Air Quality & Greenhouse Gas Assessment

Renaissance Ranch Project

Riverside County, California

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/m3	Micrograms per cubic meter; ppm = parts per million
2016 AQMP	2016 Air Quality Management Plan
2020 RTP/SCS	2020 Regional Transportation Plan/ Sustainable Communities Strategy
AB	Assembly Bill
AERMOD	USEPA air toxic dispersion model
ATCM	Airborne toxics control measure
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CC&Rs	Covenants, Codes, and Restrictions
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane

LIST OF ACRONYMS AND ABBREVIATIONS

CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DOC	Department of Conservation
DPM	Diesel particulate matter
EMFAC	EMission FACtor model
EO	Executive Order
GHG	Greenhouse gas
HRA	Health risk assessment
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
LOS	Level of service
LSTs	Localized significance threshold
MATES IV	Multiple Air Toxics Exposure Study in the South Coast Air Basin
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NOP	Notice of Preparation
NOx	Nitric oxides
NSR	New Source Review
O_3	Ozone
OEHHA	California Office of Environmental Health Hazard Assessment's
OPR	Office of Planning and Research
PM_{10}	Coarse particulate matter
$PM_{2.5}$	Fine particulate matter
ppb	Parts per billion
ppm	Parts per million
Project	Renaissance Ranch Commerce Center Specific Plan
RCPG	Regional Comprehensive Plan and Guide
RECLAIM	Regional Clean Air Incentives Market
REL	Reference Exposure Level
Risk Reduction Plan	Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles
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
sf	Square-foot
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur dioxide
SoCAB	South Coast Air Basin
SOx	Sulfur oxides
SRA	Source receptor area
SSAB	Salton Sea Air Basin

LIST OF ACRONYMS AND ABBREVIATIONS

Strategy	Mobile Source Strategy
TACs	Toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile organic compounds

1.0 INTRODUCTION

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Renaissance Ranch Commerce Center Specific Plan Project (Project), which includes the development of a 157.1-acre site in the western portion of unincorporated Riverside County (County), 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 site is located in the western portion of unincorporated Riverside County, more specifically near the community of Lake Elsinore and adjacent to the Horsethief Canyon Ranch community. The Project site is a 157.1-acre property located east of Horsethief Canyon Road, south of Interstate 15 (I-15), north of Palomino Creek Drive, and north and west of Hostettler Road (see Figure 1. Project Location). Under existing conditions, the Project site is vacant and undeveloped but has been disturbed in the past by agricultural activities. The site is generally bound by medium-density residential uses and Luiseño Elementary School to the south; medium-density residential uses, Horsethief Canyon Park and the Horsethief Canyon Wastewater Treatment Plant to the west; rural residences, a small area of open space and I-15 to the north; and open space and an existing construction storage yard to the east.

The Project is proposing an amendment to the Renaissance Ranch Specific Plan, a General Plan Amendment and Change of Zone from Medium Density Residential to a combination of Busines Park, Light Industrial, Open Space-Conservation, Open Space- Conservation. Additionally, the Project is proposing offsite water improvements that would occur on Horsethief Canyon Road, between the northwest corner of the Project site and the existing point of connection located north of I-15. Table 1 provides a statistical summary for the various land uses proposed by the Project.

Table 1-1. Land Use Plan Statistical Summary				
Planning Area	**Land Use Designation**	**Acres**	**Maximum Building Square Footage (Square Foot (sf))**	**Anticipated Use Types and Building Area (SF)[1]**
1	Business Park (BP)	18.0	392,040	Warehousing: 156,816 Industrial Park: 235,224
2	Light Industrial (LI)	97.2	2,117,016	High-Cube Cold Storage: 423,403 High-Cube Fulfillment: 740,956 High-Cube Warehouse: 740,956 Manufacturing: 211,702
Development Subtotals:		**115.2**	**2,509,056**	**2,509,056**
3	Open Space – Conservation (OS-C)	6.1	--	Open Space
4	Open Space – Conservation (OS-C)	5.4	--	Open Space
Open Space – Conservation Subtotal:		**11.5**	**--**	**--**
5	Open Space – Conservation Habitat (OS-CH)	1.8	--	Open Space Habitat
6	Open Space – Conservation Habitat (OS-CH)	25.3	--	Open Space Habitat
Open Space – Conservation Habitat Subtotal:		**27.1**	**--**	**--**
--	Circulation	3.3	--	Major Circulation
Project Total:		**157.1**	**2,509,056**	**2,509,056**

Notes: [1]Totals reflect rounding

2.0 AIR QUALITY

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

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).

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.

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).

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).

Inversions

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 Riverside County (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_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) 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.

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Manmade Sources	Human Health & Welfare Effects
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_2	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_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N_2O) 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_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; 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_2	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)

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 (i.e., up to 600 feet or 185 meters) 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.

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_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x 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_x 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_x, such as NO and NO_2, attribute to the formation of O_3 and $PM_{2.5}$. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROG and NO_x 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. NOx 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_3 to form. Ground-level O_3 is the primary constituent of smog. Because O_3 formation occurs over extended periods of time, both O_3 and its precursors are transported by wind and high O_3 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_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

Particulate Matter

Particulate matter 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_{10}) and smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM_{10} 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_{10} generally settles out of the atmosphere rapidly and is not readily transported over large distances. $PM_{2.5}$ is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SOx) and VOCs. $PM_{2.5}$ 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 $PM_{2.5}$ and PM_{10} 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_{10} and $PM_{2.5}$. 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_{10} and

$PM_{2.5}$. 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. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. 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.

Diesel Exhaust

Most recently, CARB identified 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. The Lake Elsinore-W Flint Street (506 West Flint Street, Lake Elsinore) air quality monitoring station, located approximately 6.5 miles southeast of the Project area, is the closest station to the site. The Lake Elsinore-W Flint Street monitoring station monitors ambient concentrations of O_3, $PM_{2.5}$ and PM_{10}. NO_2 and CO concentrations are monitored at the air basin level. 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 development area.

Table 2-2 summarizes the published data concerning O_3, $PM_{10,}$ and $PM_{2.5}$ since 2017 from the Lake Elsinore-W Flint Street monitoring station for each year that the monitoring data is provided. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. Table 2-2 also summarizes the published data concerning NO_2 and CO.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2017	2018	2019
O_3			
Max 1-hour concentration (ppm)	0.121	0.116	0.108
Max 8-hour concentration (ppm) (state/federal)	0.098 / 0.098	0.096 / 0.095	0.089 / 0.089
Number of days above 1-hour standard (state/federal)	23 / 0	16 / 0	4 / 0
Number of days above 8-hour standard (state/federal)	56 / 54	31 / 30	31 / 28
NO_2			
Max 1-hour concentration (ppb) (state/federal)	65.0 / 65.1	55.0 / 55.4	56.0 / 56.0
Number of days above 1-hour standard (state/federal)	0 / 0	0 / 0	0 / 0
CO			
Max concentration (ppm) (state/federal)	3.58 / 3.58	4.67 / 4.67	3.96 / 3.96
Number of days above standard (state/federal)	0 / 0	0 / 0	0 / 0
PM_{10}			
Max 24-hour concentration (µg/m3) (state/federal)	* / 134.1	* / 105.3	* / 93.8
Number of days above 24-hour standard (state/federal)	* / 0	* / 0	* / *
$PM_{2.5}$			
Max 24-hour concentration (µg/m3) (state/federal)	27.2 / *	31.3 / *	17.6 / *
Number of days above federal 24-hour standard	*	*	*

Source: CARB 2020a
CO values are specific to the years 2010, 2011, and 2012, the latest available data for the South Coast Air Basin.
µg/m3 = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion
* = Insufficient 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_3, PM_{10}, $PM_{2.5}$,

and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ 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 SoCAB is included in Table 2-3.

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_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ (CARB 2019).

Table 2-3. Attainment Status of Criteria Pollutants in the Western Riverside County Portion of South Coast Air Basin

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: CARB 2019

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 Project is proposing onsite and offsite improvements. The nearest sensitive receptor to the Project site are rural residences located on Horsethief Canyon Road as well as residences located in the Horsethief Canyon Ranch Community located directly adjacent to the southern and western Project site boundary. The installation of the proposed offsite water line would occur directly adjacent to a rural residence located on Horsethief Canyon Road.

2.2 Regulatory Framework

2.2.1 Federal

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. On April 2, 2007, the Supreme Court found that carbon dioxide (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

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

California Clean Air Act

The California Clean Air Act (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 (CalEPA), 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.

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 2016 Air Quality Management Plan (2016 AQMP) is the SIP for the SoCAB. The 2016 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 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. The AQMP relies on a regional and multi-level partnership of governmental agencies at the federal, state, regional, and local levels. 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 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2016 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_3, $PM_{2.5}$ (1997 Standard), CO, and NO_2 in the SoCAB. This revision is identified as the "2007 South Coast SIP". The 2007 South Coast SIP demonstrates attainment of the federal $PM_{2.5}$ standard in the SoCAB by 2014 and attainment of the federal eight-hour O_3 standard by 2023. This SIP also includes a request to reclassify the O_3 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_3 standard in the SoCAB by June 2024. CARB approved $PM_{2.5}$ SIP revisions in April 2011 and the O_3 SIP revisions in July 2011. The USEPA approved the $PM_{2.5}$ SIP in 2013 and has approved 46 of the 61 1997 8-hour O_3 SIP requirements (USEPA 2018a). In 2014, the USEPA proposed a finding that the SoCAB has attained the 1997 $PM_{2.5}$ standards. In 2016, the USEPA determined that the SoCAB had attained the 1997 $PM_{2.5}$ 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 (USEPA 2018b).
- 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 $PM_{2.5}$ standard by 2014 and to update the USEPA-approved 8-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 8-hour O_3 (75 parts per billion [ppb]) by 2013
- 2012 Annual $PM_{2.5}$ (12 µg/m^3) by 2025
- 1997 8-hour O_3 (80 ppb) by 2023
- 1979 1-hour O_3 (120 ppb) by 2022
- 2006 24-hour $PM_{2.5}$ (35 µg/m^3) by 2019

- The 2020 AQMP is currently being drafted by the SCAQMD.

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.

Mobile Source Strategy

In 2016 CARB released the update to the Mobile Source Strategy (Strategy). This demonstrates how the state will meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next 15 years. This includes engine technology that is effectively 90 percent cleaner than today's current standards, with clean, renewable fuels comprising half the fuels burned.

The strategy also relies on the increased use of renewable fuels to ensure that air pollutant reductions are achieved while meeting the ongoing demand for liquid and gaseous fuels in applications where combustion technologies remain, including in heavy-duty trucks and equipment and light-duty hybrid vehicles. The estimated benefits of the Mobile Source Strategy in reducing emissions from mobile sources includes an 80 percent reduction of O_3-forming emissions (ROG and NO_x), and a 45 percent reduction in

DPM emissions in the SoCAB from current levels. Statewide, the Strategy would also result in a 45 percent reduction of GHG emissions and a 50 percent reduction in the consumption of petroleum-based fuels.

Governor's Sustainable Freight Action Plan

Under the Governor's Sustainable Freight Action Plan strategy, CARB is working with agency partners and stakeholders to implement a broad program that includes regulations, incentives, and policies designed to support the transformation to a more sustainable freight system and reduce community impacts from freight operations in California. The Governor's Sustainable Freight Action Plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California's environmental, energy, mobility, safety and economic needs. The plan also identifies and initiates corridor-level freight pilot projects within the state's primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities. The plan seeks to improve the state freight system efficiency 25 percent by "increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030" as well as to deploy over 100,000 zero-emission freight vehicles and equipment and maximizing near-zero equipment and equipment powered by renewable energy by 2030.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

In 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM and NO_X emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks had to be retrofitted with PM filters beginning January 1, 2012, and older trucks had to be replaced by January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010-model-year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of CARB's ATCM *to Limit Diesel-Fueled Commercial Motor Vehicle Idling* is to reduce public exposure to DPM and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.[1] The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the

[1] *The ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is codified in Title 13 of the* CCR*, Chapter 10, § 2485.*

vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, *Requirements to Reduce Idling Emissions from New and In-Use Trucks*, which began in 2008, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

2.2.3 Local

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 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} 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 work day 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.

Additionally, the SCAQMD has adopted the Air Toxics Control Plan (March 2000, revised March 26, 2004), which is a planning document designed to examine the overall direction of the SCAQMD's air toxics control program. It includes development and implementation of strategic initiatives to monitor and control air toxics emissions. Control strategies that are deemed viable and are within the SCAQMD's jurisdiction will each be brought to the SCAQMD Board for further consideration through the normal public review process. Strategies that are to be implemented by other agencies will be developed in a cooperative effort, and the progress will be reported back to the Board periodically.

The SCAQMD has conducted an in-depth analysis of the TACs and their resulting health risks for all of Southern California. This study, the Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES IV," shows that cancer risk has decreased more than 50 percent between MATES III (2008a) and MATES IV (2015). MATES IV is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the SoCAB emissions. The SCAQMD is currently in the process of developing MATES V. The MATES IV study represents the baseline health risk for a cumulative analysis. MATES IV estimates the average excess cancer risk level from exposure to TACs is less than 400 in one million basin-wide. These model estimates were based on monitoring data collected at 10 fixed sites within the SoCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES IV has extrapolated the excess cancer risk levels throughout the basin by modeling the specific grids. MATES IV modeling predicted an excess cancer risk of 427 in one million for the Project area. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68 percent of the total risk shown in MATES-IV.

County of Riverside General Plan Air Quality Element

The County General Plan Air Quality Element identifies goals, policies and programs that are meant to balance the County's actions regarding land use, circulation and other issues with their potential effects on air quality. The Air Quality Element addresses ambient air quality standards set forth by the USEPA and CARB. The Air Quality Element contains policies designed to establish a regional basis for improving air quality. The following relevant and applicable policies from the County's Air Quality Element have been identified for the Project:

AQ 1.1: Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.

AQ 1.4: Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.

AQ 2.1: The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.

AQ 2.2: Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

AQ 2.3: Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

AQ 3.1: Allow the market place, as much as possible, to determine the most economical approach to relieve congestion and cut emissions.

AQ 3.3: Encourage large employers and commercial/industrial complexes to create Transportation Management Associations.

AQ 4.1: Require the use of all feasible building materials/methods which reduce emissions.

AQ 4.2: Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

AQ 4.6: Require stationary air pollution sources to comply with applicable air district rules and control measures.

AQ 4.7: To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.

AQ 4.9: Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses

The logistics industry is a well-established sector of the Riverside County economy that has contributed to local job growth, fueled by societal growth trends in e-commerce and coupled with our strategic location along a major trade corridor that connects to the Ports of Los Angeles and Long Beach. It is expected that Riverside County will continue to see strong demand for growth in the logistics industry. However, it is also recognized that the construction and operations of logistics and warehouse projects in close proximity to residences or other sensitive land uses may negatively affect the quality of life of those existing communities. The County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses provides a framework through which large-scale logistics and warehouse projects, such as that proposed by the Project, can be designed and operated in a way that lessens their impact on surrounding communities and the environment. It is meant to apply Best Management Practices to help minimize potential impacts to sensitive receptors and is intended to be used in conjunction with the County's Land Use Ordinance, which provides development requirements for said projects, and the California Environmental Quality Act (CEQA). This policy provides a series of development and operational criteria applicable to logistics and warehouse projects that include any building larger than 250,000 square feet in size that are implemented to supplement project-level mitigation measures in order to further reduce impacts related to logistics and warehousing development and operations. The specific policy provisions germane to the Project include the following:

1.1 An "Air Quality" study shall be prepared in accordance with the Air Quality Management District (AQMD) guidelines.

1.2 A "Health Risk Assessment" shall be prepared when a proposed warehouse/distribution facility is located within 1,000 feet of a sensitive receptor, in accordance with AQMD guidelines.

2.1 During construction of the warehouse/distribution facility, all heavy-duty haul trucks accessing the site shall have CARB-approved 2010 engines or newer approved CARB engine standards.

2.2 All excavators, graders, rubber-tired dozers, and similar "off-road" construction equipment shall be CARB Tier 3 Certified engines or better.

2.3 The maximum daily disturbance area (actively graded area) shall not exceed 10 acres per day.

2.4 Construction contractors shall utilize construction equipment, with properly operating and maintained mufflers, consistent with manufacturers' standards.

2.6 The surrounding streets shall be swept on a regular basis to remove any construction related debris and dirt.

2.7 Appropriate dust control measures that meet the SCAQMD standards shall be implemented for grading and construction activity.

2.8 Construction equipment maintenance records and data sheets, which includes equipment design specifications and equipment emission control tier classifications, as well as any other

records necessary to verify compliance with items 2.1-2.7 above, shall be kept onsite and furnished to the County upon request.

2.9 Construction Contractors shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.

3.2 Warehouse/distribution facilities should be generally designed so that truck bays and loading docks are a minimum of 300 feet away from the property line of sensitive receptors, measured from the dock building door. This distance may be reduced if the site design includes berms or other similar features to appropriately shield and buffer the sensitive receptors from the active truck operations areas. Other setbacks appropriate to the site's zoning classification shall be incorporated in the design.

3.3 Warehouse/distribution facilities shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.

3.4 Driveways shall be placed, to the maximum extent practicable, on streets that do not have fronting sensitive receptors adjacent.

3.5 Sites shall clearly mark entry and exit points for trucks and service vehicles.

3.6 Sites shall be densely screened with landscaping along all bordering streets and adjacent sensitive receptors, with trees spaced at no less than 50 feet on center. Fifty percent of the landscape screening shall include a minimum of 36-inch box trees. Facility operators will be responsible to establish a long-term maintenance mechanism to assure that the landscaping remains in place and functional in accordance with the approved landscaping plan.

3.8 Dock doors shall be located where they are not readily visible from sensitive receptors or major roads. If it is necessary to site dock doors where they may be visible, a method to screen the dock doors shall be implemented. A combination of landscaping, berms, walls, and similar features shall be considered.

4.1 Facility operators shall maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty Trucks ("HHD") accessing the site use year CARB 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the County.

4.2 Facility operators shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.

4.3 Facility operators shall train their managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.

4.4 Facility operators shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.

5.1 Signs should be posted in the appropriate locations that trucks should not idle for more than five (5) minutes and that truck drivers should turn off their engines when not in use.

5.2 Signs should be posted in the appropriate locations that clearly show the designated entry and exit points for trucks and service vehicles.

