

# **Air Quality & Greenhouse Gas Emissions Assessment Wineville Property Project**

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**Jurupa Valley, California**

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**LIST OF ATTACHMENTS**

Attachment A – CalEEMod Output File for Air Quality & Greenhouse Gas Emissions

**LIST OF ACRONYMS AND ABBREVIATIONS**

°F	Degrees Fahrenheit
µg/m <sup>3</sup>	Micrograms per cubic meter; ppm = parts per million
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
AB	Assembly Bill
AQMD	Air Quality Management District
C-1/C-P	General Commercial
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CH <sub>4</sub>	Methane
City	City of Jurupa Valley
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2e</sub>	Carbon dioxide equivalent
County	Riverside County
CR	Commercial Retail
DPM	Diesel particulate matter
EO	Executive Order
GHG	Greenhouse gas
GWP	Global warming potential
IPCC	Intergovernmental Panel on Climate Change
LSTs	Localized significance threshold
MHDR	Medium High Density Residential
MT	Metric Ton

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

N <sub>2</sub> O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Nitric oxides
O <sub>3</sub>	Ozone
OPR	Office of Planning & Research
PM	Particulate matter
PM <sub>10</sub>	Coarse particulate matter
PM <sub>2.5</sub>	Fine particulate matter
ppb	Parts per billion
Ppm	Parts per million
Project	Wineville Property Project
PUD-1	Planned Urban Development
PRD	Planned Residential Development
RCPG	Regional Comprehensive Plan and Guide
ROGs	Reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur dioxide
SO <sub>x</sub>	Sulfur oxides
SR	State Route
SRA	Source receptor area
SoCAB	South Coast Air Basin
TACs	Toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle miles traveled
VOC	Volatile organic compound

## **1.0 INTRODUCTION**

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Wineville Property Project (Project), which proposes the construction of a residential and commercial mixed-use development on 33 acres in Jurupa Valley, California. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the South Coast Air Quality Management District (SCAQMD). Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and GHG emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

### **1.1 Project Location and Description**

The Project proposes to develop 32.82 gross acres (25.72 net acres) with a mixed-use development consisting of residential and commercial/retail land uses. Associated features also include common open space, on-site parking, and onsite roadways. The Project Site is located in the City of Jurupa Valley located in the northwest corner of Riverside County. The Project Site is bound by Limonite Avenue to the north, commercial land uses to the east, residential land uses to the west, and Wineville Avenue to the west.

The Project is proposing a mix of attached single-family and detached single-family units totaling 263 units as well as 22,400 square feet of retail space and 1,800 square feet of restaurant space. Residential uses would provide different housing products for a mix of incomes and structures would not exceed two stories. Additionally, each of the Project residential units would include a three-kilowatt solar generation system per the California State Building Code. The Project would include seven access locations, including four on Limonite Avenue and three on 63<sup>rd</sup> Street.

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## **2.0 AIR QUALITY**

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### **2.1 Air Quality Setting**

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the South Coast Air Basin (SoCAB), which encompasses the Project Site, pursuant to the regulatory authority of the SCAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

#### **2.1.1 South Coast Air Basin**

The California Air Resources Board (CARB) divides the State into air basins that share similar meteorological and topographical features. The Project Site lies in the SoCAB, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air basin is on a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter (SCAQMD 1993).

##### **2.1.1.1 Temperature and Precipitation**

The air basin is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The annual average temperature varies little throughout the 6,645-square-mile SoCAB, ranging from the low 60s to the high 80s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas (SCAQMD 1993).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rains fall between November and April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains.

##### **2.1.1.2 Humidity**

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent, and low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 1993).

### **2.1.1.3 Wind**

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is higher during the dry summer months than during the rainy winter.

Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 1993).

### **2.1.1.4 Inversion**

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two similarly distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality in the summer and generally good air quality in the winter in Jurupa Valley (SCAQMD 1993).

## **2.1.2 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 (O<sub>3</sub>), coarse particulate matter (PM<sub>10</sub>), and fine particulate matter (PM<sub>2.5</sub>) 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 (NO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

<b>Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects</b>		
<b>Pollutant</b>	<b>Major Manmade Sources</b>	<b>Human Health &amp; Welfare Effects</b>
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO <sub>2</sub>	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O <sub>3</sub>	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N <sub>2</sub> O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM <sub>10</sub> & PM <sub>2.5</sub>	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO <sub>2</sub>	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

### **2.1.2.1 Carbon Monoxide**

CO in the urban environment is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SoCAB are in compliance with the state and federal one- and eight-hour standards.

### **2.1.2.2 Nitrogen Oxides**

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds

collectively called nitric oxides (NO<sub>x</sub>). Motor vehicle emissions are the main source of NO<sub>x</sub> in urban areas. NO<sub>x</sub> is very toxic to animals and humans because of its ability to form nitric acid with water in the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO<sub>x</sub> increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO<sub>x</sub>, such as NO and NO<sub>2</sub>, attribute to the formation of O<sub>3</sub> and PM<sub>2.5</sub>. Epidemiological studies have also shown associations between NO<sub>2</sub> concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

### **2.1.2.3 Ozone**

O<sub>3</sub> is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs and NO<sub>x</sub> undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO<sub>x</sub> forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O<sub>3</sub> to form. Ground-level O<sub>3</sub> is the primary constituent of smog. Because O<sub>3</sub> formation occurs over extended periods of time, both O<sub>3</sub> and its precursors are transported by wind and high O<sub>3</sub> concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O<sub>3</sub> levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O<sub>3</sub> exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

### **2.1.2.4 Particulate Matter**

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM<sub>10</sub>) and small than or equal to 2.5 microns in diameter (PM<sub>2.5</sub>). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM<sub>10</sub> is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM<sub>10</sub> generally settles out of the atmosphere rapidly and is not readily transported over large distances. PM<sub>2.5</sub> is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO<sub>x</sub>, sulfur oxides (SO<sub>x</sub>) and VOCs. PM<sub>2.5</sub> can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high PM<sub>2.5</sub> and PM<sub>10</sub> levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM<sub>10</sub> and PM<sub>2.5</sub>. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and

children may experience decline in lung function due to breathing in PM<sub>10</sub> and PM<sub>2.5</sub>. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

### **2.1.3 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.

CARB has identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

### **2.1.4 Ambient Air Quality**

Ambient air quality at the Project Site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O<sub>3</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are the pollutant species most potently affecting the Project region. As described in detail below, the region is designated as a nonattainment area for the federal O<sub>3</sub> and PM<sub>2.5</sub> standards and is also a nonattainment area for the state standards for O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> (CARB 2022b). The Riverside-Rubidoux air quality monitoring station (5888 Mission Boulevard, Riverside), located approximately 7.3 miles northeast of the Project Site, monitors ambient concentrations of O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project Area.

Table 2-2 summarizes the published data concerning O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> from the Riverside-Rubidoux monitoring station. O<sub>3</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> are the pollutant species most potently affecting the Project region.

<b>Table 2-2. Summary of Ambient Air Quality Data</b>			
<b>Pollutant Standards</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>O<sub>3</sub> – Riverside-Rubidoux Monitoring Station</b>			
Max 1-hour concentration (ppm)	0.123	0.143	0.117
Max 8-hour concentration (ppm) (State/federal)	0.096 / 0.096	0.115 / 0.115	0.098 / 0.097
Number of days above 1-hour standard (State/federal)	24 / 0	46 / 6	20 / 0
Number of days above 8-hour standard (State/federal)	63 / 37	86 / 60	57 / 32
<b>PM<sub>10</sub> – Riverside-Rubidoux Monitoring Station</b>			
Max 24-hour concentration (µg/m <sup>3</sup> ) (State/federal)	182.4 / 132.5	137.7 / 142.1	114.3 / 76.5
Number of days above 24-hour standard (State/federal)	116.4 / 0	* / *	43.7 / 0
<b>PM<sub>2.5</sub> – Riverside-Rubidoux Monitoring Station</b>			
Max 24-hour concentration (µg/m <sup>3</sup> ) (State/federal)	82.4 / 132.5	137.7 / 142.1	114.3 / 76.5
Number of days above federal 24-hour standard	5.0	12.0	11.0

Source: CARB 2022a

µg/m<sup>3</sup> = micrograms per cubic meter; ppm = parts per million

\* = Insufficient (or no) data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in “attainment” or “nonattainment” for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O<sub>3</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the Riverside County portion of the SoCAB, which encompasses the Project Site, is included in Table 2-3.

**Table 2-3. Attainment Status of Criteria Pollutants in the Riverside County Portion of the SoCAB**

Pollutant	State Designation	Federal Designation
O <sub>3</sub>	Nonattainment	Nonattainment
PM <sub>10</sub>	Nonattainment	Attainment
PM <sub>2.5</sub>	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO <sub>2</sub>	Attainment	Unclassified/Attainment
SO <sub>2</sub>	Attainment	Unclassified/Attainment

Source: CARB 2022b

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O<sub>3</sub> and PM<sub>2.5</sub> standards and is also a nonattainment area for the state standards for O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> (CARB 2022b).

**2.1.5 Sensitive Receptors**

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Site are residences located approximately 25 feet to the south at the nearest.

## **2.2 Regulatory Framework**

### **2.2.1 Federal**

#### **2.2.1.1 Clean Air Act**

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants.

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 “sensitive receptors” 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. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SoCAB for the criteria pollutants.

### **2.2.2 State**

#### **2.2.2.1 California Clean Air Act**

The CCAA allows the State to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California’s State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

#### **2.2.2.2 California State Implementation Plan**

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to

include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The *2022 Air Quality Management Plan (2022 AQMP)* is the SIP for the SoCAB. The 2022 AQMP is a regional blueprint for achieving air quality standards and healthful air in the SoCAB and those portions of the Salton Sea Air Basin that are under SCAQMD's jurisdiction. The 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero emission and low NO<sub>x</sub> technologies and (2) developing new zero emission and ultra-low NO<sub>x</sub> technologies for use in cases where the technology is not currently available. The 2022 AQMP prioritizes distribution of incentive funding in "environmental justice" areas and seek opportunities to focus benefits on the most disadvantaged communities. The 2022 AQMP focuses on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in GHGs and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The AQMP relies on a regional and multi-level partnership of governmental agencies at the federal, state, regional, and local level. These agencies (USEPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2022 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2022 AQMP includes integrated strategies and measures to meet the NAAQS. The current status of the SIPs for the SoCAB's nonattainment pollutants are shown below:

- On November 28, 2007, CARB submitted a SIP revision to the USEPA for O<sub>3</sub>, PM<sub>2.5</sub> (1997 Standard), CO, and NO<sub>2</sub> in the SoCAB. This revision is identified as the "2007 South Coast SIP". The 2007 South Coast SIP demonstrates attainment of the federal PM<sub>2.5</sub> standard in the SoCAB by 2014 and attainment of the federal eight-hour O<sub>3</sub> standard by 2023. This SIP also includes a request to reclassify the O<sub>3</sub> attainment designation from "severe" to "extreme". The USEPA approved the redesignation effective June 4, 2010. The "extreme" designation requires the attainment of the eight-hour O<sub>3</sub> standard in the SoCAB by June 2024. CARB approved PM<sub>2.5</sub> SIP revisions in April 2011 and the O<sub>3</sub> SIP revisions in July 2011. The USEPA approved the PM<sub>2.5</sub> SIP in 2013 and has approved 46 of the 61, 1997 eight-hour O<sub>3</sub> SIP requirements (. In 2014, the USEPA proposed a finding that the SoCAB has attained the 1997 PM<sub>2.5</sub> standards. In 2016, the USEPA determined that the SoCAB had attained the 1997 PM<sub>2.5</sub> standards; however, the SoCAB was not redesignated as an attainment area because the USEPA had not approved a maintenance plan and additional requirements under the CAA had not been met.
- In 2012, the SCAQMD adopted the 2012 AQMP, which was a regional and multiagency effort (the SCAQMD, CARB, SCAG, and the USEPA). The primary purposes of the 2012 AQMP were to

demonstrate attainment of the federal 24-hour PM<sub>2.5</sub> standard by 2014 and to update the USEPA-approved eight-hour Ozone Control Plan. In 2012, the 2012 AQMP was submitted to CARB and the USEPA for concurrent review and approval for inclusion in the SIP. The 2012 AQMP was approved by CARB on January 25, 2013.

