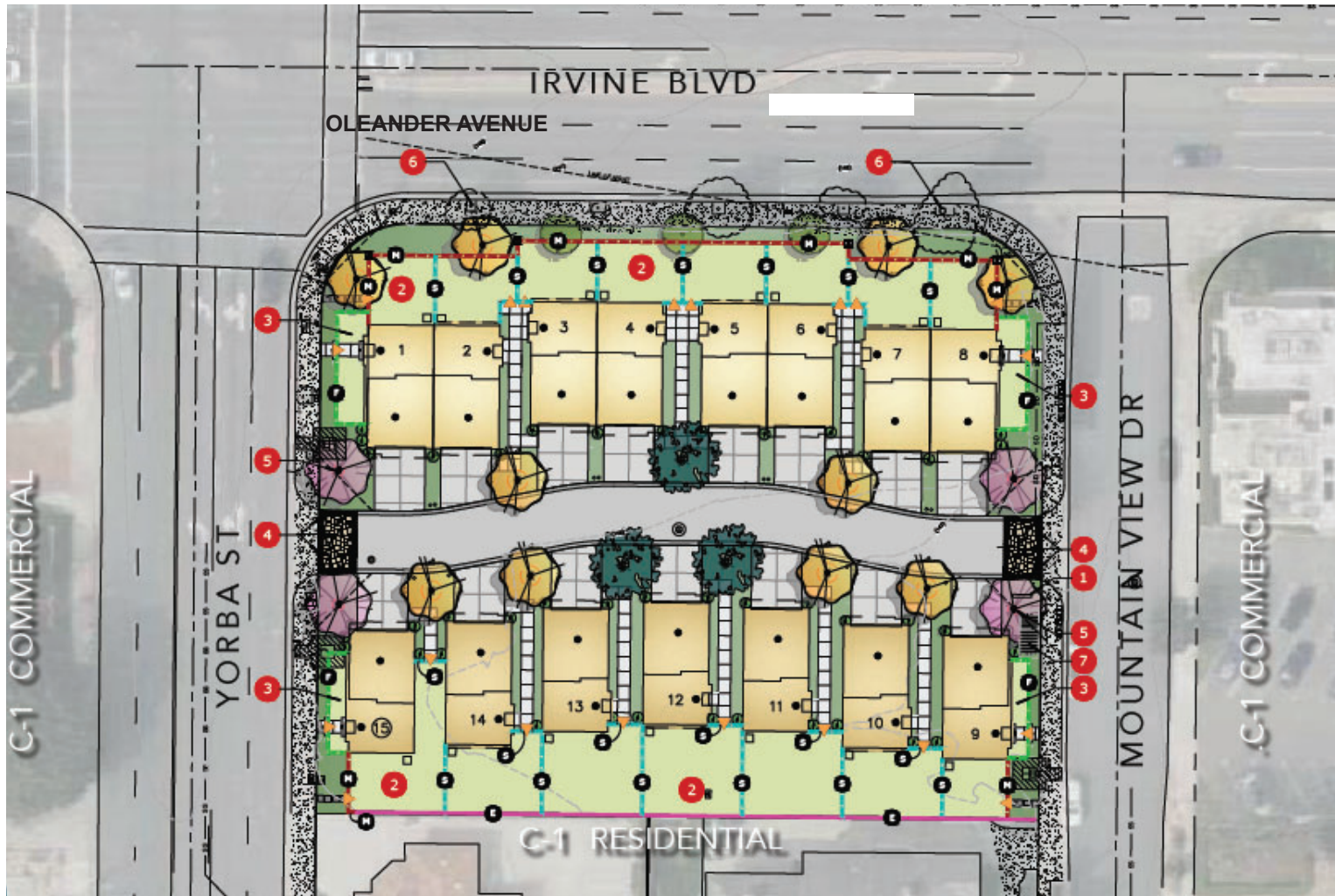
Not to Scale



Legend:



Site Location



Not to Scale



2.0 ENVIRONMENTAL SETTINGS

2.1 Existing Physical Setting

The project site is located in the City of Tustin which is part of the South Coast Air Basin (SCAB). The South Coast Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

2.2 Local Climate & Methodology

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semi-arid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. The typical mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. Precipitation is limited to a few winter storms.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as “high fog”, are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O₃) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture,

suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

The project is located within the City of Tustin with average high temperatures of up to 84°F during the month of August, and average low temperatures of 46°F during the month of December.¹

¹ Weather Spark, *Average Weather in Los Angeles, California, United States*, <https://weatherspark.com/y/1905/Average-Weather-in-Tustin-California-United-States-Year-Round>, accessed May 10, 2026.

3.0 AIR QUALITY SETTING

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

3.1 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and State governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O₃), coarse particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) are considered to be local pollutants because they tend to accumulate in the air locally. Particulate Matter is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 1.

Table 1
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness.
Ozone (O ₃)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.

Pollutants	Sources	Primary Effects
Respirable Particulate Matter (PM ₁₀)	- Stationary combustion of solid fuels. - Construction activities. - Industrial processes. - Atmospheric chemical reactions.	- Reduced lung function. - Aggravation of the effects of gaseous pollutants. - Aggravation of respiratory and cardiorespiratory diseases. - Increased cough and chest discomfort.
Fine Particulate Matter (PM _{2.5})	- Fuel combustion in motor vehicles, equipment, and industrial sources. - Residential and agricultural burning. - Industrial processes. - Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics.	- Increases respiratory disease. - Lung damage. - Cancer and premature death.
Sulfur Dioxide (SO ₂)	- Combustion of sulfur-containing fossil fuels. - Smelting of sulfur-bearing metal ores. - Industrial processes.	- Aggravation of respiratory diseases (asthma, emphysema). - Reduced lung function. - Irritation of eyes.

Source: California Air Resources Board, 2002.

3.2 Other Pollutants of Concern

3.2.1 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

According to CARB's California Almanac of Emissions and Air Quality (2005), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important

being PM from diesel-fueled engines (DPM). DPM has been identified as a human carcinogen and contains hundreds of different gaseous and particulate components, many of which are toxic. Diesel particles are so small that they penetrate deep into the lungs. Studies show that DPM concentrations are much higher near heavily traveled highways and intersections. Off-road construction equipment and heavy-duty trucks are considered major sources of diesel-related emissions.

3.2.2 Asbestos

Asbestos is listed as a TAC by the ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Orange County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain naturally occurring asbestos.

However, in the event asbestos is found on the site, the project will be required to comply with SCAQMD and NESHAP standards and protocols. SCAQMD Rule 1403 establishes the survey requirements, notification, and work practice requirements to prevent asbestos emissions during construction activities. By following the required asbestos abatement protocols, the project impact from asbestos would be less than significant.

3.2.3 Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or ‘form’ of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard. Table 2 lists the attainment status for the criteria pollutants in the basin.

**Table 2
Attainment Status**

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Maintenance (Serious)
Nitrogen dioxide	Attainment	Maintenance (Primary)
Sulfur dioxide	Attainment	Attainment/Unclassified
PM10	Nonattainment	Maintenance (Serious)
PM2.5	Nonattainment	Nonattainment (Moderate)

Source (Federal and State Status): California Air Resources Board (2020).

<https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>

3.3 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide, methane (CH₄), ozone, water vapor, nitrous oxide, and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO₂ and nitrous oxide (NO₂) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂, where CO₂ is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean.

Table 3 provides a description of each of the greenhouse gases and their global warming potential.

Additional information is available: <https://www.arb.ca.gov/cc/inventory/data/data.htm>

Table 3
Greenhouse Gasses

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N_2O), also known as laughing gas is a colorless gas.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_2O .
Methane	Methane (CH_4) is a flammable gas and is the main component of natural gas.	A natural source of CH_4 is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Greenhouse Gas	Description and Physical Properties	Sources
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF ₆) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Source: <https://www.ipcc.ch/report/ar5/syr/>

3.3.1 Global Warming Potential

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of one ton of carbon dioxide. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases.

A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 4.

Table 4
Global Warming Potential of Greenhouse Gases

Gas Name (Formula)	Atmospheric Lifetime (years)	GWP ¹
Carbon Dioxide (CO ₂)	--	1
Methane (CH ₄)	12	28-36
Nitrous Oxide (N ₂ O)	114	265
Hydrofluorocarbons (HFCs)	1-270	12-12,400
Sulphur Hexafluoride (SF ₆)	3,200	23,500
Nitrogen Trifluoride (NF ₃)	740	16,100

Source: IPCC Fifth Assessment Report (AR5)

https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf

1 = Global Warming Potential. Compared to the same quantity of CO₂ emissions.

4.0 AIR QUALITY STANDARDS

4.1 Air Quality Regulatory Standards

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

4.1.1 Ambient Air Quality Standards (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM_{2.5}"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some

inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

The federal and state ambient air quality standards are summarized in Table 5 and can also be found at <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

Table 5
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentrations ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1-Hour	0.09 ppm	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm		0.070 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁸	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µ/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		--		
Fine Particulate Matter (PM _{2.5}) ⁸	24-Hour	--	--	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 µg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 µg/m ³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 µg/m ³)		9 ppm (10 µg/m ³)	--	
	8-Hour (Lake Tahoe)	6 ppm (7 µg/m ³)		--	--	
Nitrogen Dioxide (NO ₂) ⁹	1-Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	--	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (357 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentrations ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Sulfur Dioxide (SO2) ¹⁰	1-Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	--		--	0.5 ppm (1300 mg/m ³)	
	24-Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹⁰	--	
	Annual Arithmetic Mean	--		0.130ppm (for certain areas) ¹⁰	--	
Lead ^{11,12}	30 Day Average	1.5 µg/m ³	Atomic Absorption	--		
	Calendar Qtr	--		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	--		0.15 µg/m ³		
Visibility Reducing Particles ¹³	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹¹	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent

- results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
 6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
 7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
 8. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
 9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
 10. On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
 11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
 12. The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
 13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Several pollutants listed in Table 5 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

4.1.2 South Coast Air Quality Management District

The SCAQMD is one of California's 35 air quality management districts that have prepared Air Quality Management Plans (AQMP). SCAQMD adopted the 2022 AQMP on December 2, 2022. The primary purpose of the 2022 AQMP is to identify, develop, and implement strategies and control measures to meet the 2015 eight-hour ozone NAAQS – 70 parts per billion (ppb) as expeditiously as practicable, but no later than the statutory attainment deadline of August 3, 2018, for the Basin and August 3, 2033, for the Riverside County portion of the Salton Sea Air Basin. The 2022 AQMP incorporates the recently adopted SCAG's *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS) and motor vehicle emissions from

CARB. The 2022 AQMP relies on a multi-level partnership of governmental agencies at the Federal, State, regional, and local level. These agencies (EPA, CARB, local governments, Southern California Association of Governments [SCAG], and the SCAQMD) are the primary agencies that implement the AQMP programs.