5.3 Signs should be posted in the appropriate locations that state parking and maintenance of all trucks is to be conducted within designated areas and not within the surrounding community or on public streets.

5.4 Signs should be posted in the appropriate locations and/or handouts should be provided that show the locations of nearest food options, fueling, truck maintenance services, and other similar convenience services, if these services are not available onsite.

5.5 Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information should be provided to the County and updated annually, and signs should be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community.

6.3 Given the potential for community impacts related to the construction and operation of logistics and warehouse facilities, the applicant for any new facility may be required to provide a supplemental funding contribution, which would be applied to further off-set potential air quality impacts to the community and provide a community benefit above and beyond any CEQA related mitigation measures. Said financial contribution would generally be determined by the Transportation and Land Management Agency based on the level of NO_x emissions generated by the project that exceeds the regional NO_x significance thresholds established by the appropriate AQMD. Said supplemental funding contribution will be collected on a one-time basis. Funds collected under said supplemental funding program will be subject to designation for use by the Board of Supervisors and will generally be used for projects that directly benefit the impacted community wherein the project is located. The types of projects that the Board of Supervisors may designate for use of these funds include, but are not limited to:

- Projects that directly offset NO_x reductions above and beyond what is required by existing air quality regulations;
- Projects that generally improve air quality such as paving of dirt roads, installation of additional trees and landscaping;
- Projects that provide an enhanced buffer between the new facility and sensitive receptors; and

- Projects that lead to reduced emissions by promoting alternate forms of transportation such as bicycle lanes, new sidewalks, bus turnouts, or other transit-related uses.

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).

SCAQMD 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.

Table 2-4. SCAQMD Regional Significance Thresholds – Pounds per Day

Air Pollutant	Construction Activities	Operations
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 ($PM_{2.5}$ 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.

Localized Significance Thresholds

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ 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 for construction is applicable for all projects that disturb five acres or less on a single day. The Project site is located within SCAQMD SRA 25 (Lake Elsinore). Table 2-5 shows the LSTs for a one-acre, two-acre, and five-acre project site in SRA 25 with sensitive receptors located within 25 meters of the Project site.

Table 2-5. Local Significance Thresholds at or within 25 Meters of a Sensitive Receptor

Project Size	Pollutant (pounds per day Construction/Operations)			
	NO_2	CO	PM_{10}	$PM_{2.5}$
1 Acre	162 / 162	750 / 750	4 / 1	3 / 1
2 Acres	234 / 234	1,100 / 1,100	7 / 2	4 / 1
5 Acres	371 / 371	1,965 / 1,965	13 / 4	8 / 2

Source: SCAQMD 2009

Toxic Air Contaminant Thresholds

The SCAQMD regulates levels of air toxics through a permitting process that covers both construction and operation. The SCAQMD has adopted Rule 1401 for both new and modified sources that use materials classified as air toxics. The SCAQMD CEQA Guidelines for permit processing consider the following types of projects significant:

- Any project involving the emission of a carcinogenic or toxic air contaminant identified in SCAQMD Rule 1401 that exceeds the maximum individual cancer risk of 10 in one million if the project is constructed with best available control strategy for toxics (T-BACT) using the procedures in SCAQMD Rule 1401.

- Any project that could accidentally release an acutely hazardous material or routinely release a toxic air contaminant posing an acute health hazard above an acute or chronic hazard index of 1.0.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the County of Riverside General Plan and the SCAQMD. Onsite construction-related (including worker commutes and vendors), area source, and energy source emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2 for the proposed Project. 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. Operational mobile source emissions for the proposed Project are calculated with the 2017 version of the EMission FACtor model (EMFAC) developed by CARB. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to estimate changes in future emissions from on-road mobile sources. The most recent USEPA approved version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled by speed, and number of starts per day. The most important improvement in EMFAC 2017 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment. The EMFAC 2021 model is available though has not yet been approved by the USEPA.

Construction-generated air pollutant emissions for the proposed Project, including proposed offsite improvements of the water line, were primarily calculated using CalEEMod model defaults for Riverside County. The Project is required to implement SCAQMD Rule 403. As previously stated, Rule 403 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. SCAQMD-identified best available control measures that are able to be applied in CalEEMod include sweeping/cleaning adjacent roadway access areas daily, washing equipment tires before leaving the construction site, water exposed surfaces three times daily, and limiting speeds on unpaved roads to 15 miles per hour (mph). Since CalEEMod does not differentiate between required best available control measures and mitigation measures, these applied Rule 403 activities are incorporated into the CalEEMod mitigation module. Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from Urban Crossroads (2020).

Additionally, DPM concentrations and associated dispersion generated from both off-road equipment and construction haul trucks as well as heavy-duty trucks for Project operations were modeled using the HARP2 modeling program provided by CARB, with regulatory default settings, to perform the dispersion and health risk modeling for this analysis. HARP2 implements the latest regulatory guidance to develop inputs to the U.S. EPA AERMOD dispersion model for dispersion and as the inputs for calculations for the various health risk levels. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both

surface and elevated sources, and both simple and complex terrain. The resultant concentration values at vicinity sensitive receptors were then used to calculate chronic and carcinogenic health risk using the standardized equations contained in the OEHHA Guidance Manual for Preparation of Health Risk Assessments (2015).

2.3.3 Impact Analysis

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. Four 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, the use of asphalt or other oil-based substances during paving activities, and the application of paint. 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.

As previously described, the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses contains several policy provisions that address air pollutant generated during construction of warehouse/distribution projects proposing building space larger than 250,000 square feet in size. These provisions would apply to the construction of the Project (also see Mitigation Measure AQ-1 below). For instance, Provision 2.1 states that during construction of the warehouse/distribution facility, all heavy-duty haul trucks accessing the site shall have CARB-approved 2010 engines or newer approved CARB engine standards. Therefore Provision 2.1 would substantially reduce emissions compared with a typical construction project. Provision 2.2 requires that all excavators, graders, rubber-tired dozers, and similar "off-road" construction equipment shall be CARB Tier 3 Certified engines or better, and Provision 2.3 mandates that the maximum daily disturbance area (actively graded area) shall not exceed 10 acres per day. Provision 2.6 of the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses requires surrounding streets be swept on a regular basis to remove any construction related debris and dirt, and 2.7 further requires dust control measures that meet the SCAQMD standards be implemented for grading and construction activity. Construction equipment maintenance records and data sheets, which includes equipment design specifications and equipment emission control tier classifications, as well as any other records necessary to verify compliance with Provisions 2.1-2.7 above, shall be kept onsite and furnished to the County upon request per Provision 2.8. Also, Provision 2.9 states that construction contractors prohibit truck drivers from idling more than five minutes and require operators to turn off engines when not in use, in compliance with CARB regulations. Lastly, Provision 5.5 institutes that each proposed facility designate a Compliance Officer responsible for implementing the measures described herein and/or in the Project conditions of approval and mitigation measures. Contact information must be provided to the County and

updated annually, and signs should be posted in visible locations providing the contact information of the Compliance Officer to the surrounding community.

Per Provision 2.7, 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. As required by Provision 2.2, all off-road construction equipment shall be CARB Tier 3 Certified engines or better. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, WisCon, and Yanmar). On August 27, 1998, the EPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. The Tier 3 standards can reduce NO_x and PM emissions by as much as 64 and 39 percent, respectively. By requiring the use of Tier 3 construction equipment used during construction would substantially reduce temporary NO_x and PM emissions impacts generated during Project construction.

Construction-generated emissions associated with 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. The duration of construction has been adjusted to reflect a start date in the summer of 2021 and an anticipated opening year in the year 2025. The CalEEMod model defaults for the number of construction equipment employed was doubled for all construction phases with accelerated timelines. Construction–generated emissions were calculated to account for the construction of the entire Specific Plan simultaneously in order to identify the worst-case construction emissions potential. However, the actual construction of the Project site would be dependent on several factors, including timing of Project approvals, market conditions, and/or Project funding. As such, this analysis accounts for minor modifications as Project plans evolve from conceptual planning to final mapping. If construction starts at a later date, it can be expected that Project emissions would be reduced because CalEEMod incorporates lower emission factors associated with construction equipment in future years due to improved emissions controls and fleet modernization through turnover. 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.

Table 2-6. Construction-Related Emissions (Regional Significance Analysis)

Construction Year	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction in 2021 (including offsite construction)	9.83	88.93	53.01	0.08	19.22	12.03
Construction in 2022	43.21	*105.33*	128.18	0.40	17.81	10.80
Construction in 2023	42.07	89.21	122.78	0.39	16.76	6.47
Construction in 2024	41.36	85.32	119.32	0.38	16.48	6.21
Construction in 2025	40.62	80.69	115.41	0.38	16.19	5.93
SCAQMD Regional Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment A for Model Data Outputs.
Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Building construction, paving, and painting are assumed to occur simultaneously. Construction emissions taken from the season (summer or winter) with the highest output.

As shown in Table 2-6, emissions of the O_3 precursor, NO_x, on the peak day(s) of construction in 2022 would exceed the SCAQMD significance thresholds of 100 pounds per day. Therefore, Mitigation Measure AQ-1 is required in order to reduce NO_x emissions to levels below the significance threshold. Mitigation Measure AQ-1 would mandate the use of Tier 4 Certified engines for any cranes used during Project construction. Furthermore, Mitigation Measure AQ-1 provides measures to ensure County Good Neighbor Policy provisions are required throughout all future construction of the Specific Plan.

The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2, Tier 3, and Tier 4 standards for all equipment with phase-in schedules from 2000 to 2015. As a result, all off-road, diesel-fueled construction equipment manufactured from 2006 to 2015 has been manufactured to Tier 3 standards. The Tier 3 standards can reduce NO_x emissions by as much as 64 percent and PM emissions by as much as 39 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which are currently phased-in over the period of 2008-2015. The Tier 4 standards require that NO_x emissions be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later have been manufactured to Tier 4 standards.

Recommended Mitigation Measure

AQ-1: Prior to the certificate of construction-related permits for each future Project in the Specific Plan, the Project Applicant shall demonstrate to the satisfaction of the County of Riverside Planning Department that the following measures would be implemented during Project construction.

- Any crane used in Project construction shall be California Air Resources Board (CARB) Tier 4 Certified, as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.
- All future construction projects in the Specific Plan shall adhere to the germane policy provisions in the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses, whether said project proposes buildings of 250,000 square feet or not. Germane provisions included, but are not limited to, the following:
    1. During construction of any Specific Plan facility, all heavy-duty haul trucks accessing the site shall have CARB-approved 2010 engines or newer approved CARB engine standards.
    2. All excavators, graders, rubber-tired dozers, and similar "off-road" construction equipment shall be CARB Tier 3 Certified engines or better.
    3. The maximum daily disturbance area (actively graded area) shall not exceed 10 acres per day.
    4. Construction contractors shall utilize construction equipment, with properly operating and maintained mufflers, consistent with manufacturers' standards.
    5. The surrounding streets shall be swept on a regular basis to remove any construction related debris and dirt.
    6. Appropriate dust control measures that meet the SCAQMD standards shall be implemented for grading and construction activity.
    7. Construction equipment maintenance records and data sheets, which includes equipment design specifications and equipment emission control tier classifications, as well as any other records necessary to verify compliance with items 1 - 6 above, shall be kept onsite and furnished to the County upon request.
    8. Construction Contractors shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.

Table 2-7 shows the results of localized emissions during Project site preparation with implementation of Mitigation Measure AQ-1.

Table 2-7. Mitigated Project Construction-Generated Emissions

Construction Year	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction in 2021 (including offsite construction)	9.83	88.93	53.01	0.08	`9.22	12.03
Construction in 2022	42.68	98.55	129.42	0.40	17.81	10.80
Construction in 2023	41.58	83.07	115.35	0.39	16.50	6.23
Construction in 2024	40.90	79.37	120.76	0.38	16.24	5.99
Construction in 2025	40.20	75.68	116.92	0.38	15.97	5.73
SCAQMD Regional Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment A for Model Data Outputs.
Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Building construction, paving, and painting are assumed to occur simultaneously. Construction emissions taken from the season (summer or winter) with the highest output.

As shown in Table 2-7, adherence to Mitigation Measure AQ-1 would ensure that development allowed for the proposed Project would be constructed in a manner that daily pollutants would be generated at levels below SCAQMD significance thresholds. With implementation of Mitigation Measure AQ-1, criteria pollutant emissions generated during construction of the proposed Project 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. Further, since the Project's emissions do not exceed SCAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no regional health effects from Project criteria pollutants would occur.

Localized Construction Significance Analysis

As previously described, in addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (offsite mobile source emissions are not included in the LST analysis protocol). 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.* LST analysis for construction is applicable for all projects that disturb five acres or less on a single day. However, the Specific Plan spans an area of approximately 157.1 acres and therefore it is likely that construction onsite would disturb more than five acres in a single day (Mitigation Measure AQ-1 requires that the maximum daily disturbance area [actively graded area] shall not exceed 10 acres per day). Nonetheless, applying the one-acre, two-acre, and five-acre LST thresholds to projects disturbing greater acreage is conservative. For

instance, the five-acre LST thresholds were developed in part based on the dispersion of pollutants over a five-acre construction area before exposing sensitive receptors. Thus, applying the five-acre LST thresholds to a project that could disturb 10 acres daily does not consider the pollutant-dispersing effect of the dispersion of pollutants over a 10-acre site before exposing receptors, and is therefore a lower threshold than one calculated specific to 10 acres. Therefore, while the proposed Project could potentially disturb 10 acres on a single day, the LST threshold value for a five-acre site was employed from the LST lookup tables. This is conservative since the analysis will only consider for the dispersion of air pollutants over five acres before reaching sensitive receptors, as opposed to accounting for the dispersion of air pollutants over a greater 10-acre area.

LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 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.* The nearest sensitive receptor to the site are rural residences located on Horsethief Canyon Road as well as residences located in the Horsethief Canyon Ranch Community located directly adjacent to the southern and western Project site boundary. On and offsite construction would be located closest to the rural residences located on Horsethief Canyon Road approximately 25 feet distant (7.62 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.

As previously stated, the SCAQMD developed LSTs for emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$. A construction HRA has been prepared to evaluate potential health risks associated with the emission of DPM, which includes PM_{10} and $PM_{2.5}$, resulting from the construction activities necessary to build the Project (see Attachment B). The results of this HRA are discussed below. Therefore, Table 2-8 presents the results of localized NO_x and CO emissions for on and offsite construction associated with the proposed Project.

Table 2-8. Construction-Related Emissions (Localized Significance Analysis)		
Construction Activity	**Pollutant (pounds per day)**	
	NO_X	**CO**
Site Preparation 2021 (onsite and offsite water line)	88.81	46.32
Building Construction 2021 (instillation of water line)	7.59	9.62
Paving & Architectural Coating 2021(water line)	7.40	8.20
Site Preparation 2022	66.16	39.39
Grading 2022	77.68	58.08
Building Construction, Paving & Architectural 2022	49.49	66.74
Building Construction, Paving & Architectural 2023	45.61	66.60
Building Construction, Paving & Architectural 2024	42.76	66.64
Building Construction, Paving & Architectural 2025	39.38	66.43
SCAQMD Localized Significance Threshold	*371*	*1,965*
Exceed SCAQMD Localized Threshold?	**No**	**No**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment A for Model Data Outputs.
Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Building construction, paving, and painting are assumed to occur simultaneously.

Table 2-8 shows that the estimated emissions on the peak day of construction for the proposed Project would not surpass NO_x or CO LST thresholds with adherence to Mitigation Measure AQ-1, which among other measures requires the use of Tier 4 Certified cranes to be used in Project construction. Therefore, significant impacts would not occur concerning NO_x or CO LSTs during construction activities.

Project Operations Criteria Air Quality Emissions

Regional Operational Significance Analysis

Implementation of the proposed Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as ozone precursors such as ROG and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use.

As previously described, the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses contains several policy provisions that address air pollutant generated during construction of warehouse/distribution projects proposing building space larger than 250,000 square feet in size. These provisions would apply to the operations of the Project (also see Mitigation

Measure AQ-2 below). For instance, Provision 3.3 states that warehouse/distribution facilities must be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. Such a measure prevents general queuing and spill-over of trucks onto surrounding public streets. This policy provision prohibits commercial trucks from parking in the public road right-of-way or nearby residential areas. Provision 4.1 requires facility operators to maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks and Heavy-Heavy Duty Trucks accessing the site use year CARB 2010 or newer engines. Thus, older model year trucks, which are less efficient and produce greater air pollutant emissions, would be prohibited from visiting the site.

As previously described, operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from Urban Crossroads (2020). Consistent with SCAQMD recommendations, in order to more accurately account for the trip distribution patterns of freight trucks, the average trip length is calculated at 63.7 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

Long-term operational emissions attributable to the proposed Project are identified in Table 2-9 and compared to the regional operational significance thresholds promulgated by the SCAQMD.

Table 2-9. Operational-Related Emissions (Regional Significance Analysis)

Emission Source	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	56.35	0.00	0.25	0.00	0.00	0.00
Energy	1.64	14.90	12.52	0.08	1.13	1.13
Mobile						
Passenger Vehicles	*5.28*	*21.08*	*196.98*	*0.73*	*0.41*	*0.39*
Heavy-Duty Trucks	*3.34*	*293.04*	*40.29*	*1.84*	*3.95*	*3.78*
Mobile Source Total	8.62	314.12	237.27	2.57	4.36	4.17
Total:	**66.61**	**329.02**	**250.04**	**2.65**	**5.49**	**5.3**
SCAQMD Regional Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for a trip generation rate and fleet mix identified by Urban Crossroads (2020). Specifically, Urban Crossroads estimates the generation of 5,422 average vehicle trips daily, 1,044 of which would be heavy-duty trucks. Heavy-duty trucks are a weighted average of Medium-heavy duty trucks and Heavy-heavy duty trucks as identified by the Project Traffic Assessment. The average trip length is calculated at 63.7 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles. Operational emissions taken from the season (summer or winter) with the highest output.

As shown in Table 2-9, the emissions associated with operations would exceed the SCAQMD significance threshold for ROG and NO_x. As previously described, ROG and NO_x are precursors of O_3, a pollutant for which the SoCAB is classified as nonattainment.

O_3 is produced when ROG and NO_x undergo photochemical reactions that occur only in the presence of sunlight. O_3 is a very difficult pollutant to regulate due to the time it takes to create and the fact that it can be transported away from its source by wind and meteorological air patterns. People with lung disease, children, older adults, and people who are active can be affected when O_3 levels exceed ambient air quality standards. Numerous scientific studies have linked ground level O_3 exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses. O_3 and NO_x have been decreasing in California since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled across the state continue to increase, NO_x levels are decreasing due to the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions form electric utilities have also decreased due to the use of cleaner fuels and renewable energy.