- In 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP includes strategies and measures to meet the following NAAQS:
  - 2008 eight-hour O<sub>3</sub> (75 parts per billion [ppb]) by 2013
  - 2012 Annual PM<sub>2.5</sub> (12 µg/m<sup>3</sup>) by 2025
  - 1997 eight-hour O<sub>3</sub> (80 ppb) by 2023
  - 1979 one-hour O<sub>3</sub> (120 ppb) by 2022
  - 2006 24-hour PM<sub>2.5</sub> (35 µg/m<sup>3</sup>) by 2019
- In 2022, the SCAQMD adopted the 2022 AQMP. In response to the USEPA lowering the primary and secondary O<sub>3</sub> standard levels to 70 ppb, the 2022 AQMP was developed to address the requirements for meeting this standard. The 2022 AQMP explores new and innovative ways to accomplish these goals through incentive programs, efficiency improvements, recognition of co-benefits from other programs, regulatory measures, and other voluntary actions.

### **2.2.2.3 Tanner Air Toxics Act & Air Toxics "Hot Spots" Information and Assessment Act**

CARB's statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

CARB also administers the State's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment (HRA) and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

### 2.2.3 Local

#### 2.2.3.1 South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties, including the Project Site. The agency's primary responsibility is ensuring that the NAAQS and CAAQS are attained and maintained in the SoCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The following is a list of noteworthy SCAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 201 & Rule 203 (Permit to Construct & Permit to Operate)** – Rule 201 requires a “Permit to Construct” prior to the installation of any equipment “the use of which may cause the issuance of air contaminants . . .” and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate.
- **Rule 212 (Standards for Approving Permits and Issuing Public Notice)**- This rule requires the applicant to show that the equipment used of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of Section 41700, 4170 or 44300 of the Health and Safety Code or of these rules.
- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible PM are prohibited from crossing any property line. This rule is intended to reduce PM<sub>10</sub> emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM<sub>10</sub> suppression techniques are summarized below.
  - a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
  - b) All onsite roads will be paved as soon as feasible or watered periodically or chemically stabilized.

- c) All material transported offsite will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
  - d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
  - e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.
  - **Rule 1401 (New Source Review of Toxic Air Contaminants)** – This rule requires new source review of any new, relocated, or modified permit units that emit TACs. The rule establishes allowable risks for permit units requiring permits pursuant to Rules 201 and 203 discussed above.

### **2.2.3.2 Southern California Association of Governments**

On September 3, 2020, the SCAG Regional Council adopted the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020 RTP/SCS). The 2020 RTP/SCS charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent per capita reduction by the end of 2035.

### **2.2.3.3 City of Jurupa Valley General Plan**

The City of Jurupa has the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the SCAQMD AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the City relies on the expertise of the SCAQMD and utilizes the

SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction. The City of Jurupa Valley adopted their General Plan in September 2017. The Air Quality Element in the General Plan contains the following air quality-related goals and policies that are applicable to the Proposed Project:

**Goals**

**AQ 1** - Works with regional, sub-regional, and state agencies to protect and improve air quality and reduce greenhouse gas emissions.

**AQ 2** - Helps protect its residents, and especially senior citizens, youth and other sensitive receptors, from toxic air pollution.

**AQ 3** - Works to reduce emissions from stationary and mobile sources.

**AQ 4** Employs measures to improve the jobs/housing balance and reduce commuting time.

**Policies**

**AQ 2.1 - Site Plan Designs.** Require City land use planning efforts and site plan designs to protect people and land uses sensitive to air pollution, using barriers and/or distance from emissions sources, and protect sensitive receptors from polluting sources, wherever possible.

**AQ 2.2 - Pollution Control Measures.** Strongly encourage the use of pollution control measures such as landscaping, vegetation and other materials that trap particulate matter or control pollution.

**AQ 3.1 - Efficient Building Materials/Equipment.** Encourage the use of building materials/methods and heating equipment that are efficient and reduce emissions.

**AQ 3.2 - Centrally Heated Facilities.** Encourage centrally heated facilities to utilize automated time clocks or occupant sensors to control heating.

**AQ 3.4 - Emissions Mitigation.** Require every project to mitigate any of its anticipated emissions that exceed allowable levels as established by the SCAQMD, the U.S. EPA, and CARB, to the greatest extent possible.

**AQ 3.5 - Fugitive Dust Reduction Measures.** Apply, as appropriate, measures contained in the County's Fugitive Dust Reduction to the entire City.

**AQ 3.6 - Grading in High Winds.** Suspend all grading when wind speeds exceed 25 miles per hour.

**AQ 4.1 - State and Federal Legislation.** Encourage stricter state and federal legislation on biasbeltd tires, smoking vehicles, and vehicles that spill debris on streets and highways, to better control particulate matter.

**AQ 4.2 - Particulate Matter.** Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights of way, and off-road vehicles to the maximum extent possible.

**AQ 5.1 – Reduce Solid Waste.** Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

**AQ 5.2 – Energy Conservation.** Encourage advanced energy conservation techniques and the incorporation of energy-efficient design elements for private and public developments, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling, and offer incentives, as appropriate.

**AQ 6.9 – Mixed-Use Land Use.** Support new mixed-use land use patterns with employment centers and community centers, which encourage community self sufficiency and containment, promote efficient modes of travel, and help reduce automobile dependency.

## **2.3 Air Quality Emissions Impact Assessment**

### **2.3.1 Thresholds of Significance**

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

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

#### **2.3.1.1 South Coast Air Quality Management District Regional 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. According to the SCAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The 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 2-4.

<b>Table 2-4. SCAQMD Regional Significance Thresholds – Pounds per Day</b>		
<b>Air Pollutant</b>	<b>Construction Activities</b>	<b>Operations</b>
Reactive Organic Gas	75	55
Carbon Monoxide	550	550
Nitrogen Oxide	100	55
Sulfur Oxide	150	150
Coarse Particulate Matter	150	150
Fine Particulate Matter	55	55

Source: SCAQMD 1993 (PM<sub>2.5</sub> threshold adopted June 1, 2007)

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project’s individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project’s individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

**2.3.1.2 South Coast Air Quality Management District Localized Significance Thresholds**

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> generated at new development sites (offsite mobile source emissions are not included in the LST analysis protocol). LSTs represent the maximum emissions that can be generated at a Project Site without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis is applicable for all projects that disturb five acres or less over the course of a single day. The SCAQMD has prepared mass rate LST look-up tables for projects disturbing one acre, two acres, and five acres. The Proposed Project spans approximately 33 acres and is located within SCAQMD SRA 23 (Metropolitan Riverside County). Table 2-5 shows the LSTs for a one-, two-, and five-acre project site in SRA 23, as derived from the SCAQMD mass rate LST look-up tables, with sensitive receptors located within 25 meters.

Project Size	Pollutant (pounds per day) Construction/Operations			
	NO <sub>2</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
1 Acre	118 / 118	602 / 602	4 / 1	3 / 1
2 Acres	170 / 170	883 / 883	7 / 2	4 / 1
5 Acres	270 / 270	1,577 / 1,577	13 / 4	8 / 2

Source: SCAQMD 2009

### **2.3.2 Methodology**

Air quality impacts were assessed in accordance with methodologies recommended by the SCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1.1.19. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Riverside County. Operational air pollutant emissions were based on the site dimensions and building square footage identified in the Project Site plans as well as Project details provided by the Project proponent. Specifically, the modeling accounts for three-kilowatt solar generation systems on each residential unit, a manifestation of California State Building Code requirements. Project emissions calculations account for this design feature. Additionally, traffic trip generation rates and average trips lengths are provided by Translutions Traffic Engineers (2022).

### **2.3.3 Impact Analysis**

#### **2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions**

##### *Regional Construction Significance Analysis*

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SCAQMD Rule 403, which requires taking

reasonable precautions to prevent the emissions of fugitive dust, such as using water or chemicals, where possible, for control of dust during the clearing of land and other construction activities.

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 2-6. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

<b>Table 2-6. Maximum Construction-Related Emissions (Regional Significance Analysis)</b>						
<b>Construction Year</b>	<b>Pollutant (pounds per day)</b>					
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Construction Year One	3.38	31.70	31.20	0.06	9.26	5.25
Construction Year Two	1.71	11.60	23.70	0.03	2.57	0.88
Construction Year Three	52.70	18.80	36.90	0.05	3.42	1.27
<i>SCAQMD Regional Significance Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<b>Exceed SCAQMD Regional Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: Emissions taken from the season (summer or winter) with the highest output.

As shown in Table 2-6, emissions generated during Project construction would not exceed the SCAQMD's regional thresholds of significance. Therefore, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

#### *Localized Construction Significance Analysis*

The nearest sensitive receptors to the Project Site are residences with the closest located approximately 25 feet (7.62 meters) to the south. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific level proposed projects.

For this Project, the appropriate SRA for the localized significance thresholds is Metropolitan Riverside County, SRA 23. LSTs apply to CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. As previously described, the SCAQMD has produced lookup tables for projects that disturb one, two and five acres. The Proposed Project Site is approximately 33 acres and would disturb well over five acres during construction. As previously described,

the SCAQMD has produced lookup tables for projects that disturb less than or equal to five acres daily. The SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than five acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 2-7 is used to determine the maximum daily disturbed acreage for comparison to LSTs. All construction years have the same equipment, as such, only phases are shown in the table.