Southern California Association of Governments. On September 3, 2020, the Regional Council of SCAG formally adopted the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS). The SCS portion of the 2020-2045 RTP/SCS highlights strategies for the region to reach the regional target of reducing GHGs from autos and light-duty trucks by 8 percent per capita by 2020, and 19 percent by 2035 (compared to 2005 levels). Specially, these strategies are:

- Focus growth near destinations and mobility options;
- Promote diverse housing choices;
- Leverage technology innovations;
- Support implementation of sustainability policies; and
- Promote a green region.

Furthermore, the 2020-2045 RTP/SCS discusses a variety of land use tools to help achieve the State-mandated reductions in GHG emissions through reduced per capita VMT. Some of these tools include center focused placemaking, focusing on priority growth areas, job centers, transit priority areas, as well as high quality transit areas and green regions.

In April 2024, the Regional Council of the SCAG formally adopted the Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) also known as Connect SoCal 2024 (SCAG 2024a), which is an update to the previous 2020–2045 RTP/SCS (SCAG 2020). The Connect SoCal 2024 outlines a vision for a more resilient and equitable future, with investment, policies, and strategies for achieving the region’s shared goals through 2050. The Connect SoCal 2024 sets forth a forecasted regional development pattern that, when integrated with the transportation network, measures, and policies, will reduce GHG emissions from automobiles and light-duty trucks and achieve the GHG emissions reduction target for the region set by the CARB. In addition, the Connect SoCal 2024 is supported by a combination of transportation and land use strategies that outline how the region can achieve California’s GHG-emission-reduction goals and federal Clean Air Act requirements. These are articulated in a set of Regional Strategic Investments, Regional Planning Policies, and Implementation Strategies. The Regional Planning Policies are a resource for County Transportation Commissions (CTCs) and local jurisdictions, who can refer to specific policies to demonstrate alignment with the Connect SoCal 2024 when seeking resources from state or federal programs. The Implementation Strategies articulate priorities for SCAG efforts in fulfilling or going beyond the Regional Planning Policies.

On May 7, 2025, CARB officially accepted SCAG’s determination that Connect SoCal 2024 meets the state’s GHG reduction targets. The plan demonstrates strategies to achieve per capita GHG

reductions of 8 percent by 2020 and 19 percent by 2035 compared to 2005 levels, through goals such as:

- Build and maintain an integrated multimodal transportation network.
- Develop, connect, and sustain communities that are livable and thriving.
- Create a healthy region for the people of today and tomorrow.
- Support a sustainable, efficient, and productive regional economic environment that provides opportunities for all.

CARB's acceptance confirms that Connect SoCal 2024 is consistent with SB 375 requirements and aligns with California's climate goals.

South Coast Air Quality Management District Rules

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. Some of the rules and regulations that apply to this project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging 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.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are indicated below and include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least two times daily.

- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

Idling Diesel Vehicle Trucks – Idling for more than 5 minutes in any one location by a diesel-fueled vehicle with a gross weight rating of more than 10,000 pounds is prohibited.

4.1.3 Local

City of Tustin General Plan

The City of Tustin General Plan (General Plan) provides a framework for the City's long-term growth and sustainability. The General Plan provides specific strategies for reducing emissions in the Conservation, Open Space, and Recreation Element of the City of Tustin General Plan. These policies promote planning for sustainable transportation, improving energy efficiency, enhancing air quality, and balancing jobs and housing. The accompanying policies and programs ensure that the City of Tustin moves towards a sustainable, low-carbon future while creating healthier, more resilient communities.

The City's General Plan includes policies related to air quality in the Conservation, Open Space, and Recreation Element that include the following:

Conservation, Open Space, and Recreation Element

Goal 1: Reduce air pollution through proper land use, transportation and energy use planning.

Policy 1.1: Cooperate with the South Coast Air Quality Management District and the Southern California Association of Governments in their effort to implement provisions of the region's Air Quality Management Plan, as amended.

Policy 1.2: Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicle ingress and egress.

Policy 1.3: Locate multiple family developments close to commercial areas to encourage pedestrian rather than vehicular travel.

Policy 1.4: Create the maximum possible opportunities for bicycles as an alternative transportation mode and recreational use.

Goal 2: Improve air quality by influencing transportation choices of mode, time of day, or whether to travel and to establish a jobs/housing balance.

Policy 2.1: Reduce vehicle trips through incentives, regulations and/or Transportation Demand Management (TDM) programs.

Policy 2.2: Reduce total vehicle miles traveled (VMT) through incentives, regulations and/or Transportation Demand Management.

Policy 2.6: Encourage non-motorized transportation through the provision of bicycle and pedestrian pathways.

Policy 2.7: Encourage employer rideshare and transit incentives programs by local businesses.

Policy 2.8: Manage non-residential parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

Goal 3: Reduce particulate emissions to the greatest extent feasible.

Policy 3.1: Adopt incentives, regulations, and/or procedures to minimize particulate emissions from paved and unpaved roads, agricultural uses, parking lots, and building construction.

4.2 Greenhouse Gas Regulatory Settings

4.2.1 National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to

35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaption Plan. The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. <https://www.epa.gov/arc-x/planning-climate-change-adaptation>

4.2.3 California

California Code of Regulations (CCR) Title 24, Part 6. CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 and 2016 standard The California Energy Commission (CEC) updates the Energy Code every three years. On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.

California Code of Regulations (CCR) Title 24, Part 11. All buildings for which an application for a building permit is submitted on or after January 1, 2022 must follow the 2022 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions

California Green Building Standards. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle, during the 2016 to 2017

fiscal year. During the 2019-2020 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2019 Triennial Code Adoption Cycle.

The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

Executive Order S-3-05. California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following targets:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels.
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-01-07. Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are “back-loaded”, with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today’s fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

SB 97. Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor’s Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional,

or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

AB 32. California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on Statewide GHG emissions. AB 32 requires that Statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then the California Air Resources Board (CARB) should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Senate Bill 100. Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14- 08, which was signed on November 2008 and expanded

the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

SB 375. Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a Sustainable Communities Strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. On September 3, 2020, the Southern California Association of Governments (SCAG) adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal or "Plan" herein) for the six-county region including Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. Connect SoCal reflects the region's commitment to improve the region's mobility, sustainability and economy. To achieve these goals, the Plan demonstrates how the region will reduce greenhouse gas (GHG) emissions from transportation sources to comply with Senate Bill 375 (SB 375) and meet Federal Transportation Conformity Requirements pursuant to the Federal Clean Air Act.²

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Assembly Bill 939 and Senate Bill 1374. Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Executive Order S-13-08. Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and

² <https://scag.ca.gov/read-plan-adopted-final-plan>

increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resource Agency 2009) was adopted, which is the "... first statewide, multi-sector, region-specific, and information-based climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15. Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage and was signed into law on April 1, 2015.

Executive Order B-37-16. Executive Order B-37-16, continuing the State's adopted water reduction, was signed into law on May 9, 2016. The water reduction builds off the mandatory 25% reduction called for in EO B-29-15.

CARB Scoping Plan. On December 11, 2008, CARB adopted the Climate Change Scoping Plan (Scoping Plan), which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce GHG emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions level of 596 million MTCO₂e under a business as usual (BAU)³ scenario. This is a reduction of 42 million MTCO₂e, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

The Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. The measures described in the Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal, established in Executive

³ "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions; refer to <http://www.arb.ca.gov/cc/inventory/data/bau.htm>. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

Order S-3-05, and observes that “a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal.”

On January 20, 2017, CARB released the proposed Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update was finalized in November 2017 and approved on December 14, 2017 and reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. The 2017 Scoping Plan Update establishes a new Statewide emissions limit of 260 million MTCO₂e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

On December 15, 2022, CARB released the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), which identifies the strategies achieving carbon neutrality by 2045 or earlier. The 2022 Scoping Plan contains the GHG reductions, technology, and clean energy mandated by statutes. The 2022 Scoping Plan was developed to achieve carbon neutrality by 2045 through a substantial reduction in fossil fuel dependence, while at the same time increasing deployment of efficient non-combustion technologies and distribution of clean energy. The plan would also reduce emissions of short-lived climate pollutants (SLCPs) and would include mechanical CO₂ capture and sequestration actions, as well as emissions and sequestration from natural and working lands and nature-based strategies. Under 2022 Scoping Plan, by 2045, California aims to cut GHG emissions by 85 percent below 1990 levels, reduce smog-forming air pollution by 71 percent, reduce the demand for liquid petroleum by 94 percent compared to current usage, improve health and welfare, and create millions of new jobs. This plan also builds upon current and previous environmental justice efforts to integrate environmental justice directly into the plan, to ensure that all communities can reap the benefits of this transformational plan.

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporates the contribution of natural and working lands (NWL) to the State's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

5.0 MODELING PARAMETERS & ASSUMPTIONS

Typical emission rates from construction activities were obtained from CalEEMod Version 2022.1. CalEEMod is a computer model published by SCAQMD for estimating air pollutant emissions. Using CalEEMod, the peak daily air pollutant emissions were calculated, and these emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions.

5.1 Construction Assumptions

The project construction activities are expected to begin in April-2027 and the project will be operational in the year 2028. The project would demolish the existing on site two story commercial building and parking lot. Demolition waste quantities were estimated using standard CalEEMod and CalRecycle methodologies. Building demolition waste was calculated using CalEEMod's default debris generation factor of 115 pounds per square foot for nonresidential structures. The building consists of two floors, each 17,589.90 square feet, for a total demolition area of 35,179.8 square feet. This area was multiplied by the CalEEMod debris factor and converted from pounds to tons. Asphalt pavement demolition waste was estimated using CalRecycle's published volume-to-weight conversion factor for asphalt paving (2,600 pounds per cubic yard). The 26,173.05-square-foot parking lot was assumed to have an asphalt thickness of 0.5 feet, and total volume was converted to cubic yards and then to tons. The phases of the construction activities include demolition, grading, building construction, paving, and architectural coating. For details on construction modeling and construction equipment for each phase, please see Appendix A.

The project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures is used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Compliance with Rule 403 is required.