SCAQMD's 2016 AQMP, previously described, identifies robust NO_X reductions from new regulations on Regional Clean Air Incentives Market (RECLAIM) facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_X emissions levels achievable, yet there are opportunities to require and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The SCAQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies. The 2016 AQMP also emphasizes that beginning in 2012, continued implementation of previously adopted regulations have been leading to NO_X emission reductions of 68 percent by 2023 and 80 percent by 2031. With the addition of 2016 AQMP regulatory measures, a 30 percent reduction of NO_X from stationary sources is expected in the 15-year period between 2008 and 2023. This is in addition to significant NO_X reductions from stationary sources achieved in the decades prior to 2008.

NO_x and ROG produced as a result of incomplete fossil fuel combustion. The majority of these emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the County of Riverside. CARB is primarily responsible for controlling pollution from motor vehicles. The air district must adopt rules to achieve and maintain the CAAQS and NAAQS within their jurisdiction. 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. However, this Project is proposing a large amount industrial warehousing, and the reduction of vehicle trips is only feasible for the employees working in the Specific Plan, though the majority of emissions would be a result heavy-duty trucks related to transporting freight.

As described in the Regulatory Framework discussion above, the State of California has implemented numerous strategies pertaining to trucks and the reduction of emissions that directly apply to the Project. Urban goods delivery is an essential component of the greater freight system and vital to the urban

economy. While urban goods delivery represents a small share of urban traffic, it generates a disproportionate amount of pollution emissions. The State of California promulgates policies designed and implemented to improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles—a strategy embedded in the Governor's Sustainable Freight Action Plan as well as CARB's AB 32 Scoping Plan, SIP, and Mobile Source Strategy.

Project development would be required to be consistent with the applicable air quality-related policy provisions contained in the County General Plan Air Quality Element. For instance, development of the proposed Project would occur in a manner that protects people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources (Policy AQ 2.2), and would implement pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution (Policy 2.3). Consistent with General Plan Policy AQ 4.9, 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. All development in the County, including the Project, is required to adhere to all County-adopted policy provisions, including those contained in the adopted Air Quality Element. The County ensures all provisions of the General Plan are incorporated into projects and their permits through development review and applications of conditions of approval as applicable.

Nonetheless, operational emissions would exceed SCAQMD thresholds. Thus, Mitigation Measure AQ-2 is recommended.

Recommended Mitigation Measure

AQ-2: Prior to the certificate of occupancy issuance for the Project, the Project Applicant shall demonstrate to the satisfaction of the County of Riverside Planning Department that the following measures would be implemented during Project operations.

- All future cold storage warehousing shall be equipped with electrical hookups to eliminate idling of main and auxiliary engines during the loading and unloading process and provide for transport refrigeration units, auxiliary power units and other trucks requiring electrical power. Tenants shall require the use of electrical hookups for all transport refrigeration units, auxiliary power units and other trucks requiring electrical power.

- To facilitate the possible future installation of infrastructure that would charge the batteries that power the motors of electric-powered trucks, the following shall be installed. 1) At shell building permit, an electrical room(s) and/or exterior area(s) of the site shall be designated where future electrical panels would be located for the purpose of supplying power to on-site charging facilities for electric powered trucks. Conduit shall be installed from this designated area where the panel would be located to the on-site location where the charging facilities would be located and where electric-powered trucks would park and connect to charging facilities to charge the batteries that power

the motors of the electric-powered trucks. 2) At issuance of a building permit for Tenant Improvements, if the tenant is served by electric trucks, the electrical panel and charging units shall be installed, and the electrical wiring connections shall be made from the electrical panel to the charging units. If the tenant is not served by electric trucks, this requirement shall not apply.

- Install passenger car EV charging stations and designated carpool parking stalls per the provisions of the California Green Building Standards Code and require that each building be constructed with an adequately sized electrical panel(s) and conduit to accommodate future EV charging stations at a minimum of 5 percent of the passenger car parking spaces.

- As a condition of certificates of occupancy, all on-site outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) shall be required to be powered by electricity, compressed natural gas, propane, or diesel-fueled engines that comply with the CARB/USEPA Tier 4 Engine standards for off-road vehicles or better (defined as emitting less than or equal to 0.015 grams per brake horsepower-hour [g/bhp-hr] for PM_{10}) and all indoor cargo handling equipment shall be required to be powered by electricity, compressed natural gas, or propane. Use of indoor diesel-fueled equipment shall be prohibited. Developer and all successors also shall include these obligations in all building leases. The building owner and occupant shall allow periodic inspection of the site by the County of Riverside or its designee to confirm compliance. Electrical panels should be appropriately sized to allow for future expanded use.

- In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants with information related to SCAQMD's Carl Moyer Program, or other such programs that promote truck retrofits or "clean" vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. Tenants shall be notified about the availability of: 1) alternatively fueled cargo handling equipment; 2) grant programs for diesel-fueled vehicle engine retrofit and/or replacement; 3) designated truck parking locations in the project vicinity; 4) access to alternative fueling stations proximate to the site that supply compressed natural gas; and 5) the United States Environmental Protection Agency's SmartWay program.

- All future operations in the Specific Plan shall adhere to the germane policy provisions in the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses. In addition, buildings smaller than 250,000 square feet shall comply with applicable policy provisions of the Good Neighbor Policy except as indicated below. Applicable feasible provisions of the Good Neighbor Policy that would

serve to measurably reduce Project-related operational emissions include, but are not limited to, the following:

1. Warehouse/distribution facilities greater than 250,000 square feet shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.

2. Facility operators shall maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty Trucks ("HHD") accessing the site use year CARB 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the County.

3. Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations.

4. Facility operators shall train their managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.

5. Signs should be posted in the appropriate locations and/or handouts should be provided that show the locations of nearest food options, fueling, truck maintenance services, and other similar convenience services.

6. Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information shall be provided to the County and updated annually, and signs shall be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community.

7. The future applicants for any new facility larger than 250,000 square feet in the Specific Plan will be required to enter into agreement with the County of Riverside to provide a supplemental funding contribution, which would be applied to further off-set potential air quality impacts to the community and provide a community benefit. Said financial contribution will be determined by the Transportation and Land Management Agency based on the level of NO_x emissions estimated to generated. Said supplemental funding contribution will be collected on a one-time basis. Funds collected under said supplemental funding program will be subject to designation for use by the Board of Supervisors and will generally be used for projects that directly benefit the impacted community wherein the project is located. The types of projects

that the Board of Supervisors may designate for use of these funds include, but are not limited to (1) projects that directly offset NO_x reductions above and beyond what is required by existing air quality regulations, (2) projects that generally improve air quality such as paving of dirt roads, installation of additional trees and landscaping, (3) projects that provide an enhanced buffer between the new facility and sensitive receptors, and (4) Projects that lead to reduced emissions by promoting alternate forms of transportation such as bicycle lanes, new sidewalks, bus turnouts, or other transit-related uses.

While these measures would reduce air pollutant emissions attributable to the Project, the exact reduction amount cannot be quantified for most. For some measures it would be overly speculative to quantify resulting emissions reductions. For instance, while the Project would install passenger car EV charging stations it cannot be determined how many zero emission vehicles would replace gasoline-fueled vehicles as a result. Additionally, in order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest at the Project must provide building occupants with information related to SCAQMD's Carl Moyer Program, or other such programs that promote truck retrofits or "clean" vehicles. Yet it cannot be reasonably predicted how many clean trucks would replace diesel-fueled trucks as a result. With other measures the reduction values cannot be quantified due to limitation in the modeling software, such as the requirement that all future cold storage warehousing be equipped with electrical hookups to eliminate idling of main and auxiliary engines during the loading and unloading process. The requirement that Facility operators must maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty Trucks ("HHD") accessing the site use year CARB 2010 or newer engines can be quantified and has been accounted for in Table 2-9 since the requirement is also mandated by Provision 4.1 of the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses.

Despite these efforts set forth above, including the recommendations contained in Mitigation Measure AQ-2, Project-instigated heavy-duty truck travel would result in SCAQMD daily significance thresholds to be exceeded, which equates to a cumulatively considerable net increase of ROG and NO_x (O_3 precursors) for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. While California state strategies such as the Governor's Sustainable Freight Action Plan, CARB's AB 32 Scoping Plan, and the Mobile Source Strategy will improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles, it is not currently feasible to reduce projected Project emissions to levels below the regional significance thresholds. It is noted that Mitigation Measure AQ-2 requires that the future applicants for any new facility in the Specific Plan be required to enter into agreement with the County of Riverside to provide a supplemental funding contribution, which would be applied to further off-set potential air quality impacts to the community and provide a community benefit. These funds collected under said supplemental funding program will be subject to designation for use by the Board of Supervisors and will generally be used for projects that directly benefit the impacted community wherein the project is located. The types of projects that the Board of Supervisors may designate for use of these funds include, but are not limited to (1) projects that directly offset NO_x reductions above and beyond what is required by existing air quality regulations, (2) projects that generally improve air quality such as paving of dirt roads, installation

of additional trees and landscaping, (3) projects that provide an enhanced buffer between the new facility and sensitive receptors, and (4) Projects that lead to reduced emissions by promoting alternate forms of transportation such as bicycle lanes, new sidewalks, bus turnouts, or other transit-related uses.

The SCAQMD has set its CEQA significance thresholds for ROG and NO_X at 10 tons per year (expressed as 55 pounds per day) based on the federal CAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the SoCAB) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program[2] was created by the federal CAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based NAAQS. The NAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

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

Table 2-9 show that a large proportion of ROG and NO_X emissions are from mobile sources. Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. CARB (a branch of the CalEPA) is primarily responsible for controlling pollution from motor vehicles. The air districts must adopt rules to achieve and maintain the CAAQS and NAAQS within their jurisdictions.

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (Sierra Club v. County of Fresno [Friant Ranch, L.P.] [2018] 6 Cal.5th 502, Case No. S219783). As noted above and shown in Table 2-9, the Project's operational emissions would exceed the SCAQMD's ROG and NO_X significance thresholds, resulting in an impact since the SoCAB is classified nonattainment of O_3. Pursuant to Rule 8.520(f) of the Rules of the California Court, the SCAQMD and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed amicus curiae briefs in regard to this case. In both briefs, SCAQMD and SJVAPCD provided technical explanations as to why it

[2] Code of Federal Regulation (CFR) *[i.e., PSD (40 CFR 52.21, 40* CFR *51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)*

may not be feasible for a project to relate the expected adverse air quality impacts to likely health consequences. As summarized below, for the reasons set forth by the SCAQMD and SJVAPCD, the Proposed Project's significant air quality impacts currently cannot feasibly be related to likely health consequences. The technical demands for feasibly and accurately relating the adverse air quality impacts to likely health consequences are too high for this proposed Project at this time. The technical challenges are listed below, with the SCAQMD and SJVAPCD amicus briefs providing support on the findings for the Proposed Project:

- O_3 is not formed at the location of sources/emissions, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

"For the so-called criteria pollutants, such as O_3, it may be more difficult to quantify health impacts. O_3 is formed in the atmosphere from the chemical reaction of NO_x and VOC in the presence of sunlight. It takes time and the influence of meteorological conditions for these reactions to occur, so O_3 may be formed at a distance downwind from the sources." [SCAQMD p.11]

- O_3 and secondary PM formation is complex, which necessitates the use of more sophisticated modeling that is not reasonably feasible for the Project at this time. The Proposed Project, while much smaller in scale to the Friant Ranch project, similarly includes area wide sources and mobile sources.

"Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of O_3 or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single 'point source,' but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site." [SJVAPCD p.9]

- The quantity of precursor emissions is not proportional to local O_3 and secondary PM concentration, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

"Ground level O_3 (smog) is not directly emitted into the air but is formed when precursor pollutants such as NO_x and VOCs [ROG] are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight. Once formed, O_3 can be transported long distances by wind. Because of the complexity of O_3 formation, a specific tonnage amount of NO_x or VOCs [ROG] emitted in a particular area does not equate to a particular concentration of O_3 in that area." [SJVAPCD p.4]

"Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x. Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area." [SJVAPCD p.5]

- Emissions do not cause health effects – it is the resulting concentration of criteria pollutants, which is influenced by sunlight, complex reactions, and transport, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

"The disconnect between the tonnage of precursor pollutants (NO_x, SO_x and VOCs [ROG]) and the concentration of O_3 or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting O_3 or PM." [SJVAPCD p.5]

- Currently available modeling tools are appropriate for regional evaluations, but not individual projects like the Proposed Project.

"For instance, the computer models used to simulate and predict an attainment date for the O_3 or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SOx and VOCs [ROG]) and the atmospheric chemistry and meteorology of the Valley… the models simulate future O_3 or PM levels based on predicted changes in precursor emissions Valley wide… The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment." [SJVAPCD p.6-7]

"Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."" [SJVAPCD p.8]

"...the currently available modeling tools are equipped to model the impact of all emission sources in the Valley on attainment... Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC [ROG] in the Valley) is not likely to yield valid information given the relative scale involved." [SJVAPCD p.9-10]

- The SJVAPCD indicates that it is currently impossible to accurately correlate project level emissions to specific health impacts.

"Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like O_3 and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level." [SJVAPCD p.10]

- SCAQMD highlights that CARB indicated that a CARB methodology of analysis for $PM_{2.5}$ health impacts is not suited for small projects.

Also, CARB has developed a methodology that can predict expected mortality (premature deaths) from large amounts of $PM_{2.5}$... SCAQMD used the CARB methodology to predict impacts from

three very large power plants (e.g., 731-1,837 pounds/day) Again, this project involved large amounts of additional $PM_{2.5}$ in the District, up to 2.82 tons/day (5,650 pounds/day of $PM_{2.5}$, or 1,029 tons/year… However, the primary author of the CARB methodology has reported that this $PM_{2.5}$ health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties." "Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts." [SCAQMD p.14]

- SCAQMD indicates that the CARB $PM_{2.5}$ methodology would provide unreliable findings for a small project with a small population and that a lead agency should be able to decide if and when it may be appropriate.

"Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small $PM_{2.5}$ increases (3.8 pounds/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated $PM_{2.5}$ emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so... SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information" [SCAQMD p.15]

"This CEQA document was not challenged in court." [SCAQMD p.15]

- The development of new technical approaches in the future may change the feasibility determination.

"Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths." [SCAQMD p.16]

For the reasons set forth above, it is not currently feasible to relate the proposed Project's regional ROG and NO_x impacts to likely health consequences. The SCAQMD is responsible for assessing air pollutant impacts regionally, and the potential health consequences from those on a regional basis. The current evaluation on the limitations and uncertainties of existing tools is consistent with SCAQMD findings. Currently available regional modeling tools are not designed to capture changes in pollutant concentrations for this proposed Project that would be meaningful. This is due in part to a relatively course spatial resolution (e.g., greater than 4 x 4 kilometers) which makes it speculative to discern regional Project impacts on air quality.

Localized Operational Significance Analysis

As previously described, in addition to regional significance thresholds, the SCAQMD developed LSTs for emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (offsite mobile source emissions are not included in the LST analysis protocol). According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Project is proposing business park and industrial land

uses that would accommodate warehouse activity. Therefore, the operational phase LST protocol is applied.

The nearest sensitive receptors to the site are rural residences located on Horsethief Canyon Road approximately 25 feet distant (7.62 meters). The SCAQMD Methodology 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.

As described, the SCAQMD has produced lookup tables for projects that disturb one, two and five acres. While the site is 157.1 acres, the LST threshold value for a five-acre site was employed from the LST lookup tables. This is conservative since the analysis will only account for the dispersion of air pollutants over five acres before reaching sensitive receptors, as opposed to accounting for the dispersion of air pollutants over a greater 157.1-acre area. For a worst-case scenario assessment, the emissions shown in Table 2-10 include all "onsite" Project-related stationary (area) sources and 10 percent of the Project-related mobile sources. Considering that the longest weighted trip length used for calculating mobile emissions is approximately 63.7 miles for heavy duty trucks and 16.6 miles for passenger vehicles, 10 percent of this total would represent an onsite travel distance for each truck of approximately 6.4 miles and 1.7 miles for each passenger vehicle; thus, the 10 percent assumption is conservative and would tend to overstate the actual impact.

Operational LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. An operational HRA has been prepared to evaluate potential health risks associated with the emission of DPM, which includes PM_{10} and $PM_{2.5}$, resulting heavy-duty trucks (see Attachment B). The results of this HRA are discussed below. Therefore, Table 2-10 presents the results of localized NO_x and CO emissions associated with the Project.

Table 2-10. Project Operational Emissions (Localized Significance Analysis)

Operations	Pollutant (pounds per day)	
	NO_X	**CO**
Onsite Emissions	31.42	23.97
SCAQMD Localized Significance Threshold	371	1,965
Exceed SCAQMD Localized Threshold?	**No**	**No**

Source: EMFAC2017. Refer to Attachment A for Model Data Outputs.
Notes: Emissions projections account for a trip generation rate and fleet mix identified by Urban Crossroads (2020). Specifically, Urban Crossroads estimates the generation of 5,422 average vehicle trips daily, 1,044 of which would be heavy-duty trucks.

As seen in Table 2-10, the emissions of these pollutants on the peak day of operations would not result in significant concentrations of NO_x or CO pollutants at nearby sensitive receptors.

Conflict with the 2016 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 the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 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 2020 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 previously described, adherence to Mitigation Measure AQ-1 would ensure that criteria pollutant emissions generated during construction of the proposed Project 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. However, as shown in Table 2-9 the proposed Project would result in emissions exceeding the SCAQMD regional ROG and NO_X thresholds during operations. As previously discussed, the predominate source of these pollutant emissions would be due to mobile sources, mainly that of heavy-duty trucks. Mobile emission cannot be regulated by the County. Therefore, the proposed Project would 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?

Adherence to Mitigation Measure AQ-1 would ensure that criteria pollutant emissions generated during construction of the proposed Project 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. However, the Project would result in ROG and NO_x emissions beyond the SCAQMD regional significance threshold during operations, it could potentially delay the timely attainment of the O_3 air quality standard and/or AQMP emission reduction.

The Project would not be consistent with Criterion 1.