<b>Table 2-7. Equipment-Specific Grading Rates</b>					
<b>Construction Phase</b>	<b>Equipment Type</b>	<b>Acres Graded/Disturbed per 8-Hour Day</b>	<b>Equipment Quantity</b>	<b>Operating Hours per Day</b>	<b>Acres Graded per Day</b>
Site Preparation	Rubber Tired Dozers	0.5	3	8	1.5
	Tractors/Loaders/Backhoes	0.5	4	8	2.0
<b>Site Preparation Total:</b>					<b>3.5</b>
Site Grading	Excavators	0.0	2	8	0.0
	Grader	0.5	1	8	0.5
	Rubber Tired Dozer	0.5	1	8	0.5
	Scrapers	1.0	2	8	2.0
	Tractors/Loaders/Backhoes	0.5	2	8	1.0
<b>Site Grading Total:</b>					<b>4.0</b>
Building Construction/ Paving/ Painting	Crane	0.0	1	8	0.0
	Forklifts	0.0	3	8	0.0
	Generators	0.0	1	8	0.0
	Tractors/Loaders/Backhoes	0.5	3	8	1.5
	Welder	0.0	1	8	0.0
	Pavers	0.0	2	8	0.0
	Paving Equipment	0.0	2	8	0.0
	Rollers	0.0	2	8	0.0
	Air Compressor	0.0	1	8	0.0
<b>Building Construction/Paving/Painting Total:</b>					<b>1.5</b>

As described, the SCAQMD has produced lookup tables for projects that disturb one, two and five acres. As shown in Table 2-7, Project implementation could potentially disturb a total maximum of 3.5 acres daily during site preparation, 4.0 acres daily during site grading, and 1.5 acres daily during the combined building construction/paving/painting phase. Thus, the LST threshold value for a 3.5-acre site was calculated from the LST lookup tables and employed for site preparation. The LST threshold value for a 4.0-acre site was

calculated from the LST lookup tables and used for site grading, and the LST threshold value for a 1.5-acre site was calculated and used for the combined building construction/paving/painting phase.

LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. The nearest sensitive receptors to construction activity as a result of the Project are residences located approximately 7.62 meters south of the Project Site (<25 meters). Notwithstanding, the SCAQMD Methodology explicitly states: "It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters." Therefore, LSTs for receptors located at 25 meters were utilized in this analysis. The SCAQMD's methodology clearly states that "offsite mobile emissions from a project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "onsite" emissions outputs were considered. Table 2-8 presents the results of localized emissions.

<b>Table 2-8. Maximum Construction-Related Emissions (Localized Significance Analysis)</b>				
<b>Activity</b>	<b>Pollutant (pounds per day)</b>			
	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Site Preparation</b>	<b>31.60</b>	<b>30.20</b>	<b>9.04</b>	<b>5.20</b>
<i>SCAQMD Localized Significance Threshold (3.5 acre of disturbance at 25 meters)</i>	<i>220.00</i>	<i>1,230.00</i>	<i>10.00</i>	<i>6.00</i>
<b>Grading</b>	<b>29.70</b>	<b>28.30</b>	<b>4.82</b>	<b>2.56</b>
<i>SCAQMD Localized Significance Threshold (4.0 acre of disturbance at 25 meters)</i>	<i>236.67</i>	<i>1,345.67</i>	<i>11.00</i>	<i>6.67</i>
<b>Building Construction, Paving and Painting</b>	<b>18.17</b>	<b>24.08</b>	<b>0.75</b>	<b>0.69</b>
<i>SCAQMD Localized Significance Threshold (1.5 acre of disturbance at 25 meters)</i>	<i>144.00</i>	<i>742.50</i>	<i>5.50</i>	<i>3.50</i>
<b>Exceed SCAQMD Localized Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: Emissions taken from the season (summer or winter) with the highest output. Building construction, paving, and painting phases assumed to overlap.

Table 2-8 shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: *Further-Reduced Health Risk*. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> demonstrates that the Project would likely not adversely impact the neighboring receptors in the vicinity of the Project.

### **2.3.3.2 Project Operations Criteria Air Quality Emissions**

#### *Regional Operational Significance Analysis*

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM<sub>10</sub>, PM<sub>2.5</sub>, CO, and SO<sub>2</sub> as well as O<sub>3</sub> precursors such as ROG<sub>s</sub> and NO<sub>x</sub>. As previously described, operational air pollutant emissions were based on the Project Site plans and information provided by the Project proponent. Specifically, the modeling accounts for three-kilowatt solar generation systems on each residential unit, a manifestation of California State Building Code requirements. Additionally, traffic trip generation rates were provided by Translutions Traffic Engineers (2022). Long-term operational emissions attributable to the Project are identified in Table 2-9 and compared to the operational significance thresholds promulgated by the SCAQMD.

<b>Table 2-9. Operational-Related Emissions (Regional Significance Analysis)</b>						
<b>Emission Source</b>	<b>Pollutant (pounds per day)</b>					
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Summer Emissions</b>						
Mobile	15.70	12.50	113.00	0.27	23.70	6.16
Area	8.11	0.15	16.00	0.01	0.01	0.01
Energy	0.12	2.01	0.89	0.01	0.16	0.16
<b>Total:</b>	<b>23.93</b>	<b>14.66</b>	<b>129.89</b>	<b>0.29</b>	<b>23.87</b>	<b>6.33</b>
<i>SCAQMD Regional Significance Threshold</i>	55	55	550	150	150	55
<b>Exceed SCAQMD Regional Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Winter Emissions</b>						
Mobile	14.60	13.40	97.10	0.26	23.70	6.16
Area	6.61	0.00	0.00	0.00	0.00	0.00
Energy	0.12	2.01	0.89	0.01	0.16	0.16
<b>Total:</b>	<b>21.33</b>	<b>15.41</b>	<b>97.99</b>	<b>0.27</b>	<b>23.86</b>	<b>6.32</b>
<i>SCAQMD Regional Significance Threshold</i>	55	55	550	150	150	55
<b>Exceed SCAQMD Regional Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: Operational air pollutant emissions were based on the Project Site plans and information provided by the Project proponent. Specifically, the modeling accounts for three-kilowatt solar generation systems on each residential unit, a manifestation of California State Building Code requirements. Additionally, traffic trip generation rates were provided by Translutions Traffic Engineers (2022).

As shown in Table 2-9, the Project's emissions would not exceed any SCAQMD thresholds for any criteria air pollutants during operation.

As identified in Table 2-3, Riverside County portion of the SoCAB is listed as a nonattainment area for federal O<sub>3</sub> and PM<sub>2.5</sub> standards and is also a nonattainment area for the state standards for O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> (CARB 2022b). O<sub>3</sub> is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely affect the human respiratory system. As shown in Table 2-9, the Proposed Project would result in increased emissions of the O<sub>3</sub> precursor pollutants ROG and NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in

the SCAQMD is contained in the SCAQMD 2022 AQMP. The AQMP provides control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SCAQMD are designed to meet the objectives of the AQMP and in doing so achieve attainment status with state and federal standards. As noted above, the Project would increase the emission of these pollutants, but would not exceed the thresholds of significance established by the SCAQMD for purposes of reducing air pollution and its deleterious health effects.

#### *Localized Operational Significance Analysis*

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project only if the project includes stationary sources (e.g., smokestacks) or attracts heavy-duty trucks that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Proposed Project does not include such uses. Therefore, in the case of the Proposed Project, the operational LST protocol is not applied.

#### **2.3.3.3 Conflict with the 2022 Air Quality Management Plan**

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project Site is located within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted and adopted the 2022 AQMP. The 2022 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state and federal air quality standards. The 2022 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the USEPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's latest RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Project is subject to the SCAQMD's AQMP.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

#### *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 or cause or contribute to new air quality violations?*

As shown in Table 2-6, Table 2-8, and Table 2-9 above, the Proposed Project would result in emissions that would be below the SCAQMD regional and localized thresholds during both construction and operations. Therefore, the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards.

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

As shown in Table 2-6 and 2-9 above, the Proposed Project would be below the SCAQMD regional thresholds for construction and operations. Because the Project would result in less than significant regional emission impacts, it would not delay the timely attainment of air quality standards or 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 SoCAB 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 Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2022 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

- a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the 2022 AQMP?*

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, three sources of data form the basis for the projections of air pollutant emissions in Jurupa Valley. Specifically, SCAG's Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG) provides regional population forecasts for the region and SCAG's RTP/SCS provides socioeconomic forecast projections of regional population growth. The City of Jurupa Valley General Plan is referenced by SCAG in order to assist forecasting future growth in the city.

The Project Site has a General Plan land use designation of Medium High Density Residential (MHDR) and Commercial Retail (CR) (City of Jurupa Valley 2017). The MHDR land use allows for single-family detached and attached residences with a density range of 5 to 8 dwelling units per acre while the CR land use allows for local and regional serving retail and service uses. As previously described, the Project is proposing the construction of a residential and commercial mixed-use development. The Project is not proposing to amend the City's General Plan; however, the Project would exceed the density range of 5 to 8 dwelling units per acre allowed by the MHDR land use. As such, the Project would increase the number of residential units beyond that anticipated.

Nonetheless, as a result of proposing a mix of commercial land uses in an area devoid of such uses and surrounded heavily by residences, the Project can be identified for its "location efficiency". Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within. In general, compared to the statewide average, a project with location efficiency can realize automotive vehicle mile trip (VMT) reductions between 10 and 65 percent. The Project would locate complementary commercial land uses in close to proximity to existing offsite residential uses as well as future residential uses proposed by the Project, thereby providing commercial and work options to the existing and future residents currently living near the site. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reductions in transportation-related emissions, a primary goal of the 2022 AQMP. Therefore, the Proposed Project would be considered consistent with the goals of SCAQMD's air quality plans.

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

In order to further reduce emissions, the Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 201, 402, 403, and 1113. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM<sub>10</sub> emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. As such, the Proposed Project meets this consistency criterion.

*c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?*

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general

plans. The Proposed Project is consistent with the land use designation and development density presented in the City's General Plan and therefore, would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. The Proposed Project would not result in a long-term impact on the region's ability to meet state and federal air quality standards. The Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2022 AQMP.

The Project would be consistent with the emission-reduction goals of the 2022 AQMP.

#### **2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants**

As previously described, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Site are residences with the closest located approximately 25 feet to the south.

##### *Construction-Generated Air Contaminants*

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of DPM, ROG, NO<sub>x</sub>, CO, and PM<sub>10</sub> from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the SoCAB which encompasses the Project Area is designated as a nonattainment area for federal O<sub>3</sub> and PM<sub>2.5</sub> standards and is also a nonattainment area for the state standards for O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> standards (CARB 2022b). Thus, existing O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> levels in the SoCAB are at unhealthy levels during certain periods. However, as shown in Table 2-6 and Table 2-8, the Project would not exceed the SCAQMD regional or localized significance thresholds for emissions.

The health effects associated with O<sub>3</sub> are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O<sub>3</sub> precursor emissions (ROG or NO<sub>x</sub>) in excess of the SCAQMD thresholds, the Project is not anticipated to substantially contribute to regional O<sub>3</sub> concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SCAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked

to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. PM<sub>10</sub> exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O<sub>3</sub> and NO<sub>x</sub>, the Project would not generate emissions of PM<sub>10</sub> or PM<sub>2.5</sub> that would exceed the SCAQMD's thresholds. Accordingly, the Project's PM<sub>10</sub> and PM<sub>2.5</sub> emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Furthermore, the Project has been evaluated against the SCAQMD's LSTs for construction. As previously stated, LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative and can be used to assist lead agencies in analyzing localized impacts associated with Project-specific level of proposed projects. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: *Further-Reduced Health Risk*. As shown in Table 2-8, the emissions of pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> demonstrates that the Project would not adversely impact vicinity sensitive receptors.

#### *Operational Air Contaminants*

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract additional mobile sources that spend long periods queuing and idling at the site. Onsite Project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. The Project would not have a high carcinogenic or non-carcinogenic risk during operation.