5.1.1 Localized Construction Assumptions

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features the following parameters:

1. The off-road equipment list is (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The construction equipment showing the equipment associated with the maximum area of disturbance is shown in Table 6.

Table 6
Maximum Area of Disturbance During Construction

Phase	Equipment	Number	Soil Disturbance Rate (Acres/ 8hr-Day)	Total Daily Disturbance Footprint (Acres)
Grading	Graders	1	0.5	2.0
	Rubber Tired Dozers	1	0.5	
	Tractors/Loaders/Backhoes	2	0.5	

Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2>

As shown in Table 4, the maximum number of acres disturbed in a day would be 2.0 acres.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables, and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO_x, PM₁₀, and PM_{2.5} from the proposed project could result in a significant impact to the local air quality. The emission thresholds were based on the Central Orange County Source Receptor Area (SRA 17) and a disturbance of 2.0 acres per day, at a distance of 25 meters (82 feet). According to LST methodology, any receptor located closer than 25 meters should be based on the 25-meter threshold. The closest receptors are adjacent to the south of the site.

5.2 Operational Assumptions

Operational or long-term emissions occur over the life of the project . Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the project . Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, hearths, from landscaping emissions, and consumer product usage. The operational emissions were estimated using the latest version of CalEEMod.

Mobile Source:

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The proposed project would generate approximately 136 average daily trips and are based on the 17332 Irvine Boulevard Residential Project Trip Generation & VMT Analysis/Screening, City of Tustin, California (VMT Memo), dated March 19, 2026, by MAT Engineering, Inc. It should be noted that, exiting trips generated from on-site uses are not taken into account.

The program then applies the emission factors for each trip provided by the CalEEMod defaults to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis. Please see CalEEMod output comments sections in Appendix A for details.

Area Source:

Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, per industry standards, CalEEMod defaults were used to estimate emissions from landscaping equipment.

Per SCAQMD Rule 445, wood burning stoves and/or devices are not allowed in new developments as a result no wood burning devices are modeled as a part of the project.

Energy Source:

2022.1 CalEEMod defaults were utilized.

5.2.1 Localized Operational Assumptions

For operational emissions, the screening tables for a disturbance area of 2.0 acres and a distance of 25 meters were used to determine significance. The tables were compared to the project's onsite operational emissions.

6.0 THRESHOLDS OF SIGNIFICANCE

6.1 Air Quality Standards of Significance

6.1.1 Regional Significance Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (SCAQMD) may be relied upon to make the above determinations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 7.

Table 7
SCAQMD Regional Significance Thresholds

Emissions Thresholds of Significance		
Pollutants	Construction Pounds/day	Operation Pounds/day
Nitrous Oxides (NO _x)	100	55
Volatile Organic Compounds (VOC)	75	55
Particulate Matter <10 µg (PM ₁₀)	150	150
Particulate Matter <2.5 µg (PM _{2.5})	55	55
Sulfur Oxides (SO _x)	150	150
Carbon Monoxide (CO)	550	550
Lead (Pb)	3	3

Local Microscale Concentration Standards The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.

6.1.2 Localized Significance Thresholds

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided the Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}.

The emission thresholds were calculated based on the Central Orange (SRA 17) and a disturbance of 2.0 acres per day at a distance of 25 meters and are shown in Table 8.

The nearest existing sensitive receptors are located along the southern property line, less than 25 meters from potential areas of on-site construction and operational activity. Although receptors are located closer than 25 meters to the site, SCAQMD LST methodology states that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.

The project will disturb approximately 2.0 acres per day (refer to Table 8), the closest available threshold categories are for 1-acre and 5-acre sites. As such, project's LSTs are evaluated using 2.0-acre disturbance thresholds for those nearest site sizes.

Table 8
SCAQMD Localized Significance Thresholds (LST)

Pollutant	Construction (lbs/day)
NO_x	115.0
CO	715.0
PM₁₀	6.0
PM_{2.5}	4.0

Source: SCAQMD Mass Rate Localized Significance Thresholds for 2.0-acre site in SRA-17 at 25 meters

6.2 Greenhouse Gas Thresholds of Significance

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions and gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This

section recommends certain factors to be considered in the determination of significance (i.e., the extent to which a project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and therefore GHG emissions should be analyzed in the context of CEQA's requirements for cumulative impact analyses (CEQA Guidelines Section 15064(h)(3)). A project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the SCAQMD nor the City of Tustin has adopted any numerical GHG thresholds. Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the project using recommended air quality models, as described below. The primary purpose of quantifying the project's GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the significance of the project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the project.

7.0 AIR QUALITY IMPACT ANALYSIS

The latest version of CalEEMod Model Version 2022.1 was used to estimate the onsite and offsite construction emissions. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies design features to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

Appendix G of the California CEQA Guidelines offers the following four tests of air quality impact significance. A project would have a potentially significant impact if it:

- AQ-1 Conflicts with or obstructs implementation of the applicable air quality plan.
- AQ-2 Results in a cumulatively considerable net increase of any criteria pollutants for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.
- AQ-3 Exposes sensitive receptors to substantial pollutant concentrations.
- AQ-4 Creates objectionable odors affecting a substantial number of people.

Impact Analyses

AQ-1 Conflicts with or obstructs implementation of the applicable air quality plan.

The project is located within the South Coast Air Basin, which is governed by the SCAQMD. On December 2, 2022, the SCAQMD Governing Board adopted the 2022 AQMP. The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, updated emission inventory methodologies for various source categories. Additionally, the 2022 AQMP utilized information and data from SCAG and its 2020-2045 RTP/SCS. According to the SCAQMD's CEQA Air Quality Handbook, projects must be analysed for consistency with two main criteria, as discussed below.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

- a) *Would the project result in an increase in the frequency or severity of existing air quality violations?*

As discussed under Impact Statements AQ-2 and AQ-3, the project's short-term construction emissions, long-term operational emissions, and localized concentrations of CO, NO_x, PM₁₀, and PM_{2.5} would be less than significant. Due to the role VOC plays in O₃ formation, it is classified as a precursor pollutant and only a regional emissions threshold has been established. As such, the project would not cause or contribute to localized air quality violations or delay the attainment of air quality standard or interim emissions reductions specified in the AQMP.

- b) *Would the project cause or contribute to new air quality violations?*

As discussed in Impact Statements AQ-2 and AQ-3, construction and operation of the proposed project would result in emissions that would be below the SCAQMD construction and operational thresholds. Therefore, the proposed project would not have the potential to cause or contribute to a violation of the ambient air quality standards.

- c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

As discussed in Impact Statement AQ-3, the proposed project would result in less than significant impacts with regard to localized concentrations during project construction and operations. As such, the proposed project would not delay the timely attainment of air quality standards or 2022 AQMP emissions reductions.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the project exceeds the assumptions utilized in preparing the forecasts presented in the 2022 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2022 AQMP involves the evaluation of the following criterion.

- a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

A project is consistent with the 2022 AQMP in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the 2022

AQMP. In the case of the 2022 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the City's General Plan, SCAG's regional growth forecast, and the SCAG 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The project site is located within City of Tustin, and the project site is designated as Professional Office (PO) in the General Plan Land Use Map and zoned as Professional (PR). The proposed project consists of 15 single-family residential units. The professional designation provides areas of development of primarily professional offices and other supporting uses. Permitted uses include professional, legal, medical, general financial, administrative, corporate and general offices, business support services, financial, insurance and real estate services and supportive commercial uses such as restaurants, medical services, public service uses, financial institution, cultural and public/institutional facilities, and similar uses which together constitute concentrations of office employment or community activity. The proposed project land use would not be consistent with the City of Tustin Municipal Zoning and General Plan Land Use Designation, and the project proposed General Plan amendment. Therefore, with the approval of General Plan amendment, the project would be considered consistent with the City of Tustin Municipal Zoning and General Plan Land Use Designation.

The population estimate as of January 1, 2026, is 79,175 people in the City of Tustin.⁴ Based on the CalEEMod the proposed project would result in a population increase of approximately 45 people and not substantially induce population growth. Based on the population forecast provided in 2020-2045 RTP/SCS, Tustin is estimated to have approximately 92,600 residents by 2045. As such, between 2026 and 2045, the City is expected to have an estimate population growth of 13,425 residents. The project's 45 residents would represent approximately 0.3 percent of anticipated growth in the City of Tustin. Therefore, the project would not cause the City's General Plan buildout population forecast to be exceeded. Therefore, with the General Plan amendment and zone change, the project would be consistent with the types, intensity, and patterns of land use envisioned for the site vicinity and would be considered consistent with the General Plan. Further, the population and housing projections, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City. As the SCAQMD has incorporated these same projections into the 2022 AQMP, it can be concluded that the proposed project would be consistent with the 2022 AQMP.

b) Would the project implement all feasible air quality mitigation measures?

The proposed project would not require mitigation and would result in less than significant air quality impacts; refer to Impact Statements AQ-2 and AQ-3. In addition, the project

⁴ State of California Department of Finance, *Population and Housing Estimates for Cities, Counties, and the State — January 1, 2025 and 2026*, accessed May 12, 2026.

would comply with all applicable SCAQMD rules and regulations, including Rule 403 and Rule 403.1 that requires excessive fugitive dust emissions controlled by regular watering or other dust prevention measures, and Rule 1113 that regulates the ROG content of paint. As such, the proposed project meets this AQMP consistency criterion.

- c) *Would the project be consistent with the land use planning strategies set forth in the AQMP?*

Land use planning strategies set forth in the 2022 AQMP are primarily based on the 2020-2045 RTP/SCS. The project is located less than 0.25-mile from a bus stop located at West 1st Street and Yorba Street operated by Orange County Transportation Authority. Additionally, new residential development would be required to install listed raceways to accommodate dedicated branch circuits to support electric vehicle chargers. Further, the project would comply with sustainable practices included in the 2025 CALGreen Code and 2025 Title 24 standards. As such, the project would emphasize land use patterns that facilitate multimodal access to work, educational and other destinations and support implementation of sustainable growth. Therefore, the project would be consistent with the actions and strategies of the 2020-2045 RTP/SCS. Therefore, the project would be consistent with the actions and strategies of the 2020-2045 RTP/SCS.

AQ-2 Results in a cumulatively considerable net increase of any criteria pollutants for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

7.1 Construction Air Quality Emissions Impact

7.1.1 Regional Construction Emissions

The construction emissions for the project would not exceed the SCAQMD's daily emission thresholds at the regional level as demonstrated in Table 9, and therefore would be considered less than significant.