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 2016 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 2016 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 Riverside County. Specifically, SCAG's *Growth Management* Chapter of the Regional Comprehensive Plan and Guide (RCPG) provides regional population forecasts for the region and SCAG's *2020 RTP/SCS* provides socioeconomic forecast projections of regional population growth. The County of Riverside General Plan is referenced by SCAG in order to assist forecasting future growth in the unincorporated portions of the County.

The proposed Project is not consistent with the land use designation and development density presented in the County General Plan. The Project is seeking a General Plan Amendment (GPA) to modify the land use designations for the Project site in order to reflect changes proposed for the Project. The land use designations proposed as part of the GPA are intended to reflect the land use designations proposed by the Project. Currently, the County General Plan and the Elsinore Area Plan (EAP) designates the Project site for "Medium Density Residential" (MDR). The proposed GPA would amend the General Plan and EAP land use designations to reflect those proposed, which would include "Light Industrial (LI)," "Business Park (BP)," "Open Space – Conservation (OS-C)," and "Open Space – Conservation Habitat" land uses. It is noted that the Project would result in the creation of a substantial number of jobs that would serve to assist Riverside County in improving its jobs-housing balance, thereby potentially shortening commute

lengths of residents living in the unincorporated communities of the county yet traveling substantial distances to job centers outside of the county. Nonetheless, the proposed Project is not consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan and EAP. As a result, the Project could potentially conflict with the land use assumptions used by SCAQMD to develop the 2016 AQMP. The County's population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the County; and these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into their air quality planning efforts, it can be concluded that the proposed Project could be inconsistent with the projections. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) Therefore, the proposed Project would be not be considered consistent with the population, housing, and employment growth projections utilized in the preparation 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, 1113, and 1401. 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_{10} 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. 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 . . .". Rule 1401 requires new source review of any new, relocated, or modified permit units that emit TACs. Additionally, as previously described the Project would implement Mitigation Measure AQ-1, which provides measures to ensure County Good Neighbor Policy provisions are required throughout all future construction of the Specific Plan, and Mitigation Measure AQ-2, which requires several measures to reduce emissions during operations, including ensuring that the County Good Neighbor Policy provisions are required throughout all future construction of the Specific Plan . 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. For the reasons discussed above, the Project is not consistent with the land use designation and development density presented in the County of Riverside's General Plan and therefore could

potential exceed or otherwise conflict with the population or job growth projections used by the SCAQMD to develop the AQMP.

The Project would not be consistent with Criterion 2.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. The Project would result in operational emissions which would exceed regional significance thresholds potentially hindering the region's ability to meet state and federal air quality standards, thereby conflicting with Criterion 1. Further, the Project could be inconsistent with Criterion 2. Thus, the Project would conflict with the SCAQMD 2016 AQMP.

Exposure of Sensitive Receptors to Toxic Air Contaminants

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 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about five percent of total DPM. It should be noted that CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan, the Statewide Portable Equipment Registration Program, and the Diesel Off-Road Reporting System.

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in 2000 could cause 540 "excess" cancers in a population of one million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with

human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine-particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particulate pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen. For construction activity, DPM is the primary TAC of concern.

Construction Air Contaminant Sources

A construction HRA has been prepared to evaluate potential health risks associated with the emission of DPM, which includes PM_{10} and $PM_{2.5}$, resulting from the construction activities necessary to build the Project (see Attachment B). The following discussion is sourced from the construction related HRA prepared for the Specific Plan (see Attachment B). The HARP2 model provided by CARB, with regulatory default settings, was used to perform the dispersion and health risk modeling for this analysis. HARP2 implements the latest regulatory guidance to develop inputs to the U.S. EPA AERMOD dispersion model for dispersion and as the inputs for calculations for the various health risk levels. Conservative estimates and information from the Traffic Analysis (Urban Crossroads 2020) prepared for the Project were used to model DPM emissions from associated on and off-site diesel truck traffic during operations. CalEEMod was used to estimate the emissions from diesel fired off-road equipment and diesel truck traffic during construction. All roadway sources within a quarter mile of the Project site boundary were included in modeling analysis. The air dispersion modeling for the HRA was performed using the USEPA AERMOD Version 19121 dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources.

All on and off-site diesel truck traffic related to Project construction activities was modeled using the same source parameters listed below for Project long-term operations. Emission factors were generated using EMFAC2021 for construction in the year 2021 to and conservatively utilized throughout the proposed period of construction.

Construction off-road equipment was modeled as 748 volume sources spaced 20 meters apart per SCAQMD construction HRA guidance (SCAQMD 2003). 124 of the volume sources were used to represent the business park and 624 were used to represent the light industrial area. Per the landscape buffer established in Chapter 4 Design Guidelines of the Renaissance Ranch Specific Plan (Riverside 2021) the volume sources for the business park were place 10 feet from the fence line and 100 feet from the fence line in the Light Industrial area. Annual off-road PM_{10} exhaust emissions generated using the CalEEMod

model were used to represent emissions from onsite off-road diesel equipment used throughout construction. The annual emissions for the worst-case scenario (2022) were used to conservatively estimate annual construction emissions for the estimated Project duration of five years. The calculated carcinogenic risk as a result of proposed construction at Project vicinity receptors is depicted in Table 2-11 below.

Operational Air Contaminant Sources

An operational HRA has been prepared to evaluate potential health risks associated with the emission of DPM. The following discussion is sourced from the operations related HRA prepared for the Specific Plan (see Attachment B). Project related onsite and offsite roadway sources were entered into AERMOD as thirteen-line sources. These sources all have distances relative to the projected onsite roadways and the existing surface streets. Roadway sources all have a width of 7.4 meters using standard line sizing and an estimated two lanes. Roadway sources were modeled for all roads where trucks are allowed to travel per the Renaissance Ranch Specific Plan (Riverside 2021). This does not include the South East entrance to the Project site which would be for light duty vehicles only. Thus, the emissions from this entrance are considered negligible for the purposes of this analysis. Onsite idling at loading bays was modeled as three separate line sources with widths of 35 meters in the estimated locations of Project loading bays. The placement of the onsite idling sources were all 300 feet from the nearest house per the site plan listed above (Riverside 2021) and to represent the 'worst case' scenario since the exact building location is not known at the time of this report. A map of all operational sources is presented in the Health Risk Assessment (Attachment B).

Daily truck trips were identified in in the Traffic Analysis prepared for the Project (Urban Crossroads 2020). The estimated ratio of trips on each roadway link along with the daily trips were combined with an estimated operational schedule of five days a week for 50 weeks a year to estimate the annual emissions from each link.

Emission factors for PM_{10} exhaust emissions were generated using EMFAC2021 for idling; and 5, 15, and 45 miles per hour which were used to create composite emission factors for average onsite and offsite truck traffic. The ratio of Heavy Duty and Medium Duty trucks in the Traffic Analysis prepared for the Project was also utilized in the onsite and offsite composite emission factors. These emission factors where then multiplied by the annual trips by link with the distance for each roadway link and idle time to calculate emissions from traffic and idling related to the Project, respectively. Idling was estimated at 10 minutes per trip conservatively to account for any trucks that go over the five-minute idling rule put in place for this Project by the Specific Plan (Riverside 2021). EMFAC2021 emission factors for 2025 and 2030 on were utilized to calculate two sets of annual emissions used for modeling from 2025 through 2030 and 2030 on for the various risk scenarios.

Emissions from the potential transport refrigeration units (TRUs) were also included in the calculated emissions. The Tier 4 PM emission factors from the latest amendment of the CARB TRU ATCM (CARB 2011) were used to estimate DPM emission rates from TRUs. Load factors and the average HP for each of the TRUs were estimated using information from CARB's Draft 2019 Update to the Emissions Inventory for TRUs (CARB 2019). The ratio of trucks with TRUs to those without was generated using the ratio of

refrigerated space to that of total space utilized for the proposed light industrial area. Emissions from TRUs during idling were estimated at five minutes each trip as the average time to plug in the TRU as plug in capabilities for refrigerated warehouse space are required in the Specific Plan (Riverside 2021). Annual emissions from TRUs were then added to the exhaust idling and traffic emissions for each operational source.

Cancer Risk

Cancer risk calculations for existing residential receptors are based on 70-, 30-, and 9-year exposure periods to for operations and a 5-year exposure period for construction. As described above, the calculated cancer risk accounts for 350 days per year of exposure to existing residential receptors. While the average American spends 87 percent of their life indoors (USEPA 2001), neither the pollutant dispersion modeling nor the health risk calculations account for the reduced exposure structures provide. Instead health risk calculations account for the equivalent exposure of continual outdoor living. The calculated carcinogenic risk at Project vicinity receptors is depicted in Table 2-11.

Table 2-11. Cancer Risk Summary by Pollutant

Exposure Scenario	Total Risk
Operation	
70-Year Exposure Resident	7.84
30-Year Exposure Resident	6.60
9-Year Exposure Resident	4.59
25-Year Exposure Worker	0.47
9-Year Exposure School	0.13
Construction	
5-Year Exposure Resident	4.64
5-Year Exposure Worker	0.13
5-Year Exposure School	0.01
Significance Threshold	**10**

Source: ECORP Consulting 2021. See Attachment B.

As shown, impacts related to cancer risk for all modeled scenarios would be below the 10 in one million threshold for both operations and construction. These calculations do not account for any pollutant-reducing remedial components inherent to the Project or the Project site.

For construction emissions the Maximumly Exposed Individual Resident (MEIR) receptor is located 150 feet north of the site has a 5-year cancer risk of 4.64 related to the Project. The Maximumly Exposed Individual Worker (MEIW) is located around a quarter mile north of the project site in a large industrial area 5-year cancer risk of 0.13 in one million. The maximumly exposed school child is located at Luiseno Elementary School south of the Project with a nine-year cancer risk of 0.01. The locations of cancer risk MEIR and MEIW can be seen in Figure A-4 found in Attachment B. Detailed cancer risk results for all modeled receptors can also be found in Attachment B of this document.

For operational emissions the Maximumly Exposed Individual Resident (MEIR) receptor is located 150 feet north of the site has a 70-year cancer risk of 7.84 related to the Project. The Maximumly Exposed Individual Worker (MEIW) is located at the wastewater treatment plant which borders the Project site directly to the west and has a 25-year cancer risk of 0.47 in one million. The maximumly exposed school child is located at Luiseno Elementary School south of the project with a nine-year cancer risk of 0.13. The locations of cancer and non-cancer chronic risk MEIR and MEIW can be seen in Figure A-7 found in Attachment B of this document. Detailed cancer risk results for all modeled receptors can also be found in Attachment B.

Non-Carcinogenic Hazards

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. As mentioned above no acute risk was analyzed for this report as DPM has no identified acute risk.

A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the REL. The highest maximum chronic hazard indexes for residents, workers and school children as a result of the proposed Project construction and operations as a result of DPM exposure is shown in Table 2-12.

Table 2-12. Non-Carcinogenic Health Risk Summary

Exposure Scenario	Maximum Residential Hazard	Maximum Worker Hazard	Maximum Sensitive Receptor Hazard
Operation	0.0015	0.0015	4.4e-05
Construction	0.002	0.002	4.1e-05
Significance Threshold	**1**	**1**	**1**

Source: ECORP Consulting 2021. See Attachment B.

As shown in Table 2-12, impacts related to non-cancer risk (chronic hazard index) as a result of the Project site would not surpass significance thresholds.

As only DPM emissions were analyzed for this Project the MEIR, MEIW and maximumly affected school child are the same for Chronic Hazard as they are for cancer risk and their locations are identified in Figures A-6 and A-7 in Attachment B of this document for construction and operations, respectively.

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. In 1993, the SoCAB was designated nonattainment under the CAAQS and NAAQS for CO. 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 now designated as attainment, as previously noted in Table 2-3. 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 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 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). To establish a more accurate record of baseline CO concentrations affecting the SoCAB, 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.

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) 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.

The proposed Project is anticipated to result in 5,422 (Urban Crossroads 2020) average daily 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. Localized air quality impacts related to mobile source emissions would not be a concern.

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.

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.

Cumulative Air Quality Impacts

The cumulative setting for air quality includes the County of Riverside and the SoCAB. The SoCAB is designated as a nonattainment area for state standards of O_3, PM_{10}, and $PM_{2.5}$. The region is also designated as a nonattainment area for federal standards of O_3 and $PM_{2.5}$ (CARB 2019). Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Thus, the setting for this cumulative analysis consists of the SoCAB and associated growth and development anticipated in the air basin.

The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the CAA and CCAAs. As discussed earlier, the proposed Project would potentially conflict with the 2016 AQMP, which is intended to bring the SoCAB into attainment for all criteria pollutants, since projected daily emissions of NO_x would exceed SCAQMD regional thresholds. On December 12, 2008 the CARB adopted Resolution 08-43, which limits NO_x, PM_{10} and $PM_{2.5}$ emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order (EO) R-09-010 was adopted that codified Resolution 08- 43 into Section 2025, title 13 of the California Code of Regulations (CCR). This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions including a onetime per year three-day pass for trucks registered outside of California.

In addition, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual Project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project would exceed the applicable SCAQMD regional thresholds for operational-source NO_x emissions. As such, the Project would be considered cumulatively considerable in terms of its effect on regional air quality.

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 carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). 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_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2 (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents ($CO2_2e$), which weight each gas by its global warming potential. Expressing GHG emissions in CO_2e 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_2 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_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 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_2 emissions remains stored in the atmosphere (IPCC 2013).

Table 3-1. Greenhouse Gases

Greenhouse Gas	Description
CO_2	Carbon dioxide is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 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_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
CH_4	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_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH_4 is about12 years.[2]
N_2O	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_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O 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_2O is approximately 120 years.[3]

Sources: [1]US EPA 2016a, [2] USEPA 2016b, [3] 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 2020, CARB released the 2020 edition of the California GHG inventory covering calendar year 2018 emissions. In 2018, California emitted 425.3 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2018, accounting for approximately 30 percent of total GHG emissions in the state. This sector was followed by the industrial sector (21 percent) and the electric power sector including both in-state and out-of-state sources (15 percent) (CARB 2020b). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

3.2 Regulatory Framework

3.2.1 State

Executive Order S-3-05

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.

While dated, this EO remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining "to adopt the 2050 goal as a measure of significance in light of the fact that the Executive Order does not specify any plan or implementation measures to achieve its goal, the decision also recognized that the goal of a 40 percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing greenhouse gas emissions 80 percent below 1990 levels by the year 2050.

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 requires 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). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible state implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on

December 14, 2017. The Scoping Plan Update addresses the 2030 target established by SB 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include: increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Executive Order B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2˚C, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

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. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

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

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Edmund (Jerry) Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

2019 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 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The 2019 standards are a major step toward meeting Zero Net Energy. According to the California Energy Commission, single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards and nonresidential buildings will use about 30 percent less energy (due mainly to lighting upgrades) (CEC 2018). The most significant efficiency improvement to the residential Standards include the introduction of photovoltaic into the perspective package, improvements for attics, walls, water heating and lighting. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. These new standards apply only to certain nonresidential building types, as specified in the requirements.

Phase I and 2 Heavy-Duty Vehicle GHG Standards

CARB has adopted a new regulation for GHG emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the USEPA rule for new trucks and engines nationally. Existing heavy-duty truck vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the USEPA adopted their new rule for heavy-duty trucks and engines. The USEPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year 2014 with stringency levels increasing through model year 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The USEPA rule does not regulate trailers. CARB staff has worked jointly with the USEPA and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal GHG emission standards for medium-duty trucks and heavy-duty truck vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty truck vehicles, including trailers. In February 2019, the Office of Administrative Law (OAL) approved the Phase 2 Heavy-Duty Vehicle GHG Standards and became effective April 1, 2019. The Phase 2 GHG standards are needed to offset projected vehicle miles traveled (VMT) growth and keep heavy-duty truck CO_2 emissions declining. The federal Phase 2 standards establish for the first time, federal emissions requirements for trailers hauled by heavy-duty tractors. The federal Phase 2 standards are more technology-forcing than the federal Phase 1 standards, requiring manufacturers to improve existing technologies or develop new technologies to meet the standards. The federal Phase 2 standards for tractors, vocational vehicles, and heavy-duty pick-

up trucks and vans (PUVs) will be phased-in from 2021-2027, additionally for trailers, the standards are phased-in from 2018 (2020 in California) through 2027.

3.2.2 Local

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.

The *Draft AQMD Staff CEQA GHG Significance Thresholds* guidance document, which builds on the previous guidance prepared by the CAPCOA, explored various approaches for establishing a significance threshold for GHG emissions and was described as a "work in progress" of efforts to date. However, the draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. In December 2008, the SCAQMD adopted an interim 10,000 metric tons of CO_2e per year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency. From December 2008 to September 2010, SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, used the following tiered approach to evaluate potential GHG impacts from various uses:

- Tier 1 Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.
- Tier 2 Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.
- Tier 3 Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 metric tons of CO_2e per year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 metric tons of CO_2e per year), commercial projects (1,400 metric tons of CO_2e per year), and mixed-use projects (3,000 metric tons of CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 metric tons of CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.
- Tier 4 Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment).

The efficiency targets were established based on the goal of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 metric tons of CO_2e per service population for project level analyses and 6.6 metric tons of CO_2e per service population for plan level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

- Tier 5 Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

The SCAQMD has not announced when staff is expecting to present a finalized version of its GHG thresholds to the governing board.

These thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. This working group was formed to assist 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 SoCAB, various utilities such as sanitation and power companies throughout the SoCAB, industry groups, and environmental and professional organizations. These thresholds were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provides guidance to CEQA practitioners with regard to determining whether GHG emissions from a proposed land use project are significant.

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 builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve more sustainable growth patterns. It charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

Implementation of the 2020 RTP/SCS would result in a regional transportation system that provides improved travel conditions and better air quality, while also ensuring an equitable distribution of benefits among the various communities that comprise the SCAG region. Targets for the SCAG region in the 2020 RTP/SCS includes an eight percent per capita reduction in GHG emissions from automobiles and light trucks by 2020, a 19 percent reduction in GHG emissions by 2035 compared with 2005 levels and a 21 percent reduction by 2040 compared with 2005 levels. On October 30, 2020, CARB accepted SCAG's

conclusion that the 2020-2045 RTP/SCS, if implemented, would achieve the 2020 and 2035 emission reduction targets set by CARB for the SCAG region.