#### *Carbon Monoxide Hot Spots*

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are

more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SoCAB is designated as in attainment. Detailed modeling of Project-specific CO “hot spots” is not necessary and thus this potential impact is addressed qualitatively.

A CO “hot spot” would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District’s (SCAQMD’s) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD is the air pollution control officer for much of southern California. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles region, a CO “hot spot” analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD), the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

Per the traffic memo provided by Translutions Traffic Engineers (2022), the proposed facility is expected to have a weekday trip generation of 4,047 average daily traffic trips. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and there is no likelihood of the Project traffic exceeding CO values.

#### **2.3.3.5 Odors**

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person’s reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

## 3.0 GREENHOUSE GAS EMISSIONS

### 3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO<sub>2</sub>, methane (CH<sub>4</sub>), and N<sub>2</sub>O. Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH<sub>4</sub> traps over 25 times more heat per molecule than CO<sub>2</sub>, and N<sub>2</sub>O absorbs 298 times more heat per molecule than CO<sub>2</sub> (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO<sub>2</sub>e), which weight each gas by its global warming potential. Expressing GHG emissions in CO<sub>2</sub>e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO<sub>2</sub> is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO<sub>2</sub> emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the

last 50 years, whereas the remaining 45 percent of human-caused CO<sub>2</sub> emissions remains stored in the atmosphere (IPCC 2013).

<b>Table 3-1. Greenhouse Gases</b>	
<b>Greenhouse Gas</b>	<b>Description</b>
CO <sub>2</sub>	Carbon dioxide is a colorless, odorless gas. CO <sub>2</sub> is emitted in a number of ways, both naturally and through human activities. The largest source of CO <sub>2</sub> emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO <sub>2</sub> emissions. The atmospheric lifetime of CO <sub>2</sub> is variable because it is so readily exchanged in the atmosphere. <sup>1</sup>
CH <sub>4</sub>	Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH <sub>4</sub> to the atmosphere. Natural sources of CH <sub>4</sub> include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH <sub>4</sub> is about 12 years. <sup>2</sup>
N <sub>2</sub> O	Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N <sub>2</sub> O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N <sub>2</sub> O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N <sub>2</sub> O is approximately 120 years. <sup>3</sup>

Sources: <sup>1</sup>USEPA 2016a, <sup>2</sup>USEPA 2016b, <sup>3</sup>USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

**3.1.1 Sources of Greenhouse Gas Emissions**

In 2022, CARB released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO<sub>2</sub>e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California’s GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO<sub>2</sub>e in 2020, though the intensity of this decrease was most likely from light duty vehicles after

shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level as in 2019 despite a 44 percent decrease in in-state hydropower generation (due to below average precipitation levels), which was more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2020, accounting for 23 percent (CARB 2022c).

## **3.2 Regulatory Framework**

### **3.2.1 State**

#### **3.2.1.1 Executive Order S-3-05**

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

#### **3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates**

In 2006, the California legislature passed AB 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which outlined measures to meet the 2020 GHG reduction goals. California exceeded the target of reducing GHG emissions to 1990 levels by the year 2017.

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2022 Scoping Plan Update, lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

#### **3.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016**

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

### **3.2.1.4 Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018**

In 2018, SB 100 was signed codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

### **3.2.1.5 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings**

The Building and Efficiency Standards (Energy Standards) were first adopted and put into effect in 1978 and have been updated periodically in the intervening years. These standards are a unique California asset that have placed the State on the forefront of energy efficiency, sustainability, energy independence and climate change issues. The 2022 California Building Codes include provisions related to energy efficiency to reduce energy consumption and greenhouse gas emissions from buildings. Some of the key energy efficiency components of the codes are:

1. Energy Performance Requirements: The codes specify minimum energy performance standards for the building envelope, lighting, heating and cooling systems, and other components.
2. Lighting Efficiency: The codes require that lighting systems meet minimum efficiency standards, such as the use of energy-efficient light bulbs and fixtures.
3. HVAC Systems: The codes establish requirements for heating, ventilation, and air conditioning (HVAC) systems, including the use of high-efficiency equipment, duct sealing, and controls.
4. Building Envelope: The codes include provisions for insulation, air sealing, glazing, and other building envelope components to reduce energy loss and improve indoor comfort.
5. Renewable Energy: The codes encourage the use of renewable energy systems, such as photovoltaic panels and wind turbines, to reduce dependence on non-renewable energy sources.
6. Commissioning: The codes require the commissioning of building energy systems to ensure that they are installed and operate correctly and efficiently.

Overall, the energy efficiency provisions of the 2022 California Building Codes aim to reduce the energy consumption of buildings, lower energy costs for building owners and occupants, and reduce the environmental impact of the built environment. The 2022 Building Energy Efficiency Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The exact amount by which the 2022 Building Codes are more efficient compared to the 2019 Building Codes would depend on the specific provisions that have been updated and the specific building being considered. However, in general, the 2022 Building Codes have been updated to include increased requirements for energy efficiency, such as higher insulation and air sealing standards, which are intended to result in more efficient buildings. The 2022 standards are a major step toward meeting Zero Net Energy.

### **3.2.2 Local**

#### **3.2.2.1 South Coast Air Quality Management District**

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SCAQMD staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to SCAQMD staff on developing the significance thresholds. On October 8, 2008, the SCAQMD released the Draft AQMD Staff CEQA GHG Significance Thresholds. These thresholds have not been finalized and continue to be developed through the working group.

On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including an interim screening level numeric “bright-line” threshold of 3,000 metric tons of CO<sub>2</sub>e annually and an efficiency-based threshold of 4.8 metric tons of CO<sub>2</sub>e per service population (defined as the people that work and/or congregate on the Project site) per year in 2020 and 3.0 metric tons of CO<sub>2</sub>e per service population per year in 2035. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the governing board.

#### **3.2.2.2 Southern California Association of Governments**

On September 3, 2020, the SCAG Regional Council adopted the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020 RTP/SCS). The 2020 RTP/SCS charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent per capita reduction by the end of 2035.

### **3.3 Greenhouse Gas Emissions Impact Assessment**

#### **3.3.1 Thresholds of Significance**

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

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

The Appendix G thresholds for GHG emissions do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 CCR 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130). As a note, the CEQA Guidelines were amended in response to Senate Bill 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per 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 that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG

emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The local air quality agency regulating the SoCAB is the SCAQMD, the regional air pollution control officer for the basin. As previously stated, to provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SCAQMD staff convened a GHG CEQA Significance Threshold Working Group. The Working Group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research (OPR), CARB, the Attorney General's Office, a variety of city and county planning departments in the Basin, various utilities such as sanitation and power companies throughout the Basin, industry groups, and environmental and professional organizations. The numeric bright line and efficiency-based thresholds described above were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the State that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, *Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World* (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The Project will be compared to the SCAQMD screening level numeric bright-line threshold of 3,000 metric tons of CO<sub>2</sub>e annually.

### **3.3.2 Methodology**

GHG emissions-related impacts were assessed in accordance with methodologies recommended by the SCAQMD. Where GHG emission quantification was required, emissions were modeled using CalEEMod,

version 2022.1.1.19. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Riverside County. Operational air pollutant emissions were based on Project Site plans and information provided by the Project proponent. Specifically, the modeling accounted for three-kilowatt solar generation systems on each residential unit per the California State Building Code. Project emissions calculations account for this design feature. Additionally, traffic trip generation rates were provided by Translutions Traffic Engineers (2022).

**3.3.3 Impact Analysis**

**3.3.3.1 Generation of GHG Emissions**

*Construction*

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

<b>Table 3-2. Construction-Related Greenhouse Gas Emissions</b>	
<b>Emissions Source</b>	<b>CO<sub>2</sub>e (Metric Tons/ Year)</b>
Construction Year One	565
Construction Year Two	628
Construction Year Three	229
<b>Total Construction Emissions</b>	<b>1,422</b>

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

As shown in Table 3-2, Project construction would result in the generation of approximately 1,422 metric tons of CO<sub>2</sub>e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. Consistent with SCAQMD recommendations, Project construction GHG emissions have been amortized of the expected life of the Project, which is considered to be 30 years per the SCAQMD. The amortized construction emissions are added to the annual average operational emissions (see Table 3-3).

*Operational Significance Analysis*

Operation of the Project would result in an increase in GHG emissions primarily associated with motor vehicle trips. Long-term operational GHG emissions attributed to the Project are identified in Table 3-3.

<b>Table 3-3. Operational-Related Greenhouse Gas Emissions</b>	
<b>Emission Source</b>	<b>CO<sub>2</sub>e (Metric Tons/ Year)</b>
Construction Emissions (amortized over the 30-year life of the Project)	47
Mobile	4,343
Area	5
Energy	740
Water	31
Waste	79
<b>Total</b>	<b>5,245</b>
<i>SCAQMD Numeric Significance Threshold</i>	<i>3,000</i>
<b>Exceed SCAQMD Numeric Threshold?</b>	<b>Yes</b>

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: Operational air pollutant emissions were based on Project Site plans and information provided by the Project proponent. Specifically, the modeling accounted for three-kilowatt solar generation systems on each residential unit per the California State Building Code. Additionally, traffic trip generation rates were provided by Translutions Traffic Engineers (2022).

As shown in Table 3-3, operational-generated emissions would exceed the SCAQMD's numeric bright-line threshold of 3,000 metric tons of CO<sub>2</sub>e annually. The Project's greatest contributor towards GHG emissions is due to mobile sources. Mobile sources contribute to GHG emissions primarily through the burning of fossil fuels, such as gasoline and diesel, in their engines. Mobile sources are an emission source that cannot be regulated by the City of Jurupa Valley. CARB is primarily responsible for controlling pollution from motor vehicles. A reduction of vehicle trips to and from the Proposed Project site would reduce the amount of mobile emissions. Methods of reducing vehicle trips include carpooling, transit, cycling, and pedestrian connections.

It is noted that the Project is considered "infill development" as it proposes to redevelop a built-out property and enhance the physical design of the urban environment. Under Public Resources Code (PRC) section 21061.3, an "infill site" is defined as a site that "has been previously developed for qualified urban uses." In turn, a "qualified urban use" is defined, pursuant to PRC section 21072, as "a residential, commercial, or public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses." Additionally, the Project Site is located in an "urbanized area," which is defined under PRC section 21071 as "an incorporated city" that meets the criteria of having a population of at least 100,000 persons. According to the USEPA, infill development can reduce development pressure on outlying areas and when it occurs near existing transit infrastructure, employment centers, and other destinations, it can help reduce the amount that people drive, thus improving air quality and reducing GHG emissions (USEPA 2014). It is noted that the Project Site is located less than a half mile from two bus stop locations.

Additionally, the Project can be identified for its “location efficiency.” Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within, such as an “urban area,” “compact infill,” or “suburban center.” The Project Area represents an urban/compact infill location within an area of the City developed with residential and commercial uses. The Project Area is within an active urban center of Jurupa Valley and is in close proximity to a supermarket, other retail commercial uses, and restaurants. The Project would locate additional retail space and residential land uses within this area. Therefore, the Project would provide community members with a place to live, work, shop, and receive commercial services that are in close proximity to transit and an urban developed area. Additionally, the Project would locate potential employment opportunities for future residents of the Project, or existing residents already living in the vicinity. The location efficiency of the Project Area would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transportation related GHG emissions.