Table 9
Regional Significance - Construction Emissions (pounds / day)

Analysis	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Regional Daily Emissions						
Year-1 Emissions ¹	1.01	8.73	9.94	0.02	2.49	1.05
Year-2 Emissions ¹	2.81	5.18	8.35	0.01	0.26	0.18
SCAQMD Significance Threshold	75	100	550	150	150	55
Exceeds SCAQMD Threshold?	No	No	No	No	No	No

Source: CalEEMod 2022.1. See Appendix A.

1= Maximum daily emissions during summer or winter for both on-site and off-site emissions.

7.1.2 Fugitive Dust Emissions

Construction activities are a source of fugitive dust emissions that 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 area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading, excavation and construction is expected to be short-term and would cease upon project completion. Most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particulate health concerns is the amount of PM₁₀ generated as part of fugitive dust emissions. PM₁₀ poses a serious health hazard alone or in combination with other pollutants. PM_{2.5} is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. PM_{2.5} is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_x and SO_x combining with ammonia. PM_{2.5} components from material in the Earth's crust, such as dust, are also present, with the amount varying in different locations.

The project would implement required SCAQMD dust control techniques (i.e., daily watering), limitations on construction hours, and adhere to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), to reduce PM₁₀ and PM_{2.5} concentrations. As depicted in Table 9, total PM₁₀ and PM_{2.5} emissions would not exceed the SCAQMD thresholds during construction. Thus, PM₁₀ and PM_{2.5} emissions impacts associated with project construction would be less than significant.

7.1.3 Toxic Air Contaminants – Construction

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. The Office of Environmental Health Hazard Assessment (OEHHA) has issued the Air Toxic Hot Spots Program Risk Assessment Guidelines and Guidance Manual for the Preparation of Health Risk Assessments, February 2015 to provide a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a health risk assessment (HRA) under the Air Toxics Hot Spots Information and Assessment Act of 1987. Hazard identification includes identifying all substances that are evaluated for cancer risk and/or non-cancer acute, 8-hour, and chronic health impacts. In addition, identifying any multi-pathway substances that present a cancer risk or chronic non-cancer hazard via non-inhalation routes of exposure.

Given the short-term construction schedule, the proposed project's construction activity is not expected to be a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

7.2 Operational Air Quality Emissions Impact

7.2.1 Regional Operational Emissions

The proposed project's operational criteria air quality impacts have been analyzed through the use of CalEEMod model. The summer and winter emissions created by the proposed project's long-term operations were calculated and emissions from both summer and winter are summarized in Table 10. Table 10 shows that the project does not exceed the SCAQMD daily emission threshold and regional operational emissions are considered to be less than significant.

Table 10
Regional Significance – Construction Emissions (pounds / day)

Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Summer						
Mobile Sources ¹	0.40	0.28	3.38	0.01	0.91	0.23
Area Sources ²	0.76	0.22	0.94	<0.01	0.02	0.02
Energy Sources ³	0.01	0.15	0.06	<0.01	0.01	0.01
Total Emissions	1.17	0.65	4.38	0.01	0.93	0.26
Winter						
Mobile Sources ¹	0.40	0.31	3.14	0.01	0.91	0.23
Area Sources ²	0.69	0.21	0.09	<0.01	0.02	0.02
Energy Sources ³	0.01	0.15	0.06	<0.01	0.01	0.01
Total Emissions	1.09	0.66	3.29	0.01	0.93	0.26
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

Source: CalEEMod 2022.1

1=Mobile sources consist of emissions from vehicles and road dust.

2=Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

3=Energy usage consists of emissions from on-site natural gas usage.

AQ-3 Exposes sensitive receptors to substantial pollutant concentrations.

7.2.2 Localized Construction Emissions

As shown in Table 11 none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

Table 11
Local Significance - Construction Emissions (pounds / day)

Criteria Pollutants	NOx	CO	PM₁₀	PM_{2.5}
Maximum On-site Emissions	8.73	9.94	2.49	1.05
SCAQMD Localized Significance Threshold	115.0	715.0	6.0	4.0
Exceeds Threshold?	No	No	No	No

Source: CalEEMod 2022.1 and SCAQMD's Mass Rate Look-up Tables for 2.0 acres in SRA 17 at 25 meters.

1= Maximum daily summer or Winter on-site emissions; Refer Table 7.

7.2.3 Localized Operational Emissions

As stated previously, according to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed project consists of a single-family residential use and does not include such uses. Thus, due to the lack of such emissions, no long-term localized significance thresholds analysis is necessary. Operational LST impacts would be less than significant.

7.2.4 Air Quality Health Impacts

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, ozone precursors VOCs and NOx affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

As noted in the Brief of Amicus Curiae by the SCAQMD, the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD), SJVAPCD has acknowledged that currently available modeling tools

are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from ozone, as an example, is correlated with the increases in ambient level of ozone in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient ozone levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's 2012 Air Quality Management Plan, a reduction of 432 tons (864,000 pounds) per day of NO_x and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce ozone levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. According to SCAQMD modeling, even very large reductions in NO_x and VOC emissions only slightly lower ozone levels, so the SCAQMD concludes that it's not currently feasible to accurately quantify the ozone-related health impacts from smaller projects. This is due to the complex nature of ozone formation (photochemistry) and limitations in regional air quality models. As such, for the purpose of this analysis, since the project would not exceed SCAQMD thresholds for construction and operational air emissions, the project would have a less than significant impact for air quality health impacts as well.

7.2.5 CO Hot Spot Emissions

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (e.g., adversely affecting residents, school children, hospital patients, and the elderly).

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area under State standards. There has been a decline in CO emissions even though vehicle miles traveled (VMT) on U.S. urban and rural roads have increased; estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of the nation's total anthropogenic CO emissions.⁵ Three major control programs have contributed to the reduced per-vehicle CO emissions, including exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

According to the SCAQMD *CEQA Air Quality Handbook*, a potential CO hotspot may occur at any location where the background CO concentration already exceeds 9.0 parts per million (ppm), which is the 8-hour California ambient air quality standard. As previously discussed, the site is in SRA 17. Communities within SRAs are expected to have similar climatology and ambient air pollutant concentrations. The monitoring station representative of SRA 17 is the Anaheim-812 West Vermont Street station, which is located approximately 7.1 miles northwest of the site. The maximum CO concentration at Anaheim-812 West Vermont Street station was measured at 2.098

⁵ U.S. Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed May 12, 2026.

ppm in 2025.⁶ Given that the background CO concentration does not currently exceed 9.0 ppm, a CO hotspot would not occur at the project site. Therefore, CO hotspot impacts would be less than significant in this regard.

7.2.6 Operations – Toxic Air Contaminants

The project would consist of residential land uses. These types of projects do not include major sources of toxic air contaminants (TAC) emissions that would result in significant exposure of sensitive receptors to substantial pollutant concentrations. Therefore, the project impact is considered less than significant.

AQ-4 Creates objectionable odors affecting a substantial number of people.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors. However, certain odors may emanate from diesel-powered construction equipment during the construction period for the project. These odors would be limited to the construction period and would disperse quickly; therefore, these odors would not be considered a significant impact. Construction activities associated with the project may also generate detectable architectural coatings. However, these odors would be short-term in nature and cease upon project completion. In addition, the project would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also comply with the SCAQMD Regulation XI, *Rule 1113 – Architectural Coating*, which would minimize odor impacts from ROG emissions during architectural coating. Any impacts to existing adjacent land uses would be short-term and would be less than significant.

⁶ California Air Resources Board, *Air Quality and Meteorological Information*, <https://www.arb.ca.gov/aqmis2/aqdselect.php?tab=specialrpt>, accessed May 12, 2026.

8.0 GREENHOUSE GAS (GHG) EMISSIONS ANALYSIS

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

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

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

8.1 Construction GHG Emissions Impact

During project construction, the CalEEMod 2022.1 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table 12.

Table 12
Construction Emissions (Metric Tons CO₂e)

Conditions	CO ₂ e
Total Emissions Year 2027	84.61
Total Emissions Year 2028	101.63
Amortized over 30 years	6.21

Source: CalEEMod Output contained in Appendix A

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. As shown in Table 12, the amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

8.2 Operational GHG Emissions Impact

The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO₂e emissions are summarized in the CalEEMod 2022.1 output files found in Appendix A of this report. The total operational and annualized construction emissions for the proposed project are identified in Table 13.

Table 13
Operational Emissions (Metric Tons CO₂e)

Source Category	Greenhouse Gas Emissions (Metric Tons CO₂e /Year)
Area Sources ¹	3.31
Energy Usage ²	47.53
Mobile Sources ³	152.46
Solid Waste ⁴	3.73
Water ⁵	3.80
Refrigerator	0.03
Construction ⁶	6.21
Total Emissions	217.08

Source: CalEEMod 2022.1. See Appendix A.

1= Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

2= Energy usage consist of GHG emissions from electricity and natural gas usage.

3= Mobile sources consist of GHG emissions from vehicles.

4= Solid waste includes the CO₂ and CH₄ emissions created from the solid waste placed in landfills.

5= Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

6= Construction GHG emissions based on a 30-year amortization rate.

As shown in Table 13, the proposed project would generate approximately 217.08 MT CO₂e/yr.

8.3 Consistency with GHG Plans, Programs & Policy

Consistency with the 2022 CARB Scoping Plan

The 2022 Scoping Plan identifies reduction measures necessary to achieve the goal of carbon neutrality by 2045 or earlier. Actions that reduce GHG emissions are identified for each AB 32 inventory sector. Provided in Table 14, Consistency with the 2022 Scoping Plan, is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the project would be consistent with or exceed reduction actions/strategies outlined in the 2022 Scoping Plan.

Table 14
Consistency with the 2022 Scoping Plan

Actions and Strategies	Consistency Analysis
Smart Growth / Vehicles Miles Traveled (VMT)	
Reduce VMT per capita to 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045	Consistent. The project would be required to provide Electric Vehicle (EV) charging station and bicycle parking space in accordance with the 2025 Title 24 standards and 2025 CALGreen Code, which would promote alternative mode of transportation to reduce VMT. As such, the project would be consistent with this action.
New Residential and Commercial Buildings	
All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030	Consistent. The City of Tustin has not adopted an ordinance or program limiting the use of natural gas for on-site cooking and/or heating. However, if adopted, the project would comply with the applicable goals or policies limiting the use of natural gas equipment in the future. As such, the project would be consistent with this action.
Construction Equipment	
Achieve 25% of energy demand electrified by 2030 and 75% electrified by 2045	Consistent. The City of Tustin has not adopted an ordinance or program requiring electricity-powered construction equipment. However, if adopted, the project would comply with the applicable goals or policies requiring the use of electric construction equipment in the future. As such, the project would be consistent with this action.
Non-combustion Methane Emissions	
Divert 75% of organic waste from landfills by 2025	Consistent. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025. The project would comply with local and regional regulations and recycle or compost 75 percent of waste by 2025 pursuant to SB 1383. As such, the project would be consistent with this action.