County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses

The logistics industry is a well-established sector of the Riverside County economy that has contributed to local job growth, fueled by societal growth trends in e-commerce and coupled with our strategic location along a major trade corridor that connects to the Ports of Los Angeles and Long Beach. It is expected that Riverside County will continue to see strong demand for growth in the logistics industry. However, it is also recognized that the construction and operations of logistics and warehouse projects in close proximity to residences or other sensitive land uses may negatively affect the quality of life of those existing communities. The County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses provides a framework through which large-scale logistics and warehouse projects, such as that proposed by the Project, can be designed and operated in a way that lessens their impact on surrounding communities and the environment. It is meant to apply Best Management Practices to help minimize potential impacts to sensitive receptors and is intended to be used in conjunction with the County's Land Use Ordinance, which provides development requirements for said projects, and CEQA. This policy provides a series of development and operational criteria applicable to logistics and warehouse projects that include any building larger than 250,000 square feet in size that are implemented to supplement project-level mitigation measures in order to further reduce impacts related to logistics and warehousing development and operations. The specific policy provisions germane to Project GHG emissions include the following:

> 2.1 During construction of the warehouse/distribution facility, all heavy-duty haul trucks accessing the site shall have CARB-approved 2010 engines or newer approved CARB engine standards.
>
> 2.4 Construction contractors shall utilize construction equipment, with properly operating and maintained mufflers, consistent with manufacturers' standards.
>
> 2.9 Construction Contractors shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.
>
> 4.1 Facility operators shall maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty Trucks ("HHD") accessing the site use year CARB 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the County.
>
> 4.2 Facility operators shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.
>
> 4.3 Facility operators shall train their managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.

4.4 Facility operators shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.

4.7 Facility operators for sites that exceed 250 employees shall establish a rideshare program, in accordance with AQMD rule 2202, with the intent of discouraging single-occupancy vehicle trips and promote alternate modes of transportation, such as carpooling and transit where feasible.

4.8 A minimum of 5 percent of employee parking spaces shall be designated for electric or other alternative fueled vehicles.

5.5 Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information should be provided to the County and updated annually, and signs should be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community.

County of Riverside Climate Action Plan

The County of Riverside Climate Action Plan (CAP) (December 8, 2015) was designed under the premise that the County of Riverside, and the community it represents, is uniquely capable of addressing emissions associated with sources under Riverside County's jurisdiction, and that Riverside County's emission reduction efforts should coordinate with the state strategies of reducing emissions in order to accomplish these reductions in an efficient and cost-effective manner. The County of Riverside CAP Update, November 2019 (CAP Update) establishes GHG emission reduction programs and regulations that correlate with and support evolving state GHG emissions reduction goals and strategies. The CAP Update includes reduction targets for year 2030 and year 2050. These reduction targets require the County to reduce emissions by at least 525,511 metric tons of CO_2e below the Adjusted Business As Usual (ABAU) scenario by 2030 and at least 2,982,948 metric tons of CO_2e below the ABAU scenario by 2050 (CAP Update, p.7-1). To evaluate consistency with the CAP Update, the County has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation or project design features (collectively "features") are assigned point values that correspond to the minimum GHG emissions reduction that would result from each feature. Projects that yield at least 100 points are considered to be consistent with the GHG emissions reduction quantities anticipated in the County's GHG Technical Report and support the GHG emissions reduction targets established under the CAP Update. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG would be considered less than significant.

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 or

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

The Appendix G thresholds for GHG's 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 § 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 California Code of Regulations [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 § 15130(f)). As a note, the CEQA Guidelines were amended in response to SB 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 § 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 § 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 § 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 County of Riverside CAP aims to reduce GHG emissions from development projects under County jurisdiction. The CAP builds on state and regional policies aimed at reducing GHG emissions consistent with the SB 32 year 2030 GHG reduction target and statewide post-2030 reduction goals. To evaluate consistency with the CAP Update, the County has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation or project design features (collectively "features") are assigned point values that correspond to the minimum GHG emissions reduction that would result from each feature. Projects that yield at least 100 points are considered to be consistent with the GHG emissions reduction quantities anticipated in the County's GHG Technical Report and support the GHG emissions reduction targets established under the CAP Update. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG emissions would be considered less than significant.

The CAP Update identifies a two-step approach in evaluating GHG emissions. First, a screening threshold of 3,000 metric tons of CO_2e per year is used to determine if additional analysis is required. Projects that exceed the 3,000 metric tons of CO_2e per year will be required to quantify and disclose the anticipated GHG emissions then either 1) demonstrate how the project would reduce GHG emissions to levels below 3,000 metric tons annually through project design features and/or mitigation measures, OR 2) garner 100 points through the Screening Tables. Projects that garner at least 100 points (equivalent to an approximate 49 percent reduction in GHG emissions) are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report, and consequently would be consistent with the CAP Update. As such, projects that achieve a total of 100 points or more are considered to have a less than significant individual and cumulative impact on GHG emissions.

Consistent with CEQA Guidelines § 15064.4(b)(2) and SCAQMD Tier 2 thresholds, the proposed Project is analyzed for consistency with the CAP Update in order to determine its significance.

3.3.2 Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by the County of Riverside. Onsite construction-related (including worker commutes and vendors), area source, energy

source and water/wastewater pumping were modeled using CalEEMod, version 2016.3.2. 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.

Construction-generated GHG emissions for the proposed Project, including offsite improvements, were primarily calculated using CalEEMod model defaults for Riverside County. All on-road haul trucks were modeled as CARB-approved 2010 engines or newer, consistent with the requirements of the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses (also see Mitigation Measure AQ-1 above).

GHG emissions during operations were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from Urban Crossroads (2020). Additionally, operational mobile GHG emissions for the proposed Project are calculated with the 2017 version of the EMission FACtor model (EMFAC) developed by CARB. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to estimate changes in future emissions from on-road mobile sources. The most recent USEPA approved version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled by speed, and number of starts per day. The most important improvement in EMFAC 2017 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment. The EMFAC 2021 model is available although has not yet been approved by the USEPA.

3.3.3 Impact Analysis

Contribution of Greenhouse Gas Emissions at a Level that would Conflict with an Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

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). Construction-generated GHG emissions associated with the proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model GHG emissions for land use development projects, based on typical construction requirements. The duration of construction has been adjusted to reflect a start date in the summer of 2021 and an anticipated opening year in the year 2025. The CalEEMod model defaults for the number of construction equipment employed was doubled for all construction phases with accelerated timelines. Construction–generated emissions were calculated to account for the construction of the entire Specific Plan simultaneously in order to identify the worst-case construction emissions potential. However, the actual construction of the Project site would be dependent on several factors, including timing of Project approvals, market conditions, and/or Project funding. As such, this analysis accounts for minor modifications as Project plans evolve from conceptual planning to final mapping. If construction starts at

a later date, it can be expected that Project emissions would be reduced because CalEEMod incorporates lower emission factors associated with construction equipment in future years due to improved emissions controls and fleet modernization through turnover. See Attachment C for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Table 3-2 illustrates the specific construction generated GHG emissions that would result from onsite and offsite construction of the Project.

Table 3-2. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Construction in 2021 (including offsite improvements)	389
Construction in 2022	2,038
Construction in 2023	4,502
Construction in 2024	4,469
Construction in 2025	3,989
Total	**15,387**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment C for Model Data Outputs.
Notes: All on-road haul trucks were modeled as CARB-approved 2010 engines or newer, consistent with County requirements and Mitigation Measure AQ-1.

As shown in Table 3-2, Project construction would result in the generation of approximately 15,387 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. Consistent with SCAQMD guidance, total construction GHG emissions have been amortized over the estimated life of a project, 30 years. The amortized construction emissions are added to the annual average operational emissions for the proposed Project.

Operations

Operation of the Project would result in GHG emissions predominantly associated with motor vehicle use. As previously described, the County of Riverside Board of Supervisors Good Neighbor Policy for Logistics and Warehouse/Distribution Uses contains several policy provisions that address GHG generated during construction of warehouse/distribution projects proposing building space larger than 250,000 square feet in size. These provisions would apply to the operations of the Project per Mitigation Measure AQ-2 above. Mitigation Measure AQ-2 requires that all future cold storage warehousing be equipped with electrical hookups to eliminate idling of main and auxiliary engines during the loading and unloading process and provide for transport refrigeration units, auxiliary power units and other trucks requiring electrical power. This requirement eliminates the need for transport refrigeration units to supply the energy for refrigeration from diesel fuel, and thus substantially reduces emissions. Mitigation Measure AQ-2 also requires an electrical room(s) and/or exterior area(s) of the site to be designated where future electrical panels would be located for the purpose of supplying power to on-site charging facilities for electric powered trucks at shell building permit. Conduit must be installed from this designated area where the panel would be located to the on-site location where the charging facilities would be located and where

electric-powered trucks would park and connect to charging facilities to charge the batteries that power the motors of the electric-powered trucks. If the tenant is served by electric trucks, the electrical panel and charging units must be installed, and the electrical wiring connections must be made from the electrical panel to the charging units at issuance of a building permit for Tenant Improvements. Mitigation Measure AQ-2 also requires that at least five percent of all passenger vehicle parking spaces include EV charging stations. Mitigation Measure AQ-2 requires facility operators to maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks and Heavy-Heavy Duty Trucks accessing the site use year CARB 2010 or newer engines. Thus, older model year trucks, which are less efficient and produce greater GHG emissions, would be prohibited from visiting the site.

As previously described, operational GHG emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from Urban Crossroads (2020). Consistent with SCAQMD recommendations, in order to more accurately account for the trip distribution patterns of freight trucks, the average trip length is calculated at 63.7 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

Long-term operational GHG emissions attributable to the proposed Project are identified in Table 3-3.

Table 3-3. Operational-Related GHG Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Construction Emissions (amortized over the 30-year life of the Project)	512
Area Source Emissions	0
Energy Source Emissions	9,522
Mobile Source Emissions	
Passenger Vehicles	*146*
Heavy-Duty Trucks	*34,138*
Mobile Source Total	34,284
Solid Waste Emissions	1,365
Water Emissions	219
Total Emissions	**45,902**

Source: CalEEMod version 2016.3.2; EMFAC2017. Refer to Attachment C for Model Data Outputs.
Notes: Emissions projections account for a trip generation rate and fleet mix identified by Urban Crossroads (2020). Specifically, Urban Crossroads estimates the generation of 5,422 average vehicle trips daily, 1,044 of which would be heavy-duty trucks. The average trip length is calculated at 63.7 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

As shown in Table 3-4, operational-generated emissions for the proposed Project would generate 45,902 metric tons of CO_2e emissions annually.

As previously described, the purpose of the County of Riverside CAP Update is to provide guidance on how to analyze GHG emissions and determine significance during the CEQA review of proposed development projects within the County, including the proposed Specific Plan. To address the state's requirement to reduce GHG emissions, the County prepared its CAP Update with the goal of reducing GHG emissions within the County by 49 percent below "existing" 2008 levels by the year 2030. The County's target is consistent with the state Scoping Plan target and ensures that the County will be providing GHG reductions locally that will complement state efforts to reduce GHG emissions. The County's target is also consistent with the SB 32 target that expands on AB 32 to reduce GHG emissions to 40 percent below the 1990 levels by 2030. Because the County's CAP Update addresses GHG emissions reductions and is consistent with the requirements of the state Scoping Plan, SB 32, and international efforts to reduce GHG emissions, compliance with the CAP Update fulfills the description of mitigation found in the State CEQA Guidelines. The CAP Update identifies a two-step approach in evaluating GHG emissions. First, a screening threshold of 3,000 metric tons of CO_2e per year is used to determine if additional analysis is required. Projects that exceed the 3,000 metric tons of CO_2e per year will be required to quantify and disclose the anticipated GHG then either 1) demonstrate how the project would reduce GHG emissions to levels below 3,000 metric tons annually through project design features and/or mitigation measures, OR 2) garner 100 points through the CAP Screening Tables. As shown on Tables 3-3, the Project would result in substantially more GHG emissions than the County's screening threshold of 3,000 metric tons of CO_2e per year. Thus, future projects in the Specific Plan must garner at least 100 points (equivalent to an approximate 49 percent reduction in GHG emissions) in order to be determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report, and consequently the CAP Update. Due to the conceptual natures of the Project, the following mitigation is recommended.

Recommended Mitigation Measure

GHG-1: All future projects proposed within the Specific Plan shall implement Screening Table Measures providing for a minimum 100 points per the County Screening Tables. All projects must be consistent with the CAP's requirement to achieve at least 100 points. The County shall verify incorporation of the identified Screening Table Measures within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of the identified Screening Table Measures prior to the issuance of Certificate(s) of Occupancy.

GHG-2: All future projects proposed within the Specific Plan shall comply with CAP Update Measure R2-CE1, which requires that all future plot plans proposed within the Specific Plan that include more than 100,000 gross square feet of commercial, office, industrial, or manufacturing development shall provide onsite renewable energy production generation comprising at least 20 percent of the Project energy demand. The County shall verify implementation of CAP Update Measure R2-CE1 within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable). The County shall verify implementation of CAP Update Measure R2-CE1 prior to the issuance of Certificate(s) of Occupancy.

The implemented Screening Table Measures and compliance with CAP Update Measure R2-CE1 would achieve a minimum of 100 Screening Table Points and would thereby ensure that all future projects proposed within the Specific Plan would achieve GHG emissions levels and GHG emissions reductions targets consistent with those identified in the County CAP Update. The actual measures to be implemented would be identified in conjunction with future plot plan applications and may vary from the list of measures identified in Table 3-3. Project GHG emissions that are consistent with the performance standards contained in the CAP would not comprise a significant impact on the environment.

For informational purposes, a representative example of how future individual projects could achieve a minimum of 100 Screening Table Points through implementation of CAP Update Screening Table Measures is provided at Table 3-4. (Neither Table 3-4 nor Table 3-4 accounts for implementation of Mitigation Measures GHG-1, GHG-2, or the majority of measures identified in Mitigation Measure AQ-2.)

Table 3-4. County of Riverside CAP Consistency – Industrial and Commercial Land Use

Feature	Description	Points
EE10.A.1 Insulation	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	11
EE10.A.2 Windows	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less Solar Heat Gain Coefficient [SHGC])	7
EE10.A.3 Cool Roofs	Modest Cool Roof (Cool Roof Rating Council [CRRC] Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	7
EE10.A.4 Air Infiltration	Blower Door Home Energy Rating System (HERS) Verified Envelope Leakage of equivalent	6
EE10.B.1 Heating/Cooling Distribution System	Model Duct Insulation (R-6)	5
EE10.B.2 Space Heating/Cooling Equipment	Improved Efficiency Heating, Ventilation, and Air Conditioning (HVAC) (Energy Efficiency Ratio [EER] 14/78% Annual Fuel Utilization Efficiency [AFUE] or 8 Heating Seasonal Performance Factor [HSPF])	4
EE10.B.4 Water Heaters	High Efficiency Water Heater (0.72 Energy Factor)	10
EE10.B.5 Daylighting	All rooms daylighted	1
EE10.B.6 Artificial Lighting	High Efficiency Lights (50% of in-unit fixtures are high efficiency)	7
W2.E.2 Toilets	Water Efficient Toilets/Urinals (1.5 gallons per minute [gpm]) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	6
W2.E.3 Faucets	Water Efficient faucets (1.28 gpm)	2
T4.B.1 Electric Vehicle (EV) Recharging	Install EV charging stations in garages/parking areas	+34[1]
	Total Points	**100+**

[1] Per the Screening Tables, each station is 8 points. Mitigation Measure AQ-2 requires that at least five percent of all passenger vehicle parking spaces shall include EV charging stations. While the exact amount of passenger vehicle parking spaces is not known at the time of this Assessment, 13 EV charging stations would achieve 104 points.

As such, projects that achieve a total of 100 points or more are considered to have a less than significant individual and cumulative impact on GHG emissions.

In addition to compliance with the County CAP Screening Tables, which would result in an approximate 49 percent reduction in GHG emissions for the proposed Project, the State of California, along with the SCAQMD, has implemented numerous strategies pertaining to trucks and the reduction of emissions that directly apply to the Project. Urban goods delivery is an essential component of the greater freight system and vital to the urban economy. While urban goods delivery represents a small share of urban traffic, it generates a disproportionate amount of GHG emissions. The State of California promulgates policies designed and implemented to improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles—a strategy embedded in the

Governor's Sustainable Freight Action Plan as well as CARB's AB 32 Scoping Plan, Statewide Implementation Plan, and Mobile Source Strategy.

Additionally, the objective of the proposed Specific Plan also aligns with various aspects of the SCAG's RTP/SCS to accommodate goods movement industries and balancing job and housing opportunities in local areas to reduce long commutes from home to work. SCAG identifies the Inland Empire as a housing rich area and coastal communities as job rich areas and is striving in their policies to achieve more equal balances locally. The Project would efficiently develop an underutilized property with a complementary mix of employment-generating land uses, including light industrial, business park, and commercial retail land uses, assist the SCAG region in achieving jobs/housing balance region-wide and the local area by providing additional job opportunities in a housing rich area of the Inland Empire, diversify the economy of western unincorporated Riverside County by developing a large property with a mix of employment-generating land uses with long-term economic viability, and attract new businesses to Riverside County and thereby provide a more equal jobs-housing balance in the Inland Empire region that would reduce the need for members of the local workforce to commute outside the area for employment. All of these factors are consistent with the goals of the RTP/SCS, which as previously described was developed with the target of an eight percent per capita reduction in GHG emissions from automobiles and light trucks by 2020, a 19 percent reduction in GHG emissions by 2035 compared with 2005 levels and a 21 percent reduction by 2040 compared with 2005 levels. On October 30, 2020, CARB accepted SCAG's conclusion that the 2020 RTP/SCS, if implemented, would achieve the 2020 and 2035 emission reduction targets set by CARB for the SCAG region. Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets and the proposed Specific Plan would support the goals of the RTP/SCS.

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LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Air Quality Emissions

Attachment B – Construction and Operational Health Risk Assessment - Diesel Particulate Matter

Attachment C – CalEEMod Output File for Greenhouse Gas Emissions

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutants

Renaissance Ranch-offsite

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area estimated from google earth.

Construction Phase - Paving and painting assumed to occur at the same time.

Off-road Equipment -

Off-road Equipment - Equipment updated to accurately reflect project- a crane is not needed.

Off-road Equipment - Equipment updated to match project- no more than one mixer will be needed for the project area.