**3.3.3.2 Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases**

The City of Jurupa Valley has not adopted a Climate Action Plan at the time of this analysis. However, the City of Jurupa Valley is a member of the SCAG. SCAG’s 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The RTP/SCS embodies a collective vision for the region’s future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. The SCAG region must achieve specific federal emissions standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 19 percent per capita reduction by the end of 2035. The RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve this GHG emission reduction goal. The RTP/SCS is also intended to assist the SCAG region to achieve federal CAA requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently. The Proposed Project’s consistency with the RTP/SCS goals is analyzed in detail in Table 3-4.

**Table 3-4. Project Consistency with SCAG RTP/SCS**

*Focus Growth Near Destinations & Mobility Options*

<p>Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations.</p>	<p><b>Consistent:</b> The Project is proposing the construction of a mixed-use development consisting of residential and commercial/retail uses. The Project would provide job opportunities for the existing surrounding residents as well as those proposed by the Project. Additionally, the commercial/retail uses located on the Project Site would provide services and products not currently available within the City. Furthermore, the Project is proposing preservation and enhancement of natural features, open space, a public park, and trails which could be used for educational purposes within the community.</p>
<p>Focus on job/housing balance to reduce commute times and distance and expand job opportunities near transit and along center-focused main streets.</p>	<p><b>Consistent:</b> The Project Site represents an urban/compact infill location within an area of the City developed with mainly residential uses. The Project Site is within an active urban center surrounded by many existing offsite residential neighborhoods. The Project would locate commercial/retail uses in close proximity to existing residences. Therefore, the Project would provide existing residents with potential work opportunities. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reduction of transport-related GHG emissions.</p>
<p>Plan for growth near transit investments and support implementation of first/last mile strategies.</p>	<p><b>Consistent:</b> The "last mile" refers to the process of getting the goods from the warehouse to the customer's facility or job site. The Proposed Project is proposing commercial/retail uses in a location that is primary residential. Thus, the location of the Project Site would effectively enhance regional logistics and supply chain management.</p>
<p>Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses.</p>	<p><b>Not Applicable:</b> This strategy focuses on redevelopment. The Proposed Project would not interfere with this strategy.</p>
<p>Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods.</p>	<p><b>Consistent:</b> The Project is proposing the construction of a mixed-use development consisting of residential and commercial/retail uses on an undeveloped site. The Project Site represents an infill location within a highly developed area of the City. Additionally, the Project site is located in an "urbanized area," which is defined under Public Resource Code section 21071 as "an incorporated city" that meets the criteria of having a population of at least 100,000 persons. These aspects of the Project</p>

	would result in the generation of a reduced amount of GHG emissions.
Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations).	<b>Consistent:</b> The Project is proposing the construction of a mixed-use development consisting of residential and commercial/retail uses. Additionally, the Project Site is proposing internal sidewalks and is located less than a half mile from two bus stop locations.
<i>Promote Diverse Housing Choices</i>	
Preserve and rehabilitate affordable housing and prevent displacement.	<b>Not Applicable:</b> This strategy focuses on affordable housing opportunities. The Proposed Project would not interfere with this strategy.
Identify opportunities for new workforce and affordable housing development.	<b>Consistent:</b> The Project Site is within an active urban center surrounded by many existing offsite residential neighborhoods. The Project would locate a commercial/retail use in close proximity to existing residences. Therefore, the Project would provide existing residents with potential work opportunities. Additionally, the Project Site is proposing residential units.
<i>Leverage Technology Innovations</i>	
Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing, and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging, and parking/drop-off space.	<b>Consistent:</b> The Project is proposing a three-kilowatt solar generation system on each residential unit. Additionally, the Project Site is proposing internal sidewalks and is located less than a half mile from two bus stop locations.
Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation.	<b>Consistent:</b> The Project is proposing a three-kilowatt solar generation system on each residential unit.
<i>Support Implementation of Sustainability Policies</i>	
Pursue funding opportunities to support local sustainable development implementation project that reduce GHG emissions.	<b>Not Applicable:</b> The Proposed Project would not interfere with this goal.
Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations.	<b>Not Applicable:</b> The Proposed Project would not interfere with this goal.
Support cities in the establishment of Enhanced Infrastructure Financing Districts, Community Revitalization and Investment Authorities, or other tax increment or value capture tools to finance sustainable infrastructure and development projects.	<b>Not Applicable:</b> This strategy calls on cities to establish tax incentives or other value capture tools to finance sustainable infrastructure. The Proposed Project would not interfere with this strategy.

Work with local jurisdictions/communities to identify opportunities to assess barriers to implement sustainability strategies.	<b>Not Applicable:</b> This strategy calls on SCAG to work with local jurisdictions to identify ways to implement sustainable strategies. The Proposed Project would not interfere with this strategy.
Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region.	<b>Not Applicable:</b> This strategy calls on planning organizations to promote resources and best practices in SCAG. The Proposed Project would not interfere with this strategy.
Continue to support long range planning efforts by local jurisdictions.	<b>Not Applicable:</b> The Proposed Project would not interfere with this goal.
Provide educational opportunities to local decision makers and staff on new tools, best practices, and policies related to implementing the Sustainable Communities Strategy.	<b>Not Applicable:</b> This strategy calls on local jurisdictions to provide educational opportunities on new tools and practices to promote the Sustainable Communities Strategy. The Proposed Project would not interfere with this strategy.
<i>Promote a Green Region</i>	
Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate changes and natural hazards.	<b>Not Applicable:</b> The Proposed Project would not interfere with this goal.
Support local policies for renewable energy production, reduction of urban heat islands, and carbon sequestration.	<b>Not Applicable:</b> This strategy calls on local governments to adopt policies for renewable energy production. The Proposed Project would not interfere with this strategy.
Integrate local food production into the regional landscape.	<b>Not Applicable:</b> The Proposed Project would not interfere with this goal.
Promote more resource efficient development focused on conservation, recycling, and reclamation.	<b>Consistent:</b> The Proposed Project would be required to adhere to the latest CALGreen Building Codes and Title 24, which will result in a more efficient Project Site. Additionally, the Project proposes a three-kilowatt solar generation system.
Preserve, enhance, and restore regional wildlife connectivity.	<b>Not Applicable:</b> The Project would be constructed in an existing urban setting. The Proposed Project would not interfere with this goal.
Reduce consumption of resource areas, including agricultural land.	<b>Consistent:</b> The Project would be constructed in an existing urban setting. The Proposed Project would not interfere with this goal.
Identify ways to improve access to public park space.	<b>Not Applicable:</b> The Proposed Project would not interfere with this goal.

Implementing SCAG’s RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets. As shown, the Proposed Project would in no way conflict with the stated goals of the RTP/SCS; therefore, the Proposed Project would not interfere with SCAG’s ability

to achieve the region's mobile source GHG reduction targets outlined in the RTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Furthermore, the Proposed Project is not regionally significant per CEQA Guidelines Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets, since those targets were established and are applicable on a regional level.

As such, the Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

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## **LIST OF ATTACHMENTS**

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Attachment A – CalEEMod Output Files for Air Quality & Greenhouse Gas Emissions

## **ATTACHMENT A**

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CalEEMod Output Files – Criteria Air Pollutants & Greenhouse Gas Emissions

# Wineville Property Custom Report

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#### 5.3.2. Mitigated

### 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

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Wineville Property
Construction Start Date	5/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	19.2
Location	33.975043456195394, -117.5339733416219
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5441
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.28

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Strip Mall	22.0	1000sqft	0.51	22,400	0.00	—	—	—

Single Family Housing	144	Dwelling Unit	20.1	259,200	0.00	—	465	—
Condo/Townhouse	119	Dwelling Unit	5.29	0.00	0.00	—	384	—
Parking Lot	916	Space	6.05	0.00	0.00	—	—	—
City Park	1.00	Acre	0.78	0.00	0.00	0.00	—	—
Fast Food Restaurant with Drive Thru	1.00	1000sqft	0.04	1,800	0.00	—	—	—

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-9	Use Dust Suppressants
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads
Transportation	T-1	Increase Residential Density
Transportation	T-34*	Provide Bike Parking
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power

\* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

## 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.29	29.8	29.9	0.06	1.23	3.85	5.09	1.14	1.49	2.62	—	6,881	6,881	0.28	0.24	10.3	6,908
2026	1.71	11.5	23.7	0.03	0.39	2.18	2.57	0.36	0.52	0.88	—	5,369	5,369	0.20	0.24	9.44	5,454
2027	52.7	18.8	36.9	0.05	0.67	2.75	3.42	0.62	0.66	1.27	—	7,555	7,555	0.22	0.26	10.4	7,650

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.38	31.7	31.2	0.06	1.37	7.89	9.26	1.26	3.99	5.25	—	6,858	6,858	0.28	0.24	0.27	6,884
2026	1.67	11.6	21.2	0.03	0.39	2.18	2.57	0.36	0.52	0.88	—	5,208	5,208	0.15	0.24	0.24	5,284
2027	51.1	11.9	23.1	0.03	0.37	2.56	2.93	0.34	0.61	0.95	—	5,652	5,652	0.15	0.25	0.25	5,729
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.33	10.6	14.8	0.02	0.41	1.81	2.23	0.38	0.62	1.00	—	3,373	3,373	0.13	0.11	1.95	3,412
2026	1.19	8.31	15.4	0.02	0.28	1.54	1.82	0.26	0.37	0.63	—	3,736	3,736	0.11	0.17	2.91	3,793
2027	5.75	3.08	5.79	0.01	0.10	0.56	0.66	0.09	0.13	0.23	—	1,363	1,363	0.04	0.06	0.94	1,382
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.24	1.93	2.69	< 0.005	0.08	0.33	0.41	0.07	0.11	0.18	—	559	559	0.02	0.02	0.32	565
2026	0.22	1.52	2.81	< 0.005	0.05	0.28	0.33	0.05	0.07	0.11	—	619	619	0.02	0.03	0.48	628
2027	1.05	0.56	1.06	< 0.005	0.02	0.10	0.12	0.02	0.02	0.04	—	226	226	0.01	0.01	0.15	229

### 2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.29	29.8	29.9	0.06	1.23	3.85	5.09	1.14	1.49	2.62	—	6,881	6,881	0.28	0.24	10.3	6,908
2026	1.71	11.5	23.7	0.03	0.39	2.18	2.57	0.36	0.52	0.88	—	5,369	5,369	0.20	0.24	9.44	5,454
2027	52.7	18.8	36.9	0.05	0.67	2.75	3.42	0.62	0.66	1.27	—	7,555	7,555	0.22	0.26	10.4	7,650
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.38	31.7	31.2	0.06	1.37	7.89	9.26	1.26	3.99	5.25	—	6,858	6,858	0.28	0.24	0.27	6,884
2026	1.67	11.6	21.2	0.03	0.39	2.18	2.57	0.36	0.52	0.88	—	5,208	5,208	0.15	0.24	0.24	5,284
2027	51.1	11.9	23.1	0.03	0.37	2.56	2.93	0.34	0.61	0.95	—	5,652	5,652	0.15	0.25	0.25	5,729