Source: California Air Resources Board, 2022 *Scoping Plan*, November 16, 2022.

CONSISTENCY WITH THE SCAG Connect SOCAL 2024

As previously stated, the latest Connect SoCal 2024 was adopted on April 4, 2024. The goals established for Connect SoCal 2024 provide a foundation for setting a vision for how the future of the SCAG Region would evolve over the next 25 years. The plan performance assessment

process provides an important means for determining how well the program of investments included in Connect SoCal correspond to its foundational goals and to its vision for the future of the SCAG Region. Table 15 shows the project's consistency with the four categories found within the Connect SoCal 2024. The Connect SoCal 2024 consists of a set of four high-level goals, as presented in Table 5.7-5. Each of the four Connect SoCal goals are supported by three sub-goals which provide more specific objectives within that specific focus area. The plan performance measures are designed to support achievement of these regional goals and sub-goals, with many of the measures supporting multiple goals. As shown therein, the proposed project would be consistent with the GHG emission reduction strategies contained in the Connect SoCal 2024.

Table 15
Consistency with the 2020-2045 RTP/SCS

Reduction Strategy	Project Consistency Analysis
Build and maintain an integrated multimodal transportation network.	
• Support investments and programs that are well-maintained and operated, coordinated, and resilient, and result in improved safety and air quality. • Ensure affordable, reliable, and accessible, quality travel options while striving to enhance equity in transportation resources offered in communities. • Plan for people of all ages, abilities, and backgrounds	Consistent. The project would replace the existing office and retail use with 15 single-family residential units, thus developing underutilized land to provide additional residential uses to meet City's growing housing demand. Furthermore, the project is located within approximately 0.25 miles from the existing bus stops. Additionally, the proposed project would include bicycle parking and electrical charging infrastructure and would support the use alternate fuel. Therefore, the project would focus growth near destinations and mobility options.
Develop, connect, and sustain communities that are livable and thriving.	
• Reinforce vibrant, human-centered communities in urban, suburban, and rural settings to increase mobility options and reduce travel distances. Identify funding opportunities for new workforce and affordable housing development. • Produce and preserve a diversity of housing types to affordability, improve accessibility, choices for all. • Foster inclusive communities free from barriers that restrict access to opportunity, and actively seek to reduce racial and economic disparities.	Consistent. The project is consistent with the objective of reinforcing human-centered communities by locating residential development within an established urban area that provides relatively good access to nearby commercial businesses, services, and daily amenities. This location supports shorter travel distances and increased opportunities for walking, bicycling, and transit use, thereby expanding mobility options and reducing reliance on single-occupant vehicle travel. By situating housing in an area with access to employment opportunities, services, and community amenities, the project helps reduce barriers to housing opportunity and supports more inclusive community development. In this way, the project would further the goal of fostering inclusive communities by expanding access to essential resources and opportunities and supporting broader efforts to reduce economic disparities, consistent with

Reduction Strategy	Project Consistency Analysis
	the intent of these policy objectives. Therefore, the project would be consistent with this reduction strategy.
Create a healthy region for the people of today and tomorrow.	
• Develop communities that are resilient and can mitigate, adapt to, and respond to chronic and acute stressors and disruptions, such as climate change. • Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions, and enable more sustainable use of energy and water. • Conserve and restore the region's natural and agricultural resources.	Consistent. The proposed project is consistent with Connect SoCal 2024 goals by promoting resilience, sustainability, and livability. It incorporates native landscaping, permeable surfaces, and adaptive reuse strategies to reduce water demand and support climate adaptation. The central location near transit stops and bicycle facilities encourage multimodal transportation, reducing vehicle trips and greenhouse gas emissions. Stormwater infiltration systems, locally sourced materials, and renewable energy features conserve resources and improve environmental quality. Overall, these measures align with regional objectives for a healthy, efficient, and resilient community.

Source: Southern California Association of Governments, <https://scag.ca.gov/connect-socal>, April 4, 2024.

As shown in Table 14 and Table 15, the proposed project would be consistent with all applicable GHG plans, programs and policy and therefore would result in a less than significant impacts related to GHG.

APPENDIX A: CalEEMod Outputs

17332 Irvine Boulevard, Tustin Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year
 - 2.2.1. Total Construction Emissions by Year, Unmitigated
 - 2.2.2. Onsite Construction Emissions by Year, Unmitigated
 - 2.2.3. Offsite Construction Emissions by Year, Unmitigated
 - 2.3. Operations Emissions Compared Against Thresholds
 - 2.4. Operations Emissions by Sector, Unmitigated
- 3. Construction Emissions Details
 - 3.1. Demolition (2027)
 - 3.1.1. Onsite - Unmitigated

3.1.2. Offsite - Unmitigated

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

3.2.2. Offsite - Unmitigated

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

3.3.2. Offsite - Unmitigated

3.4. Building Construction (2028)

3.4.1. Onsite - Unmitigated

3.4.2. Offsite - Unmitigated

3.5. Paving (2027)

3.5.1. Onsite - Unmitigated

3.5.2. Offsite - Unmitigated

3.6. Architectural Coating (2028)

3.6.1. Onsite - Unmitigated

3.6.2. Offsite - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

8.4. Construction

8.4.1. Construction Phases

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

8.5.2. Area Sources

8.5.2.1. Hearths

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	17332 Irvine Boulevard, Tustin
Construction Start Date	4/1/2027
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50000
Precipitation (days)	18.6000
Location	17332 Irvine Blvd, Tustin, CA 92780, USA
County	Orange
City	Tustin
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5963
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.43

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	15.0000	Dwelling Unit	0.90000	29,250.0	175,693	—	45.0000	—

Parking Lot	4.35000	1000sqft	0.09986	0.00000	9,240.00	—	—	—
-------------	---------	----------	---------	---------	----------	---	---	---

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.92125	2.80581	8.72503	9.93535	0.02274	0.39118	2.34367	2.48891	0.35989	0.69080	1.05069	—	3,008.04	3,008.04	0.19225	0.33903	4.26908	3,118.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.92104	2.80566	5.17949	8.30910	0.01414	0.16748	0.09842	0.26292	0.15411	0.02364	0.17501	—	1,563.87	1,563.87	0.06181	0.02148	0.00884	1,571.82
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.76623	0.72341	1.96252	3.17783	0.00544	0.06420	0.22576	0.28190	0.05908	0.06126	0.11303	—	610.650	610.650	0.02416	0.02461	0.14887	613.831
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13984	0.13202	0.35816	0.57995	0.00099	0.01172	0.04120	0.05145	0.01078	0.01118	0.02063	—	101.100	101.100	0.00400	0.00407	0.02465	101.627

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.20059	1.00926	8.72503	9.93535	0.02274	0.39118	2.34367	2.48891	0.35989	0.69080	1.05069	—	3,008.04	3,008.04	0.19225	0.33903	4.26908	3,118.14
2028	2.92125	2.80581	5.17448	8.35122	0.01414	0.16450	0.09842	0.26292	0.15137	0.02364	0.17501	—	1,567.77	1,567.77	0.06163	0.01883	0.34130	1,575.27
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.58838	0.49234	4.62349	7.15396	0.01241	0.16748	0.08430	0.25178	0.15411	0.02033	0.17444	—	1,419.54	1,419.54	0.05622	0.01988	0.00876	1,426.87
2028	2.92104	2.80566	5.17949	8.30910	0.01414	0.16450	0.09842	0.26292	0.15137	0.02364	0.17501	—	1,563.87	1,563.87	0.06181	0.02148	0.00884	1,571.82
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.20491	0.16410	1.59308	2.11369	0.00417	0.05614	0.22576	0.28190	0.05178	0.06126	0.11303	—	502.981	502.981	0.02413	0.02461	0.14887	511.068
2028	0.76623	0.72341	1.96252	3.17783	0.00544	0.06420	0.03709	0.10129	0.05908	0.00892	0.06800	—	610.650	610.650	0.02416	0.00846	0.05702	613.831
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.03740	0.02995	0.29074	0.38575	0.00076	0.01024	0.04120	0.05145	0.00945	0.01118	0.02063	—	83.2743	83.2743	0.00399	0.00407	0.02465	84.6131
2028	0.13984	0.13202	0.35816	0.57995	0.00099	0.01172	0.00677	0.01849	0.01078	0.00163	0.01241	—	101.100	101.100	0.00400	0.00140	0.00944	101.627

2.2.2. Onsite 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.17562	0.98785	8.70254	9.56448	0.01583	0.39118	1.66670	1.78533	0.35989	0.66782	1.02771	—	1,714.58	1,714.58	0.06955	0.01391	0.00000	1,720.46
2028	2.89671	2.78688	5.11063	8.02528	0.01378	0.16414	0.00000	0.16414	0.15101	0.00000	0.15101	—	1,438.07	1,438.07	0.05833	0.01167	0.00000	1,443.01
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.56653	0.47604	4.55564	6.89930	0.01205	0.16712	0.00000	0.16712	0.15375	0.00000	0.15375	—	1,304.35	1,304.35	0.05291	0.01058	0.00000	1,308.83
2028	2.89671	2.78688	5.11063	8.02528	0.01378	0.16414	0.00000	0.16414	0.15101	0.00000	0.15101	—	1,438.07	1,438.07	0.05833	0.01167	0.00000	1,443.01

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.18527	0.15553	1.42678	1.94200	0.00327	0.05448	0.16100	0.21548	0.05012	0.04449	0.09461	—	344.705	344.705	0.01398	0.00280	0.00000	345.888
2028	0.75689	0.71623	1.93508	3.06574	0.00530	0.06405	0.00000	0.06405	0.05893	0.00000	0.05893	—	561.374	561.374	0.02277	0.00455	0.00000	563.301
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.03381	0.02838	0.26039	0.35441	0.00060	0.00994	0.02938	0.03933	0.00915	0.00812	0.01727	—	57.0699	57.0699	0.00232	0.00046	0.00000	57.2657
2028	0.13813	0.13071	0.35315	0.55950	0.00097	0.01169	0.00000	0.01169	0.01075	0.00000	0.01075	—	92.9419	92.9419	0.00377	0.00075	0.00000	93.2608