Off-road Equipment -

Construction Off-road Equipment Mitigation - Mitigation accounts for county requirments to adhear to SCAQMD rule 403.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9774	7.8963	10.0420	0.0168	0.5861	0.4317	0.8859	0.0721	0.4093	0.4444	0.0000	1,619.1471	1,619.1471	0.3335	0.0000	1,627.4850
Maximum	**1.9774**	**7.8963**	**10.0420**	**0.0168**	**0.5861**	**0.4317**	**0.8859**	**0.0721**	**0.4093**	**0.4444**	**0.0000**	**1,619.1471**	**1,619.1471**	**0.3335**	**0.0000**	**1,627.4850**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9774	7.8963	10.0420	0.0168	0.2433	0.4317	0.5431	0.0324	0.4093	0.4335	0.0000	1,619.1471	1,619.1471	0.3335	0.0000	1,627.4850
Maximum	**1.9774**	**7.8963**	**10.0420**	**0.0168**	**0.2433**	**0.4317**	**0.5431**	**0.0324**	**0.4093**	**0.4335**	**0.0000**	**1,619.1471**	**1,619.1471**	**0.3335**	**0.0000**	**1,627.4850**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.50**	**0.00**	**38.70**	**55.07**	**0.00**	**2.45**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.8000e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**	**0.0000**	**4.6600e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.8000e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**	**0.0000**	**4.6600e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/7/2021	7/7/2021	5	1	
2	Installation of water line	Trenching	7/8/2021	7/21/2021	5	10	
3	Paving	Paving	7/22/2021	7/28/2021	5	5	
4	Architectural Coating	Architectural Coating	7/22/2021	7/28/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.46

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Installation of water line	Concrete/Industrial Saws	1	7.00	81	0.73
Installation of water line	Cranes	0	4.00	231	0.29
Installation of water line	Excavators	1	8.00	158	0.38
Installation of water line	Forklifts	1	6.00	89	0.20
Installation of water line	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation of water line	4	10.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.5303**	**0.2995**	**0.8297**	**0.0573**	**0.2755**	**0.3328**		**942.5842**	**942.5842**	**0.3049**		**950.2055**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0237	0.0135	0.1849	5.3000e-004	0.0559	3.3000e-004	0.0562	0.0148	3.0000e-004	0.0151		53.2376	53.2376	1.2700e-003		53.2693
Total	**0.0237**	**0.0135**	**0.1849**	**5.3000e-004**	**0.0559**	**3.3000e-004**	**0.0562**	**0.0148**	**3.0000e-004**	**0.0151**		**53.2376**	**53.2376**	**1.2700e-003**		**53.2693**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.2068**	**0.2995**	**0.5063**	**0.0223**	**0.2755**	**0.2978**	**0.0000**	**942.5842**	**942.5842**	**0.3049**		**950.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0237	0.0135	0.1849	5.3000e-004	0.0365	3.3000e-004	0.0368	0.0101	3.0000e-004	0.0104		53.2376	53.2376	1.2700e-003		53.2693
Total	**0.0237**	**0.0135**	**0.1849**	**5.3000e-004**	**0.0365**	**3.3000e-004**	**0.0368**	**0.0101**	**3.0000e-004**	**0.0104**		**53.2376**	**53.2376**	**1.2700e-003**		**53.2693**

3.3 Installation of water line - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8502	7.5917	9.6227	0.0149		0.4305	0.4305		0.4081	0.4081		1,430.6967	1,430.6967	0.3251		1,438.8245
Total	**0.8502**	**7.5917**	**9.6227**	**0.0149**		**0.4305**	**0.4305**		**0.4081**	**0.4081**		**1,430.6967**	**1,430.6967**	**0.3251**		**1,438.8245**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.0000e-003	0.2776	0.0495	7.8000e-004	0.0192	5.3000e-004	0.0197	5.5300e-003	5.1000e-004	6.0400e-003		81.9753	81.9753	5.8600e-003		82.1219
Worker	0.0474	0.0270	0.3697	1.0700e-003	0.1118	6.6000e-004	0.1124	0.0296	6.1000e-004	0.0303		106.4751	106.4751	2.5400e-003		106.5386
Total	**0.0544**	**0.3046**	**0.4192**	**1.8500e-003**	**0.1310**	**1.1900e-003**	**0.1322**	**0.0352**	**1.1200e-003**	**0.0363**		**188.4504**	**188.4504**	**8.4000e-003**		**188.6605**

3.3 Installation of water line - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8502	7.5917	9.6227	0.0149		0.4305	0.4305		0.4081	0.4081	0.0000	1,430.6967	1,430.6967	0.3251		1,438.8245
Total	**0.8502**	**7.5917**	**9.6227**	**0.0149**		**0.4305**	**0.4305**		**0.4081**	**0.4081**	**0.0000**	**1,430.6967**	**1,430.6967**	**0.3251**		**1,438.8245**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.0000e-003	0.2776	0.0495	7.8000e-004	0.0137	5.3000e-004	0.0143	4.1900e-003	5.1000e-004	4.6900e-003		81.9753	81.9753	5.8600e-003		82.1219
Worker	0.0474	0.0270	0.3697	1.0700e-003	0.0729	6.6000e-004	0.0736	0.0201	6.1000e-004	0.0207		106.4751	106.4751	2.5400e-003		106.5386
Total	**0.0544**	**0.3046**	**0.4192**	**1.8500e-003**	**0.0867**	**1.1900e-003**	**0.0878**	**0.0243**	**1.1200e-003**	**0.0254**		**188.4504**	**188.4504**	**8.4000e-003**		**188.6605**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5892	5.8893	6.3961	9.6600e-003		0.3212	0.3212		0.2964	0.2964		921.6808	921.6808	0.2898		928.9251
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5892**	**5.8893**	**6.3961**	**9.6600e-003**		**0.3212**	**0.3212**		**0.2964**	**0.2964**		**921.6808**	**921.6808**	**0.2898**		**928.9251**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0474	0.0270	0.3697	1.0700e-003	0.1118	6.6000e-004	0.1124	0.0296	6.1000e-004	0.0303		106.4751	106.4751	2.5400e-003		106.5386
Total	**0.0474**	**0.0270**	**0.3697**	**1.0700e-003**	**0.1118**	**6.6000e-004**	**0.1124**	**0.0296**	**6.1000e-004**	**0.0303**		**106.4751**	**106.4751**	**2.5400e-003**		**106.5386**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5892	5.8893	6.3961	9.6600e-003		0.3212	0.3212		0.2964	0.2964	0.0000	921.6808	921.6808	0.2898		928.9251
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5892**	**5.8893**	**6.3961**	**9.6600e-003**		**0.3212**	**0.3212**		**0.2964**	**0.2964**	**0.0000**	**921.6808**	**921.6808**	**0.2898**		**928.9251**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0474	0.0270	0.3697	1.0700e-003	0.0729	6.6000e-004	0.0736	0.0201	6.1000e-004	0.0207		106.4751	106.4751	2.5400e-003		106.5386
Total	**0.0474**	**0.0270**	**0.3697**	**1.0700e-003**	**0.0729**	**6.6000e-004**	**0.0736**	**0.0201**	**6.1000e-004**	**0.0207**		**106.4751**	**106.4751**	**2.5400e-003**		**106.5386**

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.3313**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.4800e-003	5.4000e-003	0.0739	2.1000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0500e-003		21.2950	21.2950	5.1000e-004		21.3077
Total	**9.4800e-003**	**5.4000e-003**	**0.0739**	**2.1000e-004**	**0.0224**	**1.3000e-004**	**0.0225**	**5.9300e-003**	**1.2000e-004**	**6.0500e-003**		**21.2950**	**21.2950**	**5.1000e-004**		**21.3077**

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.3313**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.4800e-003	5.4000e-003	0.0739	2.1000e-004	0.0146	1.3000e-004	0.0147	4.0200e-003	1.2000e-004	4.1400e-003		21.2950	21.2950	5.1000e-004		21.3077
Total	**9.4800e-003**	**5.4000e-003**	**0.0739**	**2.1000e-004**	**0.0146**	**1.3000e-004**	**0.0147**	**4.0200e-003**	**1.2000e-004**	**4.1400e-003**		**21.2950**	**21.2950**	**5.1000e-004**		**21.3077**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Unmitigated	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Total	**8.7900e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**		**4.6600e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Total	**8.7900e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**		**4.6600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Renaissance Ranch-offsite

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area estimated from google earth.

Construction Phase - Paving and painting assumed to occur at the same time.

Off-road Equipment -

Off-road Equipment - Equipment updated to accurately reflect project- a crane is not needed.

Off-road Equipment - Equipment updated to match project- no more than one mixer will be needed for the project area.

Off-road Equipment -

Construction Off-road Equipment Mitigation - Mitigation accounts for county requirments to adhear to SCAQMD rule 403.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9763	7.8949	9.9797	0.0166	0.5861	0.4317	0.8859	0.0721	0.4093	0.4444	0.0000	1,605.1081	1,605.1081	0.3339	0.0000	1,613.4543
Maximum	**1.9763**	**7.8949**	**9.9797**	**0.0166**	**0.5861**	**0.4317**	**0.8859**	**0.0721**	**0.4093**	**0.4444**	**0.0000**	**1,605.1081**	**1,605.1081**	**0.3339**	**0.0000**	**1,613.4543**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9763	7.8949	9.9797	0.0166	0.2433	0.4317	0.5431	0.0324	0.4093	0.4336	0.0000	1,605.1081	1,605.1081	0.3339	0.0000	1,613.4543
Maximum	**1.9763**	**7.8949**	**9.9797**	**0.0166**	**0.2433**	**0.4317**	**0.5431**	**0.0324**	**0.4093**	**0.4336**	**0.0000**	**1,605.1081**	**1,605.1081**	**0.3339**	**0.0000**	**1,613.4543**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.50**	**0.00**	**38.70**	**55.07**	**0.00**	**2.45**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.8000e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**	**0.0000**	**4.6600e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**8.8000e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**	**0.0000**	**4.6600e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/7/2021	7/7/2021	5	1	
2	Installation of water line	Trenching	7/8/2021	7/21/2021	5	10	
3	Paving	Paving	7/22/2021	7/28/2021	5	5	
4	Architectural Coating	Architectural Coating	7/22/2021	7/28/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.46

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Installation of water line	Concrete/Industrial Saws	1	7.00	81	0.73
Installation of water line	Cranes	0	4.00	231	0.29
Installation of water line	Excavators	1	8.00	158	0.38
Installation of water line	Forklifts	1	6.00	89	0.20
Installation of water line	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation of water line	4	10.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.5303**	**0.2995**	**0.8297**	**0.0573**	**0.2755**	**0.3328**		**942.5842**	**942.5842**	**0.3049**		**950.2055**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0233	0.0140	0.1492	4.8000e-004	0.0559	3.3000e-004	0.0562	0.0148	3.0000e-004	0.0151		47.7597	47.7597	1.1000e-003		47.7873
Total	**0.0233**	**0.0140**	**0.1492**	**4.8000e-004**	**0.0559**	**3.3000e-004**	**0.0562**	**0.0148**	**3.0000e-004**	**0.0151**		**47.7597**	**47.7597**	**1.1000e-003**		**47.7873**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.2068**	**0.2995**	**0.5063**	**0.0223**	**0.2755**	**0.2978**	**0.0000**	**942.5842**	**942.5842**	**0.3049**		**950.2055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0233	0.0140	0.1492	4.8000e-004	0.0365	3.3000e-004	0.0368	0.0101	3.0000e-004	0.0104		47.7597	47.7597	1.1000e-003		47.7873
Total	**0.0233**	**0.0140**	**0.1492**	**4.8000e-004**	**0.0365**	**3.3000e-004**	**0.0368**	**0.0101**	**3.0000e-004**	**0.0104**		**47.7597**	**47.7597**	**1.1000e-003**		**47.7873**

3.3 Installation of water line - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8502	7.5917	9.6227	0.0149		0.4305	0.4305		0.4081	0.4081		1,430.6967	1,430.6967	0.3251		1,438.8245
Total	**0.8502**	**7.5917**	**9.6227**	**0.0149**		**0.4305**	**0.4305**		**0.4081**	**0.4081**		**1,430.6967**	**1,430.6967**	**0.3251**		**1,438.8245**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.4400e-003	0.2752	0.0586	7.5000e-004	0.0192	5.4000e-004	0.0198	5.5300e-003	5.2000e-004	6.0500e-003		78.8920	78.8920	6.5300e-003		79.0553
Worker	0.0465	0.0279	0.2984	9.6000e-004	0.1118	6.6000e-004	0.1124	0.0296	6.1000e-004	0.0303		95.5194	95.5194	2.2100e-003		95.5745
Total	**0.0540**	**0.3032**	**0.3570**	**1.7100e-003**	**0.1310**	**1.2000e-003**	**0.1322**	**0.0352**	**1.1300e-003**	**0.0363**		**174.4113**	**174.4113**	**8.7400e-003**		**174.6299**

3.3 Installation of water line - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8502	7.5917	9.6227	0.0149		0.4305	0.4305		0.4081	0.4081	0.0000	1,430.6967	1,430.6967	0.3251		1,438.8245
Total	**0.8502**	**7.5917**	**9.6227**	**0.0149**		**0.4305**	**0.4305**		**0.4081**	**0.4081**	**0.0000**	**1,430.6967**	**1,430.6967**	**0.3251**		**1,438.8245**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.4400e-003	0.2752	0.0586	7.5000e-004	0.0137	5.4000e-004	0.0143	4.1900e-003	5.2000e-004	4.7100e-003		78.8920	78.8920	6.5300e-003		79.0553
Worker	0.0465	0.0279	0.2984	9.6000e-004	0.0729	6.6000e-004	0.0736	0.0201	6.1000e-004	0.0207		95.5194	95.5194	2.2100e-003		95.5745
Total	**0.0540**	**0.3032**	**0.3570**	**1.7100e-003**	**0.0867**	**1.2000e-003**	**0.0879**	**0.0243**	**1.1300e-003**	**0.0254**		**174.4113**	**174.4113**	**8.7400e-003**		**174.6299**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5892	5.8893	6.3961	9.6600e-003		0.3212	0.3212		0.2964	0.2964		921.6808	921.6808	0.2898		928.9251
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5892**	**5.8893**	**6.3961**	**9.6600e-003**		**0.3212**	**0.3212**		**0.2964**	**0.2964**		**921.6808**	**921.6808**	**0.2898**		**928.9251**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0279	0.2984	9.6000e-004	0.1118	6.6000e-004	0.1124	0.0296	6.1000e-004	0.0303		95.5194	95.5194	2.2100e-003		95.5745
Total	**0.0465**	**0.0279**	**0.2984**	**9.6000e-004**	**0.1118**	**6.6000e-004**	**0.1124**	**0.0296**	**6.1000e-004**	**0.0303**		**95.5194**	**95.5194**	**2.2100e-003**		**95.5745**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5892	5.8893	6.3961	9.6600e-003		0.3212	0.3212		0.2964	0.2964	0.0000	921.6808	921.6808	0.2898		928.9251
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5892**	**5.8893**	**6.3961**	**9.6600e-003**		**0.3212**	**0.3212**		**0.2964**	**0.2964**	**0.0000**	**921.6808**	**921.6808**	**0.2898**		**928.9251**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0465	0.0279	0.2984	9.6000e-004	0.0729	6.6000e-004	0.0736	0.0201	6.1000e-004	0.0207		95.5194	95.5194	2.2100e-003		95.5745
Total	**0.0465**	**0.0279**	**0.2984**	**9.6000e-004**	**0.0729**	**6.6000e-004**	**0.0736**	**0.0201**	**6.1000e-004**	**0.0207**		**95.5194**	**95.5194**	**2.2100e-003**		**95.5745**

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.3313**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.3100e-003	5.5900e-003	0.0597	1.9000e-004	0.0224	1.3000e-004	0.0225	5.9300e-003	1.2000e-004	6.0500e-003		19.1039	19.1039	4.4000e-004		19.1149
Total	**9.3100e-003**	**5.5900e-003**	**0.0597**	**1.9000e-004**	**0.0224**	**1.3000e-004**	**0.0225**	**5.9300e-003**	**1.2000e-004**	**6.0500e-003**		**19.1039**	**19.1039**	**4.4000e-004**		**19.1149**

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.3313**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.3100e-003	5.5900e-003	0.0597	1.9000e-004	0.0146	1.3000e-004	0.0147	4.0200e-003	1.2000e-004	4.1400e-003		19.1039	19.1039	4.4000e-004		19.1149
Total	**9.3100e-003**	**5.5900e-003**	**0.0597**	**1.9000e-004**	**0.0146**	**1.3000e-004**	**0.0147**	**4.0200e-003**	**1.2000e-004**	**4.1400e-003**		**19.1039**	**19.1039**	**4.4000e-004**		**19.1149**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Unmitigated	8.8000e-003	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Total	**8.7900e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**		**4.6600e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6600e-003
Total	**8.7900e-003**	**2.0000e-005**	**2.0400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.3800e-003**	**4.3800e-003**	**1.0000e-005**		**4.6600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Renaissance Ranch-onsite

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	740.96	1000sqft	24.30	740,956.00	0
Industrial Park	235.22	1000sqft	9.00	235,224.00	0
Manufacturing	211.70	1000sqft	24.30	211,702.00	0
Refrigerated Warehouse-No Rail	423.40	1000sqft	24.30	423,403.00	0
Unrefrigerated Warehouse-No Rail	156.82	1000sqft	9.00	156,816.00	0
Unrefrigerated Warehouse-No Rail	740.96	1000sqft	24.30	740,956.00	0
Other Asphalt Surfaces	3.30	Acre	3.30	143,748.00	0
Other Non-Asphalt Surfaces	11.50	Acre	11.50	500,940.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	502.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Renaissance Ranch-onsite - Riverside-South Coast County, Summer

Project Characteristics - 2017 SEC CO2 intensity factor per Edison International Sustainability templet.

Land Use - Lot acreage updated to match that of the Project. Open space cpnseervation= non-asphalt surface. Open space conservation habitat was not accounted for in the modeling as no grading or other ground disturbances will take place.

Construction Phase - Construction timing updated to reflect an opening year of 2025. Construction, paving and coating assumed to occur simultaneously.

Off-road Equipment -

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Trips and VMT - No hauling trips- all dirt will be balanced on the project site.

Grading - Project is estimated to cut approximately 1.8 million cubic yards of soil- split between phases.

Vehicle Trips - Mobile emissions are modeled separately to account for fleet mix.

Energy Use -

Water And Wastewater - Water use updated to match the information provided in the project description that accounts for 172,800 gpd generated by the project.