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.33	10.6	14.8	0.02	0.41	1.81	2.23	0.38	0.62	1.00	—	3,373	3,373	0.13	0.11	1.95	3,412
2026	1.19	8.31	15.4	0.02	0.28	1.54	1.82	0.26	0.37	0.63	—	3,736	3,736	0.11	0.17	2.91	3,793
2027	5.75	3.08	5.79	0.01	0.10	0.56	0.66	0.09	0.13	0.23	—	1,363	1,363	0.04	0.06	0.94	1,382
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.24	1.93	2.69	< 0.005	0.08	0.33	0.41	0.07	0.11	0.18	—	559	559	0.02	0.02	0.32	565
2026	0.22	1.52	2.81	< 0.005	0.05	0.28	0.33	0.05	0.07	0.11	—	619	619	0.02	0.03	0.48	628
2027	1.05	0.56	1.06	< 0.005	0.02	0.10	0.12	0.02	0.02	0.04	—	226	226	0.01	0.01	0.15	229

## 2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.7	12.5	113	0.27	0.20	23.5	23.7	0.19	5.97	6.16	—	27,792	27,792	1.21	1.28	95.9	28,300
Area	8.11	0.15	16.0	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	44.2	44.2	< 0.005	< 0.005	—	44.4
Energy	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	5,134	5,134	0.47	0.03	—	5,156
Water	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Waste	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Total	23.9	14.6	130	0.29	0.37	23.5	23.9	0.36	5.97	6.33	161	33,051	33,213	17.9	1.38	101	34,170
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.6	13.4	97.1	0.26	0.20	23.5	23.7	0.19	5.97	6.16	—	26,120	26,120	1.27	1.32	2.49	26,549
Area	6.61	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	5,134	5,134	0.47	0.03	—	5,156
Water	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186

Waste	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Total	21.4	15.4	98.0	0.27	0.36	23.5	23.9	0.35	5.97	6.32	161	31,336	31,497	17.9	1.42	7.30	32,375
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.5	13.6	100	0.26	0.20	23.2	23.4	0.19	5.89	6.08	—	26,362	26,362	1.27	1.33	41.4	26,833
Area	7.64	0.10	10.9	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	30.3	30.3	< 0.005	< 0.005	—	30.4
Energy	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	5,134	5,134	0.47	0.03	—	5,156
Water	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Waste	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Total	22.3	15.7	112	0.27	0.37	23.2	23.6	0.36	5.89	6.25	161	31,608	31,769	17.9	1.43	46.2	32,690
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.65	2.48	18.3	0.05	0.04	4.24	4.27	0.03	1.08	1.11	—	4,365	4,365	0.21	0.22	6.85	4,443
Area	1.39	0.02	2.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.01	5.01	< 0.005	< 0.005	—	5.03
Energy	0.02	0.37	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	850	850	0.08	0.01	—	854
Water	—	—	—	—	—	—	—	—	—	—	4.01	13.5	17.5	0.41	0.01	—	30.8
Waste	—	—	—	—	—	—	—	—	—	—	22.7	0.00	22.7	2.27	0.00	—	79.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.80	0.80
Total	4.07	2.87	20.5	0.05	0.07	4.24	4.30	0.07	1.08	1.14	26.7	5,233	5,260	2.97	0.24	7.65	5,412

## 2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.4	12.2	111	0.27	0.20	23.0	23.2	0.19	5.83	6.02	—	27,170	27,170	1.18	1.25	93.7	27,666
Area	8.11	0.15	16.0	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	44.2	44.2	< 0.005	< 0.005	—	44.4

Energy	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	4,451	4,451	0.41	0.03	—	4,469
Water	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Waste	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Total	23.6	14.4	128	0.28	0.37	23.0	23.3	0.35	5.83	6.19	161	31,746	31,908	17.8	1.34	98.5	32,850
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.4	13.1	95.0	0.25	0.20	23.0	23.2	0.19	5.83	6.02	—	25,536	25,536	1.24	1.29	2.43	25,955
Area	6.61	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	4,451	4,451	0.41	0.03	—	4,469
Water	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Waste	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Total	21.1	15.1	95.9	0.26	0.36	23.0	23.3	0.35	5.83	6.18	161	30,068	30,230	17.8	1.38	7.24	31,095
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	14.2	13.3	98.3	0.25	0.20	22.7	22.9	0.19	5.76	5.95	—	25,772	25,772	1.25	1.31	40.5	26,233
Area	7.64	0.10	10.9	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	0.00	30.3	30.3	< 0.005	< 0.005	—	30.4
Energy	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	4,451	4,451	0.41	0.03	—	4,469
Water	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Waste	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Total	22.0	15.4	110	0.27	0.37	22.7	23.1	0.35	5.76	6.11	161	30,335	30,496	17.8	1.39	45.3	31,403
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.60	2.43	17.9	0.05	0.04	4.14	4.18	0.03	1.05	1.09	—	4,267	4,267	0.21	0.22	6.70	4,343
Area	1.39	0.02	2.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.01	5.01	< 0.005	< 0.005	—	5.03
Energy	0.02	0.37	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	737	737	0.07	< 0.005	—	740
Water	—	—	—	—	—	—	—	—	—	—	4.01	13.5	17.5	0.41	0.01	—	30.8

Waste	—	—	—	—	—	—	—	—	—	—	22.7	0.00	22.7	2.27	0.00	—	79.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.80	0.80
Total	4.01	2.81	20.1	0.05	0.07	4.14	4.21	0.06	1.05	1.12	26.7	5,022	5,049	2.95	0.23	7.50	5,199

### 3. Construction Emissions Details

#### 3.1. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.73	1.65	< 0.005	0.07	—	0.07	0.07	—	0.07	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.0	48.0	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.2. Site Preparation (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	1.73	1.65	< 0.005	0.07	—	0.07	0.07	—	0.07	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.0	48.0	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.08	1.02	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	227	227	0.01	0.01	0.02	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.08	2.08	< 0.005	< 0.005	< 0.005	2.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.3. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.66	3.49	0.01	0.15	—	0.15	0.14	—	0.14	—	814	814	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	0.44	0.44	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.67	0.64	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	282	282	0.01	0.01	1.04	286
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.4	32.4	< 0.005	< 0.005	0.06	32.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.36	5.36	< 0.005	< 0.005	0.01	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.4. Grading (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622

Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.66	3.49	0.01	0.15	—	0.15	0.14	—	0.14	—	814	814	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	0.44	0.44	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.67	0.64	< 0.005	0.03	—	0.03	0.03	—	0.03	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	1.54	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	282	282	0.01	0.01	1.04	286
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	259	259	0.01	0.01	0.03	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.4	32.4	< 0.005	< 0.005	0.06	32.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.36	5.36	< 0.005	< 0.005	0.01	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.5. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	4.39	5.49	0.01	0.18	—	0.18	0.17	—	0.17	—	1,009	1,009	0.04	0.01	—	1,012
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.80	1.00	< 0.005	0.03	—	0.03	0.03	—	0.03	—	167	167	0.01	< 0.005	—	168
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.64	11.2	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,050	2,050	0.08	0.07	7.53	2,081
Vendor	0.02	1.08	0.33	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	981	981	0.02	0.15	2.79	1,029
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.61	0.70	8.49	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,884	1,884	0.09	0.07	0.20	1,908
Vendor	0.02	1.13	0.34	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	982	982	0.02	0.15	0.07	1,027
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.32	3.77	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	803	803	0.04	0.03	1.37	814
Vendor	0.01	0.47	0.14	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	413	413	0.01	0.06	0.51	433
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.69	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	133	133	0.01	0.01	0.23	135
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	68.4	68.4	< 0.005	0.01	0.08	71.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.6. Building Construction (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	4.39	5.49	0.01	0.18	—	0.18	0.17	—	0.17	—	1,009	1,009	0.04	0.01	—	1,012

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.80	1.00	< 0.005	0.03	—	0.03	0.03	—	0.03	—	167	167	0.01	< 0.005	—	168
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.64	11.2	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,050	2,050	0.08	0.07	7.53	2,081
Vendor	0.02	1.08	0.33	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	981	981	0.02	0.15	2.79	1,029
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.61	0.70	8.49	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,884	1,884	0.09	0.07	0.20	1,908
Vendor	0.02	1.13	0.34	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	982	982	0.02	0.15	0.07	1,027
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.32	3.77	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	803	803	0.04	0.03	1.37	814
Vendor	0.01	0.47	0.14	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	413	413	0.01	0.06	0.51	433
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.06	0.69	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	133	133	0.01	0.01	0.23	135
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	68.4	68.4	< 0.005	0.01	0.08	71.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.7. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.62	0.57	10.4	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,006	2,006	0.08	0.07	6.79	2,035
Vendor	0.02	1.03	0.32	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	966	966	0.02	0.15	2.64	1,013

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.64	7.92	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,844	1,844	0.03	0.07	0.18	1,867
Vendor	0.02	1.08	0.33	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	966	966	0.02	0.15	0.07	1,011
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.50	5.92	0.00	0.00	1.34	1.34	0.00	0.31	0.31	—	1,334	1,334	0.02	0.05	2.10	1,352
Vendor	0.01	0.77	0.23	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	690	690	0.02	0.11	0.81	723
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.08	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	221	221	< 0.005	0.01	0.35	224
Vendor	< 0.005	0.14	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	114	114	< 0.005	0.02	0.13	120
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.8. Building Construction (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.62	0.57	10.4	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	2,006	2,006	0.08	0.07	6.79	2,035
Vendor	0.02	1.03	0.32	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	966	966	0.02	0.15	2.64	1,013
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.64	7.92	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,844	1,844	0.03	0.07	0.18	1,867
Vendor	0.02	1.08	0.33	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	966	966	0.02	0.15	0.07	1,011
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.50	5.92	0.00	0.00	1.34	1.34	0.00	0.31	0.31	—	1,334	1,334	0.02	0.05	2.10	1,352
Vendor	0.01	0.77	0.23	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	690	690	0.02	0.11	0.81	723
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.09	1.08	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	221	221	< 0.005	0.01	0.35	224
Vendor	< 0.005	0.14	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	114	114	< 0.005	0.02	0.13	120
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.9. Building Construction (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.21	3.04	0.01	0.08	—	0.08	0.07	—	0.07	—	563	563	0.02	< 0.005	—	565
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.40	0.55	< 0.005	0.01	—	0.01	0.01	—	0.01	—	93.2	93.2	< 0.005	< 0.005	—	93.5