2.2.3. Offsite 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.22226	0.05982	2.41676	1.56046	0.01397	0.02662	0.67697	0.70359	0.02662	0.18384	0.21045	—	2,156.19	2,156.19	0.15769	0.33211	4.26908	2,263.37
2028	0.02454	0.01893	0.06385	0.32594	0.00036	0.00036	0.09842	0.09878	0.00036	0.02364	0.02400	—	129.698	129.698	0.00330	0.00717	0.34130	132.258
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.02184	0.01629	0.06785	0.25465	0.00036	0.00036	0.08430	0.08466	0.00036	0.02033	0.02070	—	115.184	115.184	0.00331	0.00930	0.00876	118.047
2028	0.02433	0.01878	0.06886	0.28383	0.00036	0.00036	0.09842	0.09878	0.00036	0.02364	0.02400	—	125.796	125.796	0.00347	0.00981	0.00884	128.815
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.01964	0.00857	0.16630	0.17169	0.00089	0.00166	0.06476	0.06642	0.00166	0.01677	0.01843	—	158.276	158.276	0.01014	0.02182	0.14887	165.179
2028	0.00935	0.00718	0.02745	0.11209	0.00015	0.00015	0.03709	0.03723	0.00015	0.00892	0.00907	—	49.2761	49.2761	0.00138	0.00390	0.05702	50.5302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00358	0.00156	0.03035	0.03133	0.00016	0.00030	0.01182	0.01212	0.00030	0.00306	0.00336	—	26.2044	26.2044	0.00168	0.00361	0.02465	27.3473
2028	0.00171	0.00131	0.00501	0.02046	0.00003	0.00003	0.00677	0.00680	0.00003	0.00163	0.00165	—	8.15821	8.15821	0.00023	0.00065	0.00944	8.36584

2.3. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.23432	1.17040	0.64578	4.37949	0.01146	0.03441	0.89989	0.93430	0.03396	0.22841	0.26237	7.51233	1,508.91	1,516.43	0.82591	0.03981	2.84157	1,551.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15331	1.09308	0.66197	3.28755	0.01107	0.03401	0.89989	0.93390	0.03366	0.22841	0.26207	7.51233	1,470.88	1,478.40	0.82734	0.04137	0.27773	1,511.69
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.18098	1.12949	0.47348	3.86313	0.00993	0.01835	0.88916	0.90751	0.01793	0.22573	0.24366	7.51233	1,232.01	1,239.52	0.82244	0.04103	1.34600	1,273.66
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21553	0.20613	0.08641	0.70502	0.00181	0.00335	0.16227	0.16562	0.00327	0.04120	0.04447	1.24375	203.973	205.217	0.13616	0.00679	0.22285	210.868

2.4. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.43747	0.39858	0.28104	3.37521	0.00915	0.00517	0.89989	0.90506	0.00482	0.22841	0.23323	—	933.930	933.930	0.03939	0.03493	2.63208	947.955
Area	0.77986	0.76333	0.21956	0.94250	0.00139	0.01750	—	0.01750	0.01740	—	0.01740	0.00000	270.738	270.738	0.00515	0.00052	—	271.023
Energy	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	286.002	286.002	0.02600	0.00152	—	287.106
Water	—	—	—	—	—	—	—	—	—	—	—	1.07862	18.2453	19.3239	0.11234	0.00284	—	22.9783
Waste	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Total	1.23432	1.17040	0.64578	4.37949	0.01146	0.03441	0.89989	0.93430	0.03396	0.22841	0.26237	7.51233	1,508.91	1,516.43	0.82591	0.03981	2.84157	1,551.78

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.43479	0.39543	0.30528	3.13576	0.00879	0.00517	0.89989	0.90506	0.00482	0.22841	0.23323	—	898.174	898.174	0.04092	0.03651	0.06825	910.144
Area	0.70153	0.68916	0.21150	0.09000	0.00135	0.01710	—	0.01710	0.01710	—	0.01710	0.00000	268.463	268.463	0.00506	0.00051	—	268.740
Energy	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	286.002	286.002	0.02600	0.00152	—	287.106
Water	—	—	—	—	—	—	—	—	—	—	—	1.07862	18.2453	19.3239	0.11234	0.00284	—	22.9783
Waste	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Total	1.15331	1.09308	0.66197	3.28755	0.01107	0.03401	0.89989	0.93390	0.03366	0.22841	0.26207	7.51233	1,470.88	1,478.40	0.82734	0.04137	0.27773	1,511.69
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.43186	0.39256	0.30829	3.21129	0.00889	0.00517	0.88916	0.89433	0.00482	0.22573	0.23055	—	907.817	907.817	0.04066	0.03662	1.13651	920.883
Area	0.73213	0.72843	0.02001	0.59007	0.00012	0.00144	—	0.00144	0.00138	—	0.00138	0.00000	19.9463	19.9463	0.00041	0.00005	—	19.9707
Energy	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	286.002	286.002	0.02600	0.00152	—	287.106
Water	—	—	—	—	—	—	—	—	—	—	—	1.07862	18.2453	19.3239	0.11234	0.00284	—	22.9783
Waste	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Total	1.18098	1.12949	0.47348	3.86313	0.00993	0.01835	0.88916	0.90751	0.01793	0.22573	0.24366	7.51233	1,232.01	1,239.52	0.82244	0.04103	1.34600	1,273.66
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.07881	0.07164	0.05626	0.58606	0.00162	0.00094	0.16227	0.16322	0.00088	0.04120	0.04207	—	150.300	150.300	0.00673	0.00606	0.18816	152.463
Area	0.13361	0.13294	0.00365	0.10769	0.00002	0.00026	—	0.00026	0.00025	—	0.00025	0.00000	3.30233	3.30233	0.00007	0.00001	—	3.30638
Energy	0.00310	0.00155	0.02650	0.01128	0.00017	0.00214	—	0.00214	0.00214	—	0.00214	—	47.3509	47.3509	0.00431	0.00025	—	47.5336
Water	—	—	—	—	—	—	—	—	—	—	—	0.17858	3.02072	3.19929	0.01860	0.00047	—	3.80432
Waste	—	—	—	—	—	—	—	—	—	—	—	1.06517	0.00000	1.06517	0.10646	0.00000	—	3.72668
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03468	0.03468
Total	0.21553	0.20613	0.08641	0.70502	0.00181	0.00335	0.16227	0.16562	0.00327	0.04120	0.04447	1.24375	203.973	205.217	0.13616	0.00679	0.22285	210.868

3. Construction Emissions Details

3.1. Demolition (2027)

3.1.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50582	0.42226	3.94364	5.55013	0.00877	0.11863	—	0.11863	0.10914	—	0.10914	—	851.847	851.847	0.03455	0.00691	—	854.771
Demolition	—	—	—	—	—	—	1.66670	1.66670	—	0.25239	0.25239	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03049	0.02545	0.23770	0.33453	0.00053	0.00715	—	0.00715	0.00658	—	0.00658	—	51.3442	51.3442	0.00208	0.00042	—	51.5204
Demolition	—	—	—	—	—	—	0.10046	0.10046	—	0.01521	0.01521	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00556	0.00464	0.04338	0.06105	0.00010	0.00130	—	0.00130	0.00120	—	0.00120	—	8.50062	8.50062	0.00034	0.00007	—	8.52979

Demolition	—	—	—	—	—	—	0.01833	0.01833	—	0.00278	0.00278	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03329	0.02855	0.02998	0.49450	0.00000	0.00000	0.13071	0.13071	0.00000	0.03064	0.03064	—	128.024	128.024	0.00132	0.00474	0.40593	129.875
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.18897	0.03127	2.38677	1.06596	0.01397	0.02662	0.54626	0.57288	0.02662	0.15320	0.17982	—	2,028.17	2,028.17	0.15637	0.32737	3.86315	2,133.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00199	0.00171	0.00208	0.02673	0.00000	0.00000	0.00778	0.00778	0.00000	0.00182	0.00182	—	7.44425	7.44425	0.00009	0.00029	0.01058	7.54230
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.01135	0.00180	0.15076	0.06449	0.00084	0.00160	0.03262	0.03422	0.00160	0.00916	0.01076	—	122.265	122.265	0.00942	0.01973	0.10048	128.481
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00036	0.00031	0.00038	0.00488	0.00000	0.00000	0.00142	0.00142	0.00000	0.00033	0.00033	—	1.23248	1.23248	0.00002	0.00005	0.00175	1.24871
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00207	0.00033	0.02751	0.01177	0.00015	0.00029	0.00595	0.00625	0.00029	0.00167	0.00196	—	20.2423	20.2423	0.00156	0.00327	0.01664	21.2715

3.2. Grading (2027)

3.2.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17562	0.98785	8.70254	9.56448	0.01583	0.39118	—	0.39118	0.35989	—	0.35989	—	1,714.58	1,714.58	0.06955	0.01391	—	1,720.46
Dust From Material Movement	—	—	—	—	—	—	1.38110	1.38110	—	0.66782	0.66782	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05153	0.04330	0.38148	0.41926	0.00069	0.01715	—	0.01715	0.01578	—	0.01578	—	75.1597	75.1597	0.00305	0.00061	—	75.4176
Dust From Material Movement	—	—	—	—	—	—	0.06054	0.06054	—	0.02927	0.02927	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00940	0.00790	0.06962	0.07652	0.00013	0.00313	—	0.00313	0.00288	—	0.00288	—	12.4435	12.4435	0.00050	0.00010	—	12.4862
Dust From Material Movement	—	—	—	—	—	—	0.01105	0.01105	—	0.00534	0.00534	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000
--------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---	---------	---------	---------	---------	---------