Construction Off-road Equipment Mitigation - "Mitigation" accounts SCAQMD rule 403

Energy Mitigation - Energy use reflects 2019 title 24 standards. Increase in efficiency per CEC 2019 building energy efficiency standards frequently asked questions (2018)

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	810.00
tblConstructionPhase	NumDays	3,100.00	810.00
tblConstructionPhase	NumDays	310.00	200.00
tblConstructionPhase	NumDays	220.00	810.00

Renaissance Ranch-onsite - Riverside-South Coast County, Summer

tblGrading	AcresOfGrading	1,000.00	775.00
tblGrading	MaterialExported	0.00	900,000.00
tblGrading	MaterialExported	0.00	900,000.00
tblLandUse	LandUseSquareFeet	740,960.00	740,956.00
tblLandUse	LandUseSquareFeet	235,220.00	235,224.00
tblLandUse	LandUseSquareFeet	211,700.00	211,702.00
tblLandUse	LandUseSquareFeet	423,400.00	423,403.00
tblLandUse	LandUseSquareFeet	156,820.00	156,816.00
tblLandUse	LandUseSquareFeet	740,960.00	740,956.00
tblLandUse	LotAcreage	17.01	24.30
tblLandUse	LotAcreage	5.40	9.00
tblLandUse	LotAcreage	4.86	24.30
tblLandUse	LotAcreage	9.72	24.30
tblLandUse	LotAcreage	3.60	9.00
tblLandUse	LotAcreage	17.01	24.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	502.65
tblSolidWaste	SolidWasteGenerationRate	843.91	843.90
tblTripsAndVMT	HaulingTripNumber	112,500.00	0.00
tblTripsAndVMT	HaulingTripNumber	112,500.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	18.00
tblTripsAndVMT	WorkerTripNumber	40.00	20.00
tblTripsAndVMT	WorkerTripNumber	30.00	15.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	ST_TR	1.49	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	SU_TR	0.62	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblVehicleTrips	WD_TR	3.82	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	171,347,000.00	12,614,400.00

tblWater	IndoorWaterUseRate	54,394,625.00	12,614,400.00
tblWater	IndoorWaterUseRate	48,955,625.00	12,614,400.00
tblWater	IndoorWaterUseRate	97,911,250.00	12,614,400.00
tblWater	IndoorWaterUseRate	207,611,625.00	12,614,400.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.8617	81.0428	42.9740	0.0780	37.2835	4.0901	41.3736	20.0585	3.7629	23.8214	0.0000	7,562.9689	7,562.9689	2.3886	0.0000	7,622.6840
2022	43.2168	105.3374	128.1865	0.4034	37.2835	3.2711	40.5098	20.0585	3.0094	23.0267	0.0000	40,558.5445	40,558.5445	4.0117	0.0000	40,658.8375
2023	42.0777	89.2191	122.7878	0.3935	21.2504	2.6961	23.9465	5.7109	2.5224	8.2333	0.0000	39,561.9072	39,561.9072	3.7403	0.0000	39,655.4151
2024	41.3635	85.3224	119.3269	0.3873	21.2503	2.4189	23.6692	5.7108	2.2617	7.9725	0.0000	38,944.0345	38,944.0345	3.6864	0.0000	39,036.1950
2025	40.6211	80.6923	115.4197	0.3803	21.2502	2.1264	23.3766	5.7108	1.9876	7.6984	0.0000	38,243.5094	38,243.5094	3.6318	0.0000	38,334.3047
Maximum	**43.2168**	**105.3374**	**128.1865**	**0.4034**	**37.2835**	**4.0901**	**41.3736**	**20.0585**	**3.7629**	**23.8214**	**0.0000**	**40,558.5445**	**40,558.5445**	**4.0117**	**0.0000**	**40,658.8375**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.8617	81.0428	42.9740	0.0780	14.5933	4.0901	18.6834	7.8382	3.7629	11.6011	0.0000	7,562.9689	7,562.9689	2.3886	0.0000	7,622.6840
2022	42.6882	98.5525	129.4237	0.4034	14.5933	3.2711	17.8196	7.8382	3.0094	10.8064	0.0000	40,558.5445	40,558.5445	4.0117	0.0000	40,658.8375
2023	41.5868	83.0795	124.1264	0.3935	14.0685	2.4338	16.5023	3.9480	2.2824	6.2304	0.0000	39,561.9072	39,561.9072	3.7403	0.0000	39,655.4151
2024	40.9070	79.7275	120.7699	0.3873	14.0683	2.1803	16.2486	3.9480	2.0435	5.9915	0.0000	38,944.0345	38,944.0345	3.6864	0.0000	39,036.1950
2025	40.1977	75.6860	116.9297	0.3803	14.0682	1.9073	15.9756	3.9479	1.7873	5.7353	0.0000	38,243.5094	38,243.5094	3.6318	0.0000	38,334.3047
Maximum	**42.6882**	**98.5525**	**129.4237**	**0.4034**	**14.5933**	**4.0901**	**18.6834**	**7.8382**	**3.7629**	**11.6011**	**0.0000**	**40,558.5445**	**40,558.5445**	**4.0117**	**0.0000**	**40,658.8375**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.08**	**5.33**	**-1.05**	**0.00**	**48.39**	**4.93**	**44.25**	**51.93**	**4.86**	**42.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Energy	1.6400	14.9089	12.5235	0.0895		1.1331	1.1331		1.1331	1.1331		17,890.7017	17,890.7017	0.3429	0.3280	17,997.0172
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**57.9928**	**14.9113**	**12.7805**	**0.0895**	**0.0000**	**1.1340**	**1.1340**	**0.0000**	**1.1340**	**1.1340**		**17,891.2541**	**17,891.2541**	**0.3444**	**0.3280**	**17,997.6055**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Energy	1.4749	13.4085	11.2631	0.0805		1.0190	1.0190		1.0190	1.0190		16,090.1546	16,090.1546	0.3084	0.2950	16,185.7704
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**57.8277**	**13.4108**	**11.5201**	**0.0805**	**0.0000**	**1.0200**	**1.0200**	**0.0000**	**1.0200**	**1.0200**		**16,090.7070**	**16,090.7070**	**0.3098**	**0.2950**	**16,186.3587**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.28**	**10.06**	**9.86**	**10.06**	**0.00**	**10.06**	**10.06**	**0.00**	**10.06**	**10.06**	**0.00**	**10.06**	**10.06**	**10.02**	**10.06**	**10.06**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2021	1/14/2022	5	120	
2	Grading	Grading	1/15/2022	10/21/2022	5	200	
3	Building Construction	Building Construction	10/22/2022	11/30/2025	5	810	
4	Paving	Paving	10/22/2022	11/28/2025	5	810	
5	Architectural Coating	Architectural Coating	10/22/2022	11/30/2025	5	810	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 14.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,763,586; Non-Residential Outdoor: 1,254,529; Striped Parking Area: 38,681 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	6	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	8	8.00	97	0.37
Grading	Excavators	4	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	6	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	6	7.00	97	0.37
Building Construction	Welders	2	8.00	46	0.45
Paving	Pavers	4	8.00	130	0.42
Paving	Paving Equipment	4	8.00	132	0.36
Paving	Rollers	4	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	14	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	16	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	1,325.00	517.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	265.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.0823	0.0000	37.0823	20.0052	0.0000	20.0052			0.0000			0.0000
Off-Road	7.7764	80.9942	42.3085	0.0760		4.0889	4.0889		3.7618	3.7618		7,371.3138	7,371.3138	2.3840		7,430.9146
Total	**7.7764**	**80.9942**	**42.3085**	**0.0760**	**37.0823**	**4.0889**	**41.1712**	**20.0052**	**3.7618**	**23.7670**		**7,371.3138**	**7,371.3138**	**2.3840**		**7,430.9146**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	**0.0853**	**0.0486**	**0.6655**	**1.9200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**191.6552**	**191.6552**	**4.5700e-003**		**191.7694**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.4621	0.0000	14.4621	7.8020	0.0000	7.8020			0.0000			0.0000
Off-Road	7.7764	80.9942	42.3085	0.0760		4.0889	4.0889		3.7618	3.7618	0.0000	7,371.3138	7,371.3138	2.3840		7,430.9146
Total	**7.7764**	**80.9942**	**42.3085**	**0.0760**	**14.4621**	**4.0889**	**18.5510**	**7.8020**	**3.7618**	**11.5638**	**0.0000**	**7,371.3138**	**7,371.3138**	**2.3840**		**7,430.9146**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0853	0.0486	0.6655	1.9200e-003	0.1312	1.1900e-003	0.1324	0.0362	1.0900e-003	0.0373		191.6552	191.6552	4.5700e-003		191.7694
Total	**0.0853**	**0.0486**	**0.6655**	**1.9200e-003**	**0.1312**	**1.1900e-003**	**0.1324**	**0.0362**	**1.0900e-003**	**0.0373**		**191.6552**	**191.6552**	**4.5700e-003**		**191.7694**

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.0823	0.0000	37.0823	20.0052	0.0000	20.0052			0.0000			0.0000
Off-Road	6.3403	66.1670	39.3955	0.0761		3.2252	3.2252		2.9671	2.9671		7,372.1237	7,372.1237	2.3843		7,431.7311
Total	**6.3403**	**66.1670**	**39.3955**	**0.0761**	**37.0823**	**3.2252**	**40.3074**	**20.0052**	**2.9671**	**22.9723**		**7,372.1237**	**7,372.1237**	**2.3843**		**7,431.7311**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0798	0.0438	0.6138	1.8500e-003	0.2012	1.1500e-003	0.2024	0.0534	1.0600e-003	0.0544		184.6523	184.6523	4.1000e-003		184.7549
Total	**0.0798**	**0.0438**	**0.6138**	**1.8500e-003**	**0.2012**	**1.1500e-003**	**0.2024**	**0.0534**	**1.0600e-003**	**0.0544**		**184.6523**	**184.6523**	**4.1000e-003**		**184.7549**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.4621	0.0000	14.4621	7.8020	0.0000	7.8020			0.0000			0.0000
Off-Road	6.3403	66.1670	39.3955	0.0761		3.2252	3.2252		2.9671	2.9671	0.0000	7,372.1237	7,372.1237	2.3843		7,431.7311
Total	**6.3403**	**66.1670**	**39.3955**	**0.0761**	**14.4621**	**3.2252**	**17.6872**	**7.8020**	**2.9671**	**10.7692**	**0.0000**	**7,372.1237**	**7,372.1237**	**2.3843**		**7,431.7311**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0798	0.0438	0.6138	1.8500e-003	0.1312	1.1500e-003	0.1324	0.0362	1.0600e-003	0.0373		184.6523	184.6523	4.1000e-003		184.7549
Total	**0.0798**	**0.0438**	**0.6138**	**1.8500e-003**	**0.1312**	**1.1500e-003**	**0.1324**	**0.0362**	**1.0600e-003**	**0.0373**		**184.6523**	**184.6523**	**4.1000e-003**		**184.7549**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.7235	0.0000	16.7235	7.1505	0.0000	7.1505			0.0000			0.0000
Off-Road	7.2497	77.6870	58.0830	0.1242		3.2698	3.2698		3.0082	3.0082		12,022.8211	12,022.8211	3.8884		12,120.0317
Total	**7.2497**	**77.6870**	**58.0830**	**0.1242**	**16.7235**	**3.2698**	**19.9932**	**7.1505**	**3.0082**	**10.1587**		**12,022.8211**	**12,022.8211**	**3.8884**		**12,120.0317**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0887	0.0486	0.6820	2.0600e-003	0.2236	1.2800e-003	0.2248	0.0593	1.1800e-003	0.0605		205.1692	205.1692	4.5600e-003		205.2832
Total	**0.0887**	**0.0486**	**0.6820**	**2.0600e-003**	**0.2236**	**1.2800e-003**	**0.2248**	**0.0593**	**1.1800e-003**	**0.0605**		**205.1692**	**205.1692**	**4.5600e-003**		**205.2832**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5222	0.0000	6.5222	2.7887	0.0000	2.7887			0.0000			0.0000
Off-Road	7.2497	77.6870	58.0830	0.1242		3.2698	3.2698		3.0082	3.0082	0.0000	12,022.8211	12,022.8211	3.8884		12,120.0317
Total	**7.2497**	**77.6870**	**58.0830**	**0.1242**	**6.5222**	**3.2698**	**9.7919**	**2.7887**	**3.0082**	**5.7969**	**0.0000**	**12,022.8211**	**12,022.8211**	**3.8884**		**12,120.0317**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0887	0.0486	0.6820	2.0600e-003	0.1458	1.2800e-003	0.1471	0.0402	1.1800e-003	0.0414		205.1692	205.1692	4.5600e-003		205.2832
Total	**0.0887**	**0.0486**	**0.6820**	**2.0600e-003**	**0.1458**	**1.2800e-003**	**0.1471**	**0.0402**	**1.1800e-003**	**0.0414**		**205.1692**	**205.1692**	**4.5600e-003**		**205.2832**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4125	31.2313	32.7268	0.0539		1.6180	1.6180		1.5223	1.5223		5,108.6672	5,108.6672	1.2239		5,139.2644
Total	**3.4125**	**31.2313**	**32.7268**	**0.0539**		**1.6180**	**1.6180**		**1.5223**	**1.5223**		**5,108.6672**	**5,108.6672**	**1.2239**		**5,139.2644**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1254	45.1382	7.9394	0.1328	3.3104	0.0765	3.3869	0.9531	0.0732	1.0263		14,006.8317	14,006.8317	0.9572		14,030.7608
Worker	5.8758	3.2206	45.1838	0.1364	14.8104	0.0850	14.8954	3.9278	0.0782	4.0060		13,592.4600	13,592.4600	0.3022		13,600.0141
Total	**7.0012**	**48.3588**	**53.1233**	**0.2692**	**18.1208**	**0.1615**	**18.2823**	**4.8809**	**0.1514**	**5.0323**		**27,599.2917**	**27,599.2917**	**1.2593**		**27,630.7749**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8838	24.4464	33.9640	0.0539		1.3305	1.3305		1.2592	1.2592	0.0000	5,108.6672	5,108.6672	1.2239		5,139.2644
Total	**2.8838**	**24.4464**	**33.9640**	**0.0539**		**1.3305**	**1.3305**		**1.2592**	**1.2592**	**0.0000**	**5,108.6672**	**5,108.6672**	**1.2239**		**5,139.2644**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1254	45.1382	7.9394	0.1328	2.3671	0.0765	2.4436	0.7216	0.0732	0.7948		14,006.8317	14,006.8317	0.9572		14,030.7608
Worker	5.8758	3.2206	45.1838	0.1364	9.6601	0.0850	9.7451	2.6636	0.0782	2.7419		13,592.4600	13,592.4600	0.3022		13,600.0141
Total	**7.0012**	**48.3588**	**53.1233**	**0.2692**	**12.0272**	**0.1615**	**12.1887**	**3.3852**	**0.1514**	**3.5366**		**27,599.2917**	**27,599.2917**	**1.2593**		**27,630.7749**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1455	28.7698	32.4880	0.0539		1.3995	1.3995		1.3169	1.3169		5,110.4199	5,110.4199	1.2157		5,140.8121
Total	**3.1455**	**28.7698**	**32.4880**	**0.0539**		**1.3995**	**1.3995**		**1.3169**	**1.3169**		**5,110.4199**	**5,110.4199**	**1.2157**		**5,140.8121**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8632	33.9420	6.9979	0.1292	3.3103	0.0342	3.3444	0.9531	0.0327	0.9857		13,634.3006	13,634.3006	0.7345		13,652.6622
Worker	5.5092	2.9043	41.6993	0.1312	14.8104	0.0830	14.8933	3.9278	0.0764	4.0042		13,075.9110	13,075.9110	0.2712		13,082.6914
Total	**6.3724**	**36.8463**	**48.6972**	**0.2604**	**18.1206**	**0.1171**	**18.2377**	**4.8808**	**0.1090**	**4.9899**		**26,710.2116**	**26,710.2116**	**1.0057**		**26,735.3536**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6546	22.6302	33.8266	0.0539		1.1372	1.1372		1.0769	1.0769	0.0000	5,110.4198	5,110.4198	1.2157		5,140.8121
Total	**2.6546**	**22.6302**	**33.8266**	**0.0539**		**1.1372**	**1.1372**		**1.0769**	**1.0769**	**0.0000**	**5,110.4198**	**5,110.4198**	**1.2157**		**5,140.8121**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8632	33.9420	6.9979	0.1292	2.3670	0.0342	2.4011	0.7215	0.0327	0.7542		13,634.3006	13,634.3006	0.7345		13,652.6622
Worker	5.5092	2.9043	41.6993	0.1312	9.6601	0.0830	9.7431	2.6636	0.0764	2.7400		13,075.9110	13,075.9110	0.2712		13,082.6914
Total	**6.3724**	**36.8463**	**48.6972**	**0.2604**	**12.0271**	**0.1171**	**12.1442**	**3.3852**	**0.1090**	**3.4942**		**26,710.2116**	**26,710.2116**	**1.0057**		**26,735.3536**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9431	26.8876	32.3336	0.0539		1.2266	1.2266		1.1538	1.1538		5,111.3978	5,111.3978	1.2087		5,141.6153
Total	**2.9431**	**26.8876**	**32.3336**	**0.0539**		**1.2266**	**1.2266**		**1.1538**	**1.1538**		**5,111.3978**	**5,111.3978**	**1.2087**		**5,141.6153**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8465	33.7578	6.7600	0.1286	3.3102	0.0340	3.3441	0.9530	0.0325	0.9855		13,580.9612	13,580.9612	0.7185		13,598.9241
Worker	5.1920	2.6337	39.0991	0.1265	14.8104	0.0821	14.8925	3.9278	0.0756	4.0033		12,609.1169	12,609.1169	0.2473		12,615.2997
Total	**6.0385**	**36.3915**	**45.8591**	**0.2551**	**18.1205**	**0.1161**	**18.2366**	**4.8808**	**0.1080**	**4.9888**		**26,190.0781**	**26,190.0781**	**0.9658**		**26,214.2239**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4866	21.2926	33.7767	0.0539		0.9880	0.9880		0.9356	0.9356	0.0000	5,111.3978	5,111.3978	1.2087		5,141.6153
Total	**2.4866**	**21.2926**	**33.7767**	**0.0539**		**0.9880**	**0.9880**		**0.9356**	**0.9356**	**0.0000**	**5,111.3978**	**5,111.3978**	**1.2087**		**5,141.6153**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8465	33.7578	6.7600	0.1286	2.3669	0.0340	2.4009	0.7215	0.0325	0.7540		13,580.9612	13,580.9612	0.7185		13,598.9241
Worker	5.1920	2.6337	39.0991	0.1265	9.6601	0.0821	9.7422	2.6636	0.0756	2.7392		12,609.1169	12,609.1169	0.2473		12,615.2997
Total	**6.0385**	**36.3915**	**45.8591**	**0.2551**	**12.0270**	**0.1161**	**12.1430**	**3.3851**	**0.1080**	**3.4931**		**26,190.0781**	**26,190.0781**	**0.9658**		**26,214.2239**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7348	24.9394	32.1693	0.0539		1.0551	1.0551		0.9925	0.9925		5,112.9487	5,112.9487	1.2019		5,142.9961
Total	**2.7348**	**24.9394**	**32.1693**	**0.0539**		**1.0551**	**1.0551**		**0.9925**	**0.9925**		**5,112.9487**	**5,112.9487**	**1.2019**		**5,142.9961**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8247	33.3936	6.5290	0.1278	3.3100	0.0336	3.3436	0.9530	0.0321	0.9851		13,492.5942	13,492.5942	0.7003		13,510.1004
Worker	4.9060	2.3983	36.2804	0.1214	14.8104	0.0806	14.8910	3.9278	0.0742	4.0020		12,103.7966	12,103.7966	0.2242		12,109.4010
Total	**5.7307**	**35.7919**	**42.8094**	**0.2492**	**18.1204**	**0.1142**	**18.2346**	**4.8808**	**0.1063**	**4.9871**		**25,596.3908**	**25,596.3908**	**0.9244**		**25,619.5014**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3114	19.9331	33.6793	0.0539		0.8360	0.8360		0.7923	0.7923	0.0000	5,112.9487	5,112.9487	1.2019		5,142.9961
Total	**2.3114**	**19.9331**	**33.6793**	**0.0539**		**0.8360**	**0.8360**		**0.7923**	**0.7923**	**0.0000**	**5,112.9487**	**5,112.9487**	**1.2019**		**5,142.9961**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8247	33.3936	6.5290	0.1278	2.3668	0.0336	2.4004	0.7215	0.0321	0.7536		13,492.5942	13,492.5942	0.7003		13,510.1004
Worker	4.9060	2.3983	36.2804	0.1214	9.6601	0.0806	9.7407	2.6636	0.0742	2.7378		12,103.7966	12,103.7966	0.2242		12,109.4010
Total	**5.7307**	**35.7919**	**42.8094**	**0.2492**	**12.0269**	**0.1142**	**12.1411**	**3.3851**	**0.1063**	**3.4914**		**25,596.3908**	**25,596.3908**	**0.9244**		**25,619.5014**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2056	22.2498	29.1610	0.0456		1.1358	1.1358		1.0449	1.0449		4,415.3206	4,415.3206	1.4280		4,451.0207
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2163**	**22.2498**	**29.1610**	**0.0456**		**1.1358**	**1.1358**		**1.0449**	**1.0449**		**4,415.3206**	**4,415.3206**	**1.4280**		**4,451.0207**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0365	0.5115	1.5400e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		153.8769	153.8769	3.4200e-003		153.9624
Total	**0.0665**	**0.0365**	**0.5115**	**1.5400e-003**	**0.1677**	**9.6000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**153.8769**	**153.8769**	**3.4200e-003**		**153.9624**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2056	22.2498	29.1610	0.0456		1.1358	1.1358		1.0449	1.0449	0.0000	4,415.3206	4,415.3206	1.4280		4,451.0207
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2163**	**22.2498**	**29.1610**	**0.0456**		**1.1358**	**1.1358**		**1.0449**	**1.0449**	**0.0000**	**4,415.3206**	**4,415.3206**	**1.4280**		**4,451.0207**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0365	0.5115	1.5400e-003	0.1094	9.6000e-004	0.1103	0.0302	8.9000e-004	0.0310		153.8769	153.8769	3.4200e-003		153.9624
Total	**0.0665**	**0.0365**	**0.5115**	**1.5400e-003**	**0.1094**	**9.6000e-004**	**0.1103**	**0.0302**	**8.9000e-004**	**0.0310**		**153.8769**	**153.8769**	**3.4200e-003**		**153.9624**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0655	20.3833	29.1684	0.0456		1.0204	1.0204		0.9388	0.9388		4,415.1683	4,415.1683	1.4280		4,450.8672
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0761**	**20.3833**	**29.1684**	**0.0456**		**1.0204**	**1.0204**		**0.9388**	**0.9388**		**4,415.1683**	**4,415.1683**	**1.4280**		**4,450.8672**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059
Total	**0.0624**	**0.0329**	**0.4721**	**1.4900e-003**	**0.1677**	**9.4000e-004**	**0.1686**	**0.0445**	**8.6000e-004**	**0.0453**		**148.0292**	**148.0292**	**3.0700e-003**		**148.1059**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0655	20.3833	29.1684	0.0456		1.0204	1.0204		0.9388	0.9388	0.0000	4,415.1683	4,415.1683	1.4280		4,450.8672
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0761**	**20.3833**	**29.1684**	**0.0456**		**1.0204**	**1.0204**		**0.9388**	**0.9388**	**0.0000**	**4,415.1683**	**4,415.1683**	**1.4280**		**4,450.8672**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0329	0.4721	1.4900e-003	0.1094	9.4000e-004	0.1103	0.0302	8.6000e-004	0.0310		148.0292	148.0292	3.0700e-003		148.1059
Total	**0.0624**	**0.0329**	**0.4721**	**1.4900e-003**	**0.1094**	**9.4000e-004**	**0.1103**	**0.0302**	**8.6000e-004**	**0.0310**		**148.0292**	**148.0292**	**3.0700e-003**		**148.1059**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9763	19.0492	29.2515	0.0456		0.9370	0.9370		0.8621	0.8621		4,415.0944	4,415.0944	1.4279		4,450.7927
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9870**	**19.0492**	**29.2515**	**0.0456**		**0.9370**	**0.9370**		**0.8621**	**0.8621**		**4,415.0944**	**4,415.0944**	**1.4279**		**4,450.7927**