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.51	9.66	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,969	1,969	0.02	0.07	6.12	1,996
Vendor	0.02	0.99	0.31	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	948	948	0.02	0.14	2.41	993
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.57	7.30	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,811	1,811	0.03	0.07	0.16	1,832
Vendor	0.02	1.04	0.32	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	949	949	0.02	0.14	0.06	992
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.15	1.80	0.00	0.00	0.44	0.44	0.00	0.10	0.10	—	431	431	0.01	0.02	0.62	436
Vendor	< 0.005	0.24	0.07	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	223	223	0.01	0.03	0.24	233
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.33	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	71.3	71.3	< 0.005	< 0.005	0.10	72.2
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.9	36.9	< 0.005	0.01	0.04	38.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.10. Building Construction (2027) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.21	3.04	0.01	0.08	—	0.08	0.07	—	0.07	—	563	563	0.02	< 0.005	—	565
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.40	0.55	< 0.005	0.01	—	0.01	0.01	—	0.01	—	93.2	93.2	< 0.005	< 0.005	—	93.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.51	9.66	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,969	1,969	0.02	0.07	6.12	1,996
Vendor	0.02	0.99	0.31	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	948	948	0.02	0.14	2.41	993
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.55	0.57	7.30	0.00	0.00	1.90	1.90	0.00	0.45	0.45	—	1,811	1,811	0.03	0.07	0.16	1,832
Vendor	0.02	1.04	0.32	0.01	0.01	0.27	0.29	0.01	0.08	0.09	—	949	949	0.02	0.14	0.06	992
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.15	1.80	0.00	0.00	0.44	0.44	0.00	0.10	0.10	—	431	431	0.01	0.02	0.62	436
Vendor	< 0.005	0.24	0.07	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	223	223	0.01	0.03	0.24	233
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.33	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	71.3	71.3	< 0.005	< 0.005	0.10	72.2
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.9	36.9	< 0.005	0.01	0.04	38.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.11. Paving (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	1.00	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.63	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	1.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.12. Paving (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	1.00	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.63	206

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.4	10.4	< 0.005	< 0.005	0.01	10.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	1.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.13. Architectural Coating (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	49.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	49.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.3	14.3	< 0.005	< 0.005	—	14.3
Architectural Coatings	5.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.36	2.36	< 0.005	< 0.005	—	2.37
Architectural Coatings	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	1.93	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	394	394	< 0.005	0.01	1.22	399
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	1.46	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	362	362	0.01	0.01	0.03	366

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.2	39.2	< 0.005	< 0.005	0.06	39.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.49	6.49	< 0.005	< 0.005	0.01	6.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

### 3.14. Architectural Coating (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	49.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134

Architectural	49.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.3	14.3	< 0.005	< 0.005	—	14.3
Architectural Coatings	5.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.36	2.36	< 0.005	< 0.005	—	2.37
Architectural Coatings	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	1.93	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	394	394	< 0.005	0.01	1.22	399
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.11	1.46	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	362	362	0.01	0.01	0.03	366
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.2	39.2	< 0.005	< 0.005	0.06	39.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.49	6.49	< 0.005	< 0.005	0.01	6.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	4.19	2.83	25.1	0.06	0.04	4.87	4.92	0.04	1.24	1.28	—	5,818	5,818	0.29	0.29	19.9	5,930
Single Family Housing	5.50	4.95	45.7	0.11	0.08	9.85	9.93	0.08	2.50	2.58	—	11,581	11,581	0.46	0.51	40.2	11,786
Condo/Townhouse	3.26	2.83	26.0	0.06	0.05	5.55	5.60	0.04	1.41	1.45	—	6,540	6,540	0.27	0.29	22.7	6,657
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Fast Food Restaurant with Drive Thru	2.78	1.87	16.6	0.04	0.03	3.23	3.26	0.03	0.82	0.85	—	3,853	3,853	0.19	0.19	13.2	3,927
Total	15.7	12.5	113	0.27	0.20	23.5	23.7	0.19	5.97	6.16	—	27,792	27,792	1.21	1.28	95.9	28,300
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	3.89	3.02	22.0	0.05	0.04	4.87	4.92	0.04	1.24	1.28	—	5,472	5,472	0.31	0.30	0.52	5,568
Single Family Housing	5.14	5.30	38.5	0.11	0.08	9.85	9.93	0.08	2.50	2.58	—	10,880	10,880	0.48	0.53	1.04	11,051
Condo/Townhouse	3.04	3.03	22.0	0.06	0.05	5.55	5.60	0.04	1.41	1.45	—	6,145	6,145	0.28	0.30	0.59	6,243
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	2.58	2.00	14.6	0.04	0.03	3.23	3.26	0.03	0.82	0.85	—	3,624	3,624	0.20	0.20	0.34	3,687
Total	14.6	13.4	97.1	0.26	0.20	23.5	23.7	0.19	5.97	6.16	—	26,120	26,120	1.27	1.32	2.49	26,549
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	0.70	0.56	4.14	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	914	914	0.05	0.05	1.42	932
Single Family Housing	0.93	0.99	7.29	0.02	0.02	1.77	1.79	0.01	0.45	0.46	—	1,818	1,818	0.08	0.09	2.87	1,849
Condo/Townhouse	0.55	0.56	4.17	0.01	0.01	1.00	1.01	0.01	0.25	0.26	—	1,027	1,027	0.05	0.05	1.62	1,045
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	0.47	0.37	2.74	0.01	0.01	0.58	0.59	< 0.005	0.15	0.15	—	605	605	0.03	0.03	0.94	617
Total	2.65	2.48	18.3	0.05	0.04	4.24	4.27	0.03	1.08	1.11	—	4,365	4,365	0.21	0.22	6.85	4,443

#### 4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	4.19	2.83	25.1	0.06	0.04	4.87	4.92	0.04	1.24	1.28	—	5,818	5,818	0.29	0.29	19.9	5,930
Single Family Housing	5.31	4.78	44.1	0.11	0.08	9.51	9.59	0.08	2.41	2.49	—	11,184	11,184	0.45	0.50	38.8	11,381
Condo/Townhouse	3.14	2.73	25.1	0.06	0.05	5.36	5.41	0.04	1.36	1.40	—	6,316	6,316	0.26	0.28	21.9	6,428
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	2.78	1.87	16.6	0.04	0.03	3.23	3.26	0.03	0.82	0.85	—	3,853	3,853	0.19	0.19	13.2	3,927
Total	15.4	12.2	111	0.27	0.20	23.0	23.2	0.19	5.83	6.02	—	27,170	27,170	1.18	1.25	93.7	27,666
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Strip Mall	3.89	3.02	22.0	0.05	0.04	4.87	4.92	0.04	1.24	1.28	—	5,472	5,472	0.31	0.30	0.52	5,568
Single Family Housing	4.96	5.12	37.2	0.10	0.08	9.51	9.59	0.08	2.41	2.49	—	10,507	10,507	0.46	0.51	1.01	10,672
Condo/Townhouse	2.93	2.93	21.3	0.06	0.05	5.36	5.41	0.04	1.36	1.40	—	5,934	5,934	0.27	0.29	0.57	6,028
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	2.58	2.00	14.6	0.04	0.03	3.23	3.26	0.03	0.82	0.85	—	3,624	3,624	0.20	0.20	0.34	3,687
Total	14.4	13.1	95.0	0.25	0.20	23.0	23.2	0.19	5.83	6.02	—	25,536	25,536	1.24	1.29	2.43	25,955
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	0.70	0.56	4.14	0.01	0.01	0.88	0.89	0.01	0.22	0.23	—	914	914	0.05	0.05	1.42	932
Single Family Housing	0.90	0.95	7.04	0.02	0.01	1.71	1.73	0.01	0.44	0.45	—	1,756	1,756	0.08	0.09	2.77	1,786
Condo/Townhouse	0.53	0.54	4.02	0.01	0.01	0.97	0.97	0.01	0.25	0.25	—	992	992	0.04	0.05	1.56	1,009
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	0.47	0.37	2.74	0.01	0.01	0.58	0.59	< 0.005	0.15	0.15	—	605	605	0.03	0.03	0.94	617
Total	2.60	2.43	17.9	0.05	0.04	4.14	4.18	0.03	1.05	1.09	—	4,267	4,267	0.21	0.22	6.70	4,343

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	207	207	0.02	< 0.005	—	209
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,276	1,276	0.12	0.01	—	1,283
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	827	827	0.08	0.01	—	832
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	219	219	0.02	< 0.005	—	220
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	60.0	60.0	0.01	< 0.005	—	60.3
Total	—	—	—	—	—	—	—	—	—	—	—	2,589	2,589	0.25	0.03	—	2,604
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	207	207	0.02	< 0.005	—	209
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1,276	1,276	0.12	0.01	—	1,283

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	827	827	0.08	0.01	—	832
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	219	219	0.02	< 0.005	—	220
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	60.0	60.0	0.01	< 0.005	—	60.3
Total	—	—	—	—	—	—	—	—	—	—	—	2,589	2,589	0.25	0.03	—	2,604
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	34.3	34.3	< 0.005	< 0.005	—	34.5
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	211	211	0.02	< 0.005	—	212
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	137	137	0.01	< 0.005	—	138
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	36.3	36.3	< 0.005	< 0.005	—	36.5
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	9.93	9.93	< 0.005	< 0.005	—	9.98
Total	—	—	—	—	—	—	—	—	—	—	—	429	429	0.04	< 0.005	—	431

#### 4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	207	207	0.02	< 0.005	—	209
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	593	593	0.06	0.01	—	596
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	827	827	0.08	0.01	—	832
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	219	219	0.02	< 0.005	—	220
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	60.0	60.0	0.01	< 0.005	—	60.3
Total	—	—	—	—	—	—	—	—	—	—	—	1,906	1,906	0.18	0.02	—	1,917
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	207	207	0.02	< 0.005	—	209
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	593	593	0.06	0.01	—	596
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	827	827	0.08	0.01	—	832
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	219	219	0.02	< 0.005	—	220
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	60.0	60.0	0.01	< 0.005	—	60.3
Total	—	—	—	—	—	—	—	—	—	—	—	1,906	1,906	0.18	0.02	—	1,917
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	34.3	34.3	< 0.005	< 0.005	—	34.5
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	98.1	98.1	0.01	< 0.005	—	98.7
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	137	137	0.01	< 0.005	—	138
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	36.3	36.3	< 0.005	< 0.005	—	36.5
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	9.93	9.93	< 0.005	< 0.005	—	9.98
Total	—	—	—	—	—	—	—	—	—	—	—	316	316	0.03	< 0.005	—	317

#### 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.5	42.5	< 0.005	< 0.005	—	42.6

Single Family Housing	0.08	1.29	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,641	1,641	0.15	< 0.005	—	1,646
Condo/Townhouse	0.04	0.63	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	795	795	0.07	< 0.005	—	797
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.8	65.8	0.01	< 0.005	—	66.0
Total	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	2,545	2,545	0.23	< 0.005	—	2,552
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Single Family Housing	0.08	1.29	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,641	1,641	0.15	< 0.005	—	1,646
Condo/Townhouse	0.04	0.63	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	795	795	0.07	< 0.005	—	797
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.8	65.8	0.01	< 0.005	—	66.0
Total	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	2,545	2,545	0.23	< 0.005	—	2,552
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.04	7.04	< 0.005	< 0.005	—	7.06
Single Family Housing	0.01	0.24	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	272	272	0.02	< 0.005	—	272
Condo/Townhouse	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	132	132	0.01	< 0.005	—	132
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.9	10.9	< 0.005	< 0.005	—	10.9
Total	0.02	0.37	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	421	421	0.04	< 0.005	—	422