3.2.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02497	0.02141	0.02249	0.37087	0.00000	0.00000	0.09803	0.09803	0.00000	0.02298	0.02298	—	96.0178	96.0178	0.00099	0.00355	0.30445	97.4064
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00109	0.00093	0.00113	0.01458	0.00000	0.00000	0.00425	0.00425	0.00000	0.00099	0.00099	—	4.06050	4.06050	0.00005	0.00016	0.00577	4.11398
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00020	0.00017	0.00021	0.00266	0.00000	0.00000	0.00077	0.00077	0.00000	0.00018	0.00018	—	0.67226	0.67226	0.00001	0.00003	0.00096	0.68112
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - 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
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56653	0.47604	4.55564	6.89930	0.01205	0.16712	—	0.16712	0.15375	—	0.15375	—	1,304.35	1,304.35	0.05291	0.01058	—	1,308.83
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08204	0.06894	0.65972	0.99912	0.00174	0.02420	—	0.02420	0.02226	—	0.02226	—	188.888	188.888	0.00766	0.00153	—	189.537
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01497	0.01258	0.12040	0.18234	0.00032	0.00442	—	0.00442	0.00406	—	0.00406	—	31.2726	31.2726	0.00127	0.00025	—	31.3800
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01798	0.01530	0.01655	0.22965	0.00000	0.00000	0.07058	0.07058	0.00000	0.01654	0.01654	—	65.7952	65.7952	0.00083	0.00256	0.00570	66.5845
Vendor	0.00387	0.00100	0.05130	0.02501	0.00036	0.00036	0.01372	0.01408	0.00036	0.00379	0.00415	—	49.3892	49.3892	0.00247	0.00674	0.00306	51.4620
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00259	0.00222	0.00270	0.03468	0.00000	0.00000	0.01010	0.01010	0.00000	0.00237	0.00237	—	9.65819	9.65819	0.00012	0.00037	0.01373	9.78540
Vendor	0.00057	0.00015	0.00748	0.00358	0.00005	0.00005	0.00197	0.00202	0.00005	0.00054	0.00060	—	7.15009	7.15009	0.00036	0.00098	0.00737	7.45719
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00047	0.00040	0.00049	0.00633	0.00000	0.00000	0.00184	0.00184	0.00000	0.00043	0.00043	—	1.59902	1.59902	0.00002	0.00006	0.00227	1.62008
Vendor	0.00010	0.00003	0.00136	0.00065	0.00001	0.00001	0.00036	0.00037	0.00001	0.00010	0.00011	—	1.18378	1.18378	0.00006	0.00016	0.00122	1.23462
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Building Construction (2028)

3.4.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54653	0.45924	4.30249	6.90694	0.01205	0.14878	—	0.14878	0.13688	—	0.13688	—	1,304.56	1,304.56	0.05292	0.01058	—	1,309.03
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54653	0.45924	4.30249	6.90694	0.01205	0.14878	—	0.14878	0.13688	—	0.13688	—	1,304.56	1,304.56	0.05292	0.01058	—	1,309.03
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22246	0.18693	1.75131	2.81144	0.00490	0.06056	—	0.06056	0.05572	—	0.05572	—	531.013	531.013	0.02154	0.00431	—	532.835
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04060	0.03411	0.31961	0.51309	0.00090	0.01105	—	0.01105	0.01017	—	0.01017	—	87.9152	87.9152	0.00357	0.00071	—	88.2169
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01750	0.01494	0.01387	0.25191	0.00000	0.00000	0.07058	0.07058	0.00000	0.01654	0.01654	—	67.8997	67.8997	0.00071	0.00036	0.19590	68.2199
Vendor	0.00354	0.00100	0.04721	0.02365	0.00036	0.00036	0.01372	0.01408	0.00036	0.00379	0.00415	—	48.2188	48.2188	0.00244	0.00674	0.10622	50.3939
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01738	0.01482	0.01631	0.21637	0.00000	0.00000	0.07058	0.07058	0.00000	0.01654	0.01654	—	64.6251	64.6251	0.00083	0.00256	0.00507	65.4138
Vendor	0.00347	0.00100	0.04929	0.02418	0.00036	0.00036	0.01372	0.01408	0.00036	0.00379	0.00415	—	48.2458	48.2458	0.00247	0.00674	0.00276	50.3183
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00712	0.00608	0.00664	0.09207	0.00000	0.00000	0.02839	0.02839	0.00000	0.00665	0.00665	—	26.6649	26.6649	0.00034	0.00104	0.03449	27.0183
Vendor	0.00143	0.00042	0.02006	0.00973	0.00015	0.00015	0.00553	0.00568	0.00015	0.00153	0.00168	—	19.6319	19.6319	0.00101	0.00274	0.01868	20.4930
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00130	0.00111	0.00121	0.01680	0.00000	0.00000	0.00518	0.00518	0.00000	0.00121	0.00121	—	4.41468	4.41468	0.00006	0.00017	0.00571	4.47319
Vendor	0.00026	0.00008	0.00366	0.00178	0.00003	0.00003	0.00101	0.00104	0.00003	0.00028	0.00031	—	3.25028	3.25028	0.00017	0.00045	0.00309	3.39286
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Paving (2027)

3.5.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57535	0.48071	4.15212	5.30895	0.00857	0.16795	—	0.16795	0.15451	—	0.15451	—	823.016	823.016	0.03339	0.00668	—	825.840
Paving	0.02013	0.02013	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02049	0.01712	0.14788	0.18909	0.00031	0.00598	—	0.00598	0.00550	—	0.00550	—	29.3129	29.3129	0.00119	0.00024	—	29.4135
Paving	0.00072	0.00072	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00374	0.00312	0.02699	0.03451	0.00006	0.00109	—	0.00109	0.00100	—	0.00100	—	4.85309	4.85309	0.00020	0.00004	—	4.86974
Paving	0.00013	0.00013	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05826	0.04996	0.05247	0.86537	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	224.042	224.042	0.00231	0.00829	0.71038	227.282
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00206	0.00177	0.00215	0.02764	0.00000	0.00000	0.00805	0.00805	0.00000	0.00189	0.00189	—	7.69803	7.69803	0.00010	0.00030	0.01094	7.79942
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00038	0.00032	0.00039	0.00504	0.00000	0.00000	0.00147	0.00147	0.00000	0.00034	0.00034	—	1.27450	1.27450	0.00002	0.00005	0.00181	1.29128
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Architectural Coating (2028)

3.6.1. Onsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12985	0.10731	0.80814	1.11833	0.00173	0.01536	—	0.01536	0.01413	—	0.01413	—	133.517	133.517	0.00542	0.00108	—	133.975
Architectural Coatings	2.22033	2.22033	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12985	0.10731	0.80814	1.11833	0.00173	0.01536	—	0.01536	0.01413	—	0.01413	—	133.517	133.517	0.00542	0.00108	—	133.975
Architectural Coatings	2.22033	2.22033	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02953	0.02440	0.18377	0.25431	0.00039	0.00349	—	0.00349	0.00321	—	0.00321	—	30.3614	30.3614	0.00123	0.00025	—	30.4656
Architectural Coatings	0.50490	0.50490	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00539	0.00445	0.03354	0.04641	0.00007	0.00064	—	0.00064	0.00059	—	0.00059	—	5.02668	5.02668	0.00020	0.00004	—	5.04393
Architectural Coatings	0.09214	0.09214	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00350	0.00299	0.00277	0.05038	0.00000	0.00000	0.01412	0.01412	0.00000	0.00331	0.00331	—	13.5799	13.5799	0.00014	0.00007	0.03918	13.6440
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00348	0.00296	0.00326	0.04327	0.00000	0.00000	0.01412	0.01412	0.00000	0.00331	0.00331	—	12.9250	12.9250	0.00017	0.00051	0.00101	13.0828
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00080	0.00068	0.00074	0.01029	0.00000	0.00000	0.00317	0.00317	0.00000	0.00074	0.00074	—	2.97929	2.97929	0.00004	0.00012	0.00385	3.01878
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00015	0.00012	0.00014	0.00188	0.00000	0.00000	0.00058	0.00058	0.00000	0.00014	0.00014	—	0.49326	0.49326	0.00001	0.00002	0.00064	0.49979
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.43747	0.39858	0.28104	3.37521	0.00915	0.00517	0.89989	0.90506	0.00482	0.22841	0.23323	—	933.930	933.930	0.03939	0.03493	2.63208	947.955
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.43747	0.39858	0.28104	3.37521	0.00915	0.00517	0.89989	0.90506	0.00482	0.22841	0.23323	—	933.930	933.930	0.03939	0.03493	2.63208	947.955
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.43479	0.39543	0.30528	3.13576	0.00879	0.00517	0.89989	0.90506	0.00482	0.22841	0.23323	—	898.174	898.174	0.04092	0.03651	0.06825	910.144
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.43479	0.39543	0.30528	3.13576	0.00879	0.00517	0.89989	0.90506	0.00482	0.22841	0.23323	—	898.174	898.174	0.04092	0.03651	0.06825	910.144
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07881	0.07164	0.05626	0.58606	0.00162	0.00094	0.16227	0.16322	0.00088	0.04120	0.04207	—	150.300	150.300	0.00673	0.00606	0.18816	152.463
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Total	0.07881	0.07164	0.05626	0.58606	0.00162	0.00094	0.16227	0.16322	0.00088	0.04120	0.04207	—	150.300	150.300	0.00673	0.00606	0.18816	152.463

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	98.0988	98.0988	0.00935	0.00113	—	98.6704
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	3.61429	3.61429	0.00034	0.00004	—	3.63534
Total	—	—	—	—	—	—	—	—	—	—	—	—	101.713	101.713	0.00970	0.00118	—	102.306
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	98.0988	98.0988	0.00935	0.00113	—	98.6704
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	3.61429	3.61429	0.00034	0.00004	—	3.63534
Total	—	—	—	—	—	—	—	—	—	—	—	—	101.713	101.713	0.00970	0.00118	—	102.306
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	16.2414	16.2414	0.00155	0.00019	—	16.3360
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.59839	0.59839	0.00006	0.00001	—	0.60187
Total	—	—	—	—	—	—	—	—	—	—	—	—	16.8398	16.8398	0.00161	0.00019	—	16.9379

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

Single Family Housing	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	184.289	184.289	0.01631	0.00035	—	184.800
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	184.289	184.289	0.01631	0.00035	—	184.800
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	184.289	184.289	0.01631	0.00035	—	184.800
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.01699	0.00849	0.14519	0.06178	0.00093	0.01174	—	0.01174	0.01174	—	0.01174	—	184.289	184.289	0.01631	0.00035	—	184.800
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00310	0.00155	0.02650	0.01128	0.00017	0.00214	—	0.00214	0.00214	—	0.00214	—	30.5111	30.5111	0.00270	0.00006	—	30.5957
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00310	0.00155	0.02650	0.01128	0.00017	0.00214	—	0.00214	0.00214	—	0.00214	—	30.5111	30.5111	0.00270	0.00006	—	30.5957

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.02475	0.01238	0.21150	0.09000	0.00135	0.01710	—	0.01710	0.01710	—	0.01710	0.00000	268.463	268.463	0.00506	0.00051	—	268.740

Consumer Product	0.62629	0.62629	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05049	0.05049	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.07833	0.07417	0.00806	0.85250	0.00004	0.00040	—	0.00040	0.00030	—	0.00030	—	2.27531	2.27531	0.00010	0.00002	—	2.28331
Total	0.77986	0.76333	0.21956	0.94250	0.00139	0.01750	—	0.01750	0.01740	—	0.01740	0.00000	270.738	270.738	0.00515	0.00052	—	271.023
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.02475	0.01238	0.21150	0.09000	0.00135	0.01710	—	0.01710	0.01710	—	0.01710	0.00000	268.463	268.463	0.00506	0.00051	—	268.740
Consumer Products	0.62629	0.62629	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05049	0.05049	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.70153	0.68916	0.21150	0.09000	0.00135	0.01710	—	0.01710	0.01710	—	0.01710	0.00000	268.463	268.463	0.00506	0.00051	—	268.740
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00031	0.00015	0.00264	0.00112	0.00002	0.00021	—	0.00021	0.00021	—	0.00021	0.00000	3.04432	3.04432	0.00006	0.00001	—	3.04746
Consumer Products	0.11430	0.11430	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00921	0.00921	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipm	0.00979	0.00927	0.00101	0.10656	< 0.000005	0.00005	—	0.00005	0.00004	—	0.00004	—	0.25802	0.25802	0.00001	< 0.000005	—	0.25892
Total	0.13361	0.13294	0.00365	0.10769	0.00002	0.00026	—	0.00026	0.00025	—	0.00025	0.00000	3.30233	3.30233	0.00007	0.00001	—	3.30638

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.07862	17.6425	18.7211	0.11228	0.00283	—	22.3720
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.60277	0.60277	0.00006	0.00001	—	0.60628
Total	—	—	—	—	—	—	—	—	—	—	—	1.07862	18.2453	19.3239	0.11234	0.00284	—	22.9783
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.07862	17.6425	18.7211	0.11228	0.00283	—	22.3720
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.60277	0.60277	0.00006	0.00001	—	0.60628
Total	—	—	—	—	—	—	—	—	—	—	—	1.07862	18.2453	19.3239	0.11234	0.00284	—	22.9783
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.17858	2.92092	3.09950	0.01859	0.00047	—	3.70394

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.09979	0.09979	0.00001	< 0.000005	—	0.10038
Total	—	—	—	—	—	—	—	—	—	—	—	0.17858	3.02072	3.19929	0.01860	0.00047	—	3.80432

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	6.43371	0.00000	6.43371	0.64303	0.00000	—	22.5094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.06517	0.00000	1.06517	0.10646	0.00000	—	3.72668
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Total	—	—	—	—	—	—	—	—	—	—	—	1.06517	0.00000	1.06517	0.10646	0.00000	—	3.72668
-------	---	---	---	---	---	---	---	---	---	---	---	---------	---------	---------	---------	---------	---	---------

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.20949	0.20949
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03468	0.03468
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03468	0.03468

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	4/15/2027	5/16/2027	5.00000	22.0000	—
Grading	Grading	5/18/2027	6/8/2027	5.00000	16.0000	—
Building Construction	Building Construction	10/19/2027	7/26/2028	5.00000	202.000	—

Paving	Paving	8/31/2027	9/16/2027	5.00000	13.0000	—
Architectural Coating	Architectural Coating	3/13/2028	7/5/2028	5.00000	83.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.000000	8.00000	33.0000	0.73000
Demolition	Rubber Tired Dozers	Diesel	Average	1.000000	1.000000	367.000	0.40000
Demolition	Tractors/Loaders/Back hoes	Diesel	Average	2.00000	6.00000	84.0000	0.37000
Grading	Graders	Diesel	Average	1.000000	6.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	6.00000	367.000	0.40000
Grading	Tractors/Loaders/Back hoes	Diesel	Average	1.000000	7.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	4.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	2.00000	6.00000	82.0000	0.20000
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Paving	Cement and Mortar Mixers	Diesel	Average	4.00000	6.00000	10.00000	0.56000
Paving	Pavers	Diesel	Average	1.000000	7.00000	81.0000	0.42000
Paving	Rollers	Diesel	Average	1.000000	7.00000	36.0000	0.38000
Paving	Tractors/Loaders/Back hoes	Diesel	Average	1.000000	7.00000	84.0000	0.37000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	10.00000	18.5000	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2000	HHDT,MHDT
Demolition	Hauling	30.1818	20.0000	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading	Worker	7.50000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	5.40000	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	1.60350	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	1.08000	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	59,231.3	19,743.8	0.00000	0.00000	261.000

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00000	0.00000	0.00000	2,653.00	0.00000
Grading	0.00000	0.00000	12.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	0.26515

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Single Family Housing	0.16529	0%
Paving	Parking Lot	0.09986	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	346.196	0.03300	0.00400
2028	0.00000	346.196	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMt/Weekday	VMt/Saturday	VMt/Sunday	VMt/Year
Single Family Housing	136.005	136.005	136.005	49,641.8	1,271.74	1,271.74	1,271.74	464,185
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	0	0
Single Family Housing	Gas Fireplaces	13	13
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	0	0
Single Family Housing	No Fireplaces	2	2
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	1	1
Single Family Housing	Non-Catalytic Wood Stoves	1	1
Single Family Housing	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0

Parking Lot	Gas Fireplaces	0	0
Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0

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)
59,231.3	19,743.8	0.00000	0.00000	261.000

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	250.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	103,427	346.196	0.0330	0.0040	575,030
Parking Lot	3,810.60	346.196	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	562,885	2,783,057
Parking Lot	0.00000	119,754

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	11.9377	0.00000
Parking Lot	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088.00	0.00225	2.50000	2.50000	10.00000
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430.00	0.11538	0.60000	0.00000	1.000000

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

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	9.03000	annual days of extreme heat
Extreme Precipitation	3.50000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	1.31000	annual hectares burned

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

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

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

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	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	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
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	59.6889
AQ-PM	71.0765
AQ-DPM	86.2228
Drinking Water	41.9508
Lead Risk Housing	70.6616

Pesticides	0.00000
Toxic Releases	90.4851
Traffic	91.3375
Effect Indicators	—
CleanUp Sites	28.8541
Groundwater	25.0872
Haz Waste Facilities/Generators	67.5579
Impaired Water Bodies	0.00000
Solid Waste	0.00000
Sensitive Population	—
Asthma	38.5593
Cardio-vascular	48.3923
Low Birth Weights	4.28535
Socioeconomic Factor Indicators	—
Education	44.3432
Housing	36.2104
Linguistic	44.3632
Poverty	39.9749
Unemployment	6.29880

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	47.13204158
Employed	96.77916079
Median HI	61.22160914
Education	—

Bachelor's or higher	69.35711536
High school enrollment	100
Preschool enrollment	39.95893751
Transportation	—
Auto Access	30.23225972
Active commuting	43.24393687
Social	—
2-parent households	57.56448094
Voting	31.25882202
Neighborhood	—
Alcohol availability	28.65392018
Park access	81.35506224
Retail density	96.57384833
Supermarket access	38.31643783
Tree canopy	44.4629796
Housing	—
Homeownership	37.48235596
Housing habitability	37.76466059
Low-inc homeowner severe housing cost burden	54.69010651
Low-inc renter severe housing cost burden	60.6698319
Uncrowded housing	41.35762864
Health Outcomes	—
Insured adults	51.84139612
Arthritis	44.8
Asthma ER Admissions	62.0
High Blood Pressure	43.5
Cancer (excluding skin)	30.9
Asthma	55.1

Coronary Heart Disease	54.4
Chronic Obstructive Pulmonary Disease	50.7
Diagnosed Diabetes	61.5
Life Expectancy at Birth	64.4
Cognitively Disabled	84.2
Physically Disabled	92.6
Heart Attack ER Admissions	55.7
Mental Health Not Good	58.7
Chronic Kidney Disease	55.3
Obesity	68.0
Pedestrian Injuries	83.6
Physical Health Not Good	56.1
Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	26.9
Current Smoker	62.2
No Leisure Time for Physical Activity	57.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	40.9
English Speaking	64.0
Foreign-born	52.8
Outdoor Workers	50.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	31.1
Traffic Density	90.8

Traffic Access	50.9
Other Indices	—
Hardship	29.2
Other Decision Support	—
2016 Voting	67.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	39.0000
Healthy Places Index Score for Project Location (b)	60.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
--------	---------------

Land Use	The project proposed to construct 15 SFD on a 0.99 acre project site. Approximately 10% of the project site is assumed to be paved for internal driveway purpose.
Construction: Construction Phases	Based on the project applicant.
Operations: Vehicle Data	Based on 17332 Irvine Boulevard Residential Project Trip Generation & VMT Analysis/Screening, City of Tustin, California by MAT Engineering
Operations: Hearths	No wood burning stoves would be used

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	4.87013	0.90000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Demolition	Demolition	Start Date	4/1/2027	4/15/2027
Demolition	Demolition	End Date	4/15/2027	5/16/2027
Demolition	Demolition	Work Days per Phase	10.00000	22.0000
Grading	Grading	Start Date	4/18/2027	5/18/2027
Grading	Grading	End Date	4/20/2027	6/8/2027
Grading	Grading	Work Days per Phase	2.00000	16.0000
Building Construction	Building Construction	Start Date	4/21/2027	10/19/2027
Building Construction	Building Construction	End Date	9/8/2027	7/26/2028
Building Construction	Building Construction	Work Days per Phase	100.0000	202.000
Paving	Paving	Start Date	9/9/2027	8/31/2027
Paving	Paving	Work Days per Phase	5.00000	13.0000
Architectural Coating	Architectural Coating	Start Date	9/17/2027	3/13/2028
Architectural Coating	Architectural Coating	End Date	9/24/2027	7/5/2028

Architectural Coating	Architectural Coating	Work Days per Phase	5.00000	83.0000
-----------------------	-----------------------	---------------------	---------	---------

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Single Family Housing	Weekday Trip Rate	size/day	9.44000	9.06700
Single Family Housing	Saturday Trip Rate	size/day	9.54000	9.06700
Single Family Housing	Sunday Trip Rate	size/day	8.55000	9.06700

8.5.2. Area Sources

8.5.2.1. Hearths

Land Use	Model Parameter	Units	Default Value	New Value
Single Family Housing	Wood Fireplaces	—	1	0
Single Family Housing	Wood Mass	lb/year	1,019	0
Single Family Housing	Wood Mass	lb/year	1,000	0