#### 4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Single Family Housing	0.08	1.29	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,641	1,641	0.15	< 0.005	—	1,646
Condo/Townhouse	0.04	0.63	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	795	795	0.07	< 0.005	—	797
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.8	65.8	0.01	< 0.005	—	66.0
Total	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	2,545	2,545	0.23	< 0.005	—	2,552
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.5	42.5	< 0.005	< 0.005	—	42.6
Single Family Housing	0.08	1.29	0.55	0.01	0.10	—	0.10	0.10	—	0.10	—	1,641	1,641	0.15	< 0.005	—	1,646
Condo/Townhouse	0.04	0.63	0.27	< 0.005	0.05	—	0.05	0.05	—	0.05	—	795	795	0.07	< 0.005	—	797
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.8	65.8	0.01	< 0.005	—	66.0
Total	0.12	2.01	0.89	0.01	0.16	—	0.16	0.16	—	0.16	—	2,545	2,545	0.23	< 0.005	—	2,552
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.04	7.04	< 0.005	< 0.005	—	7.06
Single Family Housing	0.01	0.24	0.10	< 0.005	0.02	—	0.02	0.02	—	0.02	—	272	272	0.02	< 0.005	—	272
Condo/Townhouse	0.01	0.11	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01	—	132	132	0.01	< 0.005	—	132

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.9	10.9	< 0.005	< 0.005	—	10.9
Total	0.02	0.37	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	421	421	0.04	< 0.005	—	422

### 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	6.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.50	0.15	16.0	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.2	44.2	< 0.005	< 0.005	—	44.4
Total	8.11	0.15	16.0	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	44.2	44.2	< 0.005	< 0.005	—	44.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consum Products	6.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.61	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consum er Products	1.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	0.19	0.02	2.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.01	5.01	< 0.005	< 0.005	—	5.03
Total	1.39	0.02	2.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.01	5.01	< 0.005	< 0.005	—	5.03

### 4.3.2. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consum er Products	6.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	1.50	0.15	16.0	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.2	44.2	< 0.005	< 0.005	—	44.4
Total	8.11	0.15	16.0	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	44.2	44.2	< 0.005	< 0.005	—	44.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	6.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	6.61	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	1.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.19	0.02	2.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.01	5.01	< 0.005	< 0.005	—	5.03
Total	1.39	0.02	2.00	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.01	5.01	< 0.005	< 0.005	—	5.03

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.12	10.5	13.6	0.32	0.01	—	24.0
Single Family Housing	—	—	—	—	—	—	—	—	—	—	11.2	37.8	49.0	1.15	0.03	—	86.2
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	9.27	31.3	40.5	0.95	0.02	—	71.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.58	1.96	2.54	0.06	< 0.005	—	4.47
Total	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.12	10.5	13.6	0.32	0.01	—	24.0
Single Family Housing	—	—	—	—	—	—	—	—	—	—	11.2	37.8	49.0	1.15	0.03	—	86.2
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	9.27	31.3	40.5	0.95	0.02	—	71.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.58	1.96	2.54	0.06	< 0.005	—	4.47
Total	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.52	1.74	2.26	0.05	< 0.005	—	3.97
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1.86	6.26	8.12	0.19	< 0.005	—	14.3
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	1.54	5.17	6.71	0.16	< 0.005	—	11.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.10	0.32	0.42	0.01	< 0.005	—	0.74
Total	—	—	—	—	—	—	—	—	—	—	4.01	13.5	17.5	0.41	0.01	—	30.8

4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.12	10.5	13.6	0.32	0.01	—	24.0

Single Family Housing	—	—	—	—	—	—	—	—	—	—	11.2	37.8	49.0	1.15	0.03	—	86.2
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	9.27	31.3	40.5	0.95	0.02	—	71.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.58	1.96	2.54	0.06	< 0.005	—	4.47
Total	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	3.12	10.5	13.6	0.32	0.01	—	24.0
Single Family Housing	—	—	—	—	—	—	—	—	—	—	11.2	37.8	49.0	1.15	0.03	—	86.2
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	9.27	31.3	40.5	0.95	0.02	—	71.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.58	1.96	2.54	0.06	< 0.005	—	4.47
Total	—	—	—	—	—	—	—	—	—	—	24.2	81.5	106	2.49	0.06	—	186
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Strip Mall	—	—	—	—	—	—	—	—	—	—	0.52	1.74	2.26	0.05	< 0.005	—	3.97
Single Family Housing	—	—	—	—	—	—	—	—	—	—	1.86	6.26	8.12	0.19	< 0.005	—	14.3
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	1.54	5.17	6.71	0.16	< 0.005	—	11.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.10	0.32	0.42	0.01	< 0.005	—	0.74
Total	—	—	—	—	—	—	—	—	—	—	4.01	13.5	17.5	0.41	0.01	—	30.8

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.6
Single Family Housing	—	—	—	—	—	—	—	—	—	—	71.0	0.00	71.0	7.10	0.00	—	249
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	47.4	0.00	47.4	4.74	0.00	—	166

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.05	0.00	0.05	< 0.005	0.00	—	0.16
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	6.21	0.00	6.21	0.62	0.00	—	21.7
Total	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.6
Single Family Housing	—	—	—	—	—	—	—	—	—	—	71.0	0.00	71.0	7.10	0.00	—	249
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	47.4	0.00	47.4	4.74	0.00	—	166
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.05	0.00	0.05	< 0.005	0.00	—	0.16
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	6.21	0.00	6.21	0.62	0.00	—	21.7
Total	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.06	0.00	2.06	0.21	0.00	—	7.21
Single Family Housing	—	—	—	—	—	—	—	—	—	—	11.8	0.00	11.8	1.18	0.00	—	41.1

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	7.84	0.00	7.84	0.78	0.00	—	27.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.03
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	1.03	0.00	1.03	0.10	0.00	—	3.60
Total	—	—	—	—	—	—	—	—	—	—	22.7	0.00	22.7	2.27	0.00	—	79.4

#### 4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.6
Single Family Housing	—	—	—	—	—	—	—	—	—	—	71.0	0.00	71.0	7.10	0.00	—	249
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	47.4	0.00	47.4	4.74	0.00	—	166
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.05	0.00	0.05	< 0.005	0.00	—	0.16
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	6.21	0.00	6.21	0.62	0.00	—	21.7

Total	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	12.4	0.00	12.4	1.24	0.00	—	43.6
Single Family Housing	—	—	—	—	—	—	—	—	—	—	71.0	0.00	71.0	7.10	0.00	—	249
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	47.4	0.00	47.4	4.74	0.00	—	166
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.05	0.00	0.05	< 0.005	0.00	—	0.16
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	6.21	0.00	6.21	0.62	0.00	—	21.7
Total	—	—	—	—	—	—	—	—	—	—	137	0.00	137	13.7	0.00	—	480
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.06	0.00	2.06	0.21	0.00	—	7.21
Single Family Housing	—	—	—	—	—	—	—	—	—	—	11.8	0.00	11.8	1.18	0.00	—	41.1
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	7.84	0.00	7.84	0.78	0.00	—	27.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
City Park	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.03

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	1.03	0.00	1.03	0.10	0.00	—	3.60
Total	—	—	—	—	—	—	—	—	—	—	22.7	0.00	22.7	2.27	0.00	—	79.4

## 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.81	2.81
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.81	2.81
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.47	0.47
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.80	0.80

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.81	2.81
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.14	0.14
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.86	1.86
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.81	2.81
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.81	4.81
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.31	0.31
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.47	0.47
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.80	0.80

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

#### 4.7.2. Mitigated

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

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

#### 4.8. Stationary Emissions By Equipment Type

##### 4.8.1. Unmitigated

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

Equipment Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.8.2. Mitigated

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

Equipment Type	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	3/1/2025	3/28/2025	5.00	20.0	—
Grading	Grading	3/29/2025	5/30/2025	5.00	45.0	—
Building Construction	Building Construction	5/31/2025	4/30/2027	5.00	500	—
Paving	Paving	4/3/2027	4/30/2027	5.00	20.0	—
Architectural Coating	Architectural Coating	3/09/2027	4/30/2027	5.00	39.0	—

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

### 5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37

Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT

Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	145	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	32.1	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	29.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

### 5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT

Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	145	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	32.1	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	29.1	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	524,880	174,960	36,300	12,100	15,812

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	30.0	0.00	—
Grading	—	—	135	0.00	—
Paving	0.00	0.00	0.00	0.00	7.64

### 5.6.2. Construction Earthmoving Control Strategies

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

### 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Strip Mall	0.00	0%
Single Family Housing	1.59	0%
Condo/Townhouse	—	0%
Parking Lot	6.05	100%
City Park	0.00	0%
Fast Food Restaurant with Drive Thru	0.00	0%

### 5.8. Construction Electricity Consumption and Emissions Factors

#### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Strip Mall	1,128	1,128	1,128	411,698	6,880	6,880	6,880	2,511,358
Single Family Housing	1,358	1,358	1,358	495,693	13,897	13,897	13,897	5,072,529
Condo/Townhouse	814	814	814	297,095	7,838	7,838	7,838	2,860,732
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	747	747	747	272,655	4,557	4,557	4,557	1,663,196

### 5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Strip Mall	1,128	1,128	1,128	411,698	6,880	6,880	6,880	2,511,358
Single Family Housing	1,311	1,311	1,311	478,676	13,420	13,420	13,420	4,898,391
Condo/Townhouse	786	786	786	286,896	7,569	7,569	7,569	2,762,524
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fast Food Restaurant with Drive Thru	747	747	747	272,655	4,557	4,557	4,557	1,663,196

## 5.10. Operational Area Sources

### 5.10.1. Hearths

## 5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

## 5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0

Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	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)
524880	174,960	36,300	12,100	15,812

### 5.10.3. Landscape Equipment

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

### 5.10.4. Landscape Equipment - Mitigated

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

### 5.11. Operational Energy Consumption

#### 5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Strip Mall	218,588	346	0.0330	0.0040	132,657
Single Family Housing	1,344,851	346	0.0330	0.0040	5,121,261
Condo/Townhouse	872,168	346	0.0330	0.0040	2,481,231
Parking Lot	230,859	346	0.0330	0.0040	0.00
City Park	0.00	346	0.0330	0.0040	0.00
Fast Food Restaurant with Drive Thru	63,207	346	0.0330	0.0040	205,306

#### 5.11.2. Mitigated

#### 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)
Strip Mall	218,588	346	0.0330	0.0040	132,657
Single Family Housing	624,851	346	0.0330	0.0040	5,121,261
Condo/Townhouse	872,168	346	0.0330	0.0040	2,481,231
Parking Lot	230,859	346	0.0330	0.0040	0.00
City Park	0.00	346	0.0330	0.0040	0.00
Fast Food Restaurant with Drive Thru	63,207	346	0.0330	0.0040	205,306

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Strip Mall	1,629,595	0.00
Single Family Housing	5,857,024	0.00
Condo/Townhouse	4,840,179	0.00
Parking Lot	0.00	0.00
City Park	0.00	0.00
Fast Food Restaurant with Drive Thru	303,534	0.00

### 5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Strip Mall	1,629,595	0.00
Single Family Housing	5,857,024	0.00
Condo/Townhouse	4,840,179	0.00
Parking Lot	0.00	0.00
City Park	0.00	0.00
Fast Food Restaurant with Drive Thru	303,534	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Strip Mall	23.1	—
Single Family Housing	132	—
Condo/Townhouse	87.9	—

Parking Lot	0.00	—
City Park	0.09	—
Fast Food Restaurant with Drive Thru	11.5	—

### 5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Strip Mall	23.1	—
Single Family Housing	132	—
Condo/Townhouse	87.9	—
Parking Lot	0.00	—
City Park	0.09	—
Fast Food Restaurant with Drive Thru	11.5	—

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

## 5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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### 5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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## 5.16.2. Process Boilers

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