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0298	0.4426	1.4300e-003	0.1677	9.3000e-004	0.1686	0.0445	8.6000e-004	0.0453		142.7447	142.7447	2.8000e-003		142.8147
Total	**0.0588**	**0.0298**	**0.4426**	**1.4300e-003**	**0.1677**	**9.3000e-004**	**0.1686**	**0.0445**	**8.6000e-004**	**0.0453**		**142.7447**	**142.7447**	**2.8000e-003**		**142.8147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9763	19.0492	29.2515	0.0456		0.9370	0.9370		0.8621	0.8621	0.0000	4,415.0944	4,415.0944	1.4279		4,450.7927
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9870**	**19.0492**	**29.2515**	**0.0456**		**0.9370**	**0.9370**		**0.8621**	**0.8621**	**0.0000**	**4,415.0944**	**4,415.0944**	**1.4279**		**4,450.7927**

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0298	0.4426	1.4300e-003	0.1094	9.3000e-004	0.1103	0.0302	8.6000e-004	0.0310		142.7447	142.7447	2.8000e-003		142.8147
Total	**0.0588**	**0.0298**	**0.4426**	**1.4300e-003**	**0.1094**	**9.3000e-004**	**0.1103**	**0.0302**	**8.6000e-004**	**0.0310**		**142.7447**	**142.7447**	**2.8000e-003**		**142.8147**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8303	17.1633	29.1559	0.0456		0.8371	0.8371		0.7701	0.7701		4,413.4903	4,413.4903	1.4274		4,449.1756
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8410**	**17.1633**	**29.1559**	**0.0456**		**0.8371**	**0.8371**		**0.7701**	**0.7701**		**4,413.4903**	**4,413.4903**	**1.4274**		**4,449.1756**

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0555	0.0272	0.4107	1.3700e-003	0.1677	9.1000e-004	0.1686	0.0445	8.4000e-004	0.0453		137.0241	137.0241	2.5400e-003		137.0876
Total	**0.0555**	**0.0272**	**0.4107**	**1.3700e-003**	**0.1677**	**9.1000e-004**	**0.1686**	**0.0445**	**8.4000e-004**	**0.0453**		**137.0241**	**137.0241**	**2.5400e-003**		**137.0876**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8303	17.1633	29.1559	0.0456		0.8371	0.8371		0.7701	0.7701	0.0000	4,413.4903	4,413.4903	1.4274		4,449.1756
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8410**	**17.1633**	**29.1559**	**0.0456**		**0.8371**	**0.8371**		**0.7701**	**0.7701**	**0.0000**	**4,413.4903**	**4,413.4903**	**1.4274**		**4,449.1756**

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0555	0.0272	0.4107	1.3700e-003	0.1094	9.1000e-004	0.1103	0.0302	8.4000e-004	0.0310		137.0241	137.0241	2.5400e-003		137.0876
Total	**0.0555**	**0.0272**	**0.4107**	**1.3700e-003**	**0.1094**	**9.1000e-004**	**0.1103**	**0.0302**	**8.4000e-004**	**0.0310**		**137.0241**	**137.0241**	**2.5400e-003**		**137.0876**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4091	2.8170	3.6272	5.9400e-003		0.1634	0.1634		0.1634	0.1634		562.8961	562.8961	0.0367		563.8123
Total	**29.3452**	**2.8170**	**3.6272**	**5.9400e-003**		**0.1634**	**0.1634**		**0.1634**	**0.1634**		**562.8961**	**562.8961**	**0.0367**		**563.8123**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1752	0.6441	9.0368	0.0273	2.9621	0.0170	2.9791	0.7856	0.0157	0.8012		2,718.4920	2,718.4920	0.0604		2,720.0028
Total	**1.1752**	**0.6441**	**9.0368**	**0.0273**	**2.9621**	**0.0170**	**2.9791**	**0.7856**	**0.0157**	**0.8012**		**2,718.4920**	**2,718.4920**	**0.0604**		**2,720.0028**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4091	2.8170	3.6272	5.9400e-003		0.1634	0.1634		0.1634	0.1634	0.0000	562.8961	562.8961	0.0367		563.8123
Total	**29.3452**	**2.8170**	**3.6272**	**5.9400e-003**		**0.1634**	**0.1634**		**0.1634**	**0.1634**	**0.0000**	**562.8961**	**562.8961**	**0.0367**		**563.8123**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1752	0.6441	9.0368	0.0273	1.9320	0.0170	1.9490	0.5327	0.0157	0.5484		2,718.4920	2,718.4920	0.0604		2,720.0028
Total	**1.1752**	**0.6441**	**9.0368**	**0.0273**	**1.9320**	**0.0170**	**1.9490**	**0.5327**	**0.0157**	**0.5484**		**2,718.4920**	**2,718.4920**	**0.0604**		**2,720.0028**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416		562.8961	562.8961	0.0337		563.7380
Total	**29.3194**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**		**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1018	0.5809	8.3399	0.0262	2.9621	0.0166	2.9787	0.7856	0.0153	0.8008		2,615.1822	2,615.1822	0.0542		2,616.5383
Total	**1.1018**	**0.5809**	**8.3399**	**0.0262**	**2.9621**	**0.0166**	**2.9787**	**0.7856**	**0.0153**	**0.8008**		**2,615.1822**	**2,615.1822**	**0.0542**		**2,616.5383**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416	0.0000	562.8961	562.8961	0.0337		563.7380
Total	**29.3194**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**	**0.0000**	**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1018	0.5809	8.3399	0.0262	1.9320	0.0166	1.9486	0.5327	0.0153	0.5480		2,615.1822	2,615.1822	0.0542		2,616.5383
Total	**1.1018**	**0.5809**	**8.3399**	**0.0262**	**1.9320**	**0.0166**	**1.9486**	**0.5327**	**0.0153**	**0.5480**		**2,615.1822**	**2,615.1822**	**0.0542**		**2,616.5383**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3615	2.4376	3.6203	5.9400e-003		0.1218	0.1218		0.1218	0.1218		562.8961	562.8961	0.0317		563.6885
Total	**29.2976**	**2.4376**	**3.6203**	**5.9400e-003**		**0.1218**	**0.1218**		**0.1218**	**0.1218**		**562.8961**	**562.8961**	**0.0317**		**563.6885**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0384	0.5267	7.8198	0.0253	2.9621	0.0164	2.9785	0.7856	0.0151	0.8007		2,521.8234	2,521.8234	0.0495		2,523.0600
Total	**1.0384**	**0.5267**	**7.8198**	**0.0253**	**2.9621**	**0.0164**	**2.9785**	**0.7856**	**0.0151**	**0.8007**		**2,521.8234**	**2,521.8234**	**0.0495**		**2,523.0600**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3615	2.4376	3.6203	5.9400e-003		0.1218	0.1218		0.1218	0.1218	0.0000	562.8961	562.8961	0.0317		563.6885
Total	**29.2976**	**2.4376**	**3.6203**	**5.9400e-003**		**0.1218**	**0.1218**		**0.1218**	**0.1218**	**0.0000**	**562.8961**	**562.8961**	**0.0317**		**563.6885**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0384	0.5267	7.8198	0.0253	1.9320	0.0164	1.9484	0.5327	0.0151	0.5478		2,521.8234	2,521.8234	0.0495		2,523.0600
Total	**1.0384**	**0.5267**	**7.8198**	**0.0253**	**1.9320**	**0.0164**	**1.9484**	**0.5327**	**0.0151**	**0.5478**		**2,521.8234**	**2,521.8234**	**0.0495**		**2,523.0600**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030		562.8961	562.8961	0.0307		563.6637
Total	**29.2778**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**		**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.9812	0.4797	7.2561	0.0243	2.9621	0.0161	2.9782	0.7856	0.0148	0.8004		2,420.7593	2,420.7593	0.0448		2,421.8802
Total	**0.9812**	**0.4797**	**7.2561**	**0.0243**	**2.9621**	**0.0161**	**2.9782**	**0.7856**	**0.0148**	**0.8004**		**2,420.7593**	**2,420.7593**	**0.0448**		**2,421.8802**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**29.2778**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.9812	0.4797	7.2561	0.0243	1.9320	0.0161	1.9481	0.5327	0.0148	0.5476		2,420.7593	2,420.7593	0.0448		2,421.8802
Total	**0.9812**	**0.4797**	**7.2561**	**0.0243**	**1.9320**	**0.0161**	**1.9481**	**0.5327**	**0.0148**	**0.5476**		**2,420.7593**	**2,420.7593**	**0.0448**		**2,421.8802**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Manufacturing	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Industrial Park	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Manufacturing	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Other Asphalt Surfaces	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Other Non-Asphalt Surfaces	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Refrigerated Warehouse-No Rail	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Unrefrigerated Warehouse-No Rail	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Renaissance Ranch-onsite - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4749	13.4085	11.2631	0.0805		1.0190	1.0190		1.0190	1.0190		16,090.1546	16,090.1546	0.3084	0.2950	16,185.7704
NaturalGas Unmitigated	1.6400	14.9089	12.5235	0.0895		1.1331	1.1331		1.1331	1.1331		17,890.7017	17,890.7017	0.3429	0.3280	17,997.0172

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	65955.2	0.7113	6.4662	5.4316	0.0388		0.4914	0.4914		0.4914	0.4914		7,759.4393	7,759.4393	0.1487	0.1423	7,805.5498
Industrial Park	2236.24	0.0241	0.2192	0.1842	1.3200e-003		0.0167	0.0167		0.0167	0.0167		263.0870	263.0870	5.0400e-003	4.8200e-003	264.6504
Manufacturing	18844.4	0.2032	1.8475	1.5519	0.0111		0.1404	0.1404		0.1404	0.1404		2,216.9857	2,216.9857	0.0425	0.0406	2,230.1601
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	60042	0.6475	5.8865	4.9446	0.0353		0.4474	0.4474		0.4474	0.4474		7,063.7677	7,063.7677	0.1354	0.1295	7,105.7441
Unrefrigerated Warehouse-No Rail	4120.93	0.0444	0.4040	0.3394	2.4200e-003		0.0307	0.0307		0.0307	0.0307		484.8157	484.8157	9.2900e-003	8.8900e-003	487.6967
Unrefrigerated Warehouse-No Rail	872.155	9.4100e-003	0.0855	0.0718	5.1000e-004		6.5000e-003	6.5000e-003		6.5000e-003	6.5000e-003		102.6064	102.6064	1.9700e-003	1.8800e-003	103.2162
Total		**1.6400**	**14.9089**	**12.5235**	**0.0895**		**1.1331**	**1.1331**		**1.1331**	**1.1331**		**17,890.7017**	**17,890.7017**	**0.3429**	**0.3280**	**17,997.0172**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	56.6009	0.6104	5.5491	4.6613	0.0333		0.4217	0.4217		0.4217	0.4217		6,658.9316	6,658.9316	0.1276	0.1221	6,698.5023
Industrial Park	1.56537	0.0169	0.1535	0.1289	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1609	184.1609	3.5300e-003	3.3800e-003	185.2552
Manufacturing	16.1717	0.1744	1.5855	1.3318	9.5100e-003		0.1205	0.1205		0.1205	0.1205		1,902.5544	1,902.5544	0.0365	0.0349	1,913.8604
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	58.911	0.6353	5.7756	4.8515	0.0347		0.4389	0.4389		0.4389	0.4389		6,930.7079	6,930.7079	0.1328	0.1271	6,971.8937
Unrefrigerated Warehouse-No Rail	0.614375	6.6300e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2794	72.2794	1.3900e-003	1.3300e-003	72.7089
Unrefrigerated Warehouse-No Rail	2.90292	0.0313	0.2846	0.2391	1.7100e-003		0.0216	0.0216		0.0216	0.0216		341.5204	341.5204	6.5500e-003	6.2600e-003	343.5499
Total		**1.4749**	**13.4085**	**11.2631**	**0.0804**		**1.0190**	**1.0190**		**1.0190**	**1.0190**		**16,090.1546**	**16,090.1546**	**0.3084**	**0.2950**	**16,185.7704**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Unmitigated	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	49.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0237	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Total	**56.3528**	**2.3300e-003**	**0.2570**	**2.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**		**0.5524**	**0.5524**	**1.4400e-003**		**0.5883**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	49.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0237	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Total	**56.3528**	**2.3300e-003**	**0.2570**	**2.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**		**0.5524**	**0.5524**	**1.4400e-003**		**0.5883**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Renaissance Ranch-onsite

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	740.96	1000sqft	24.30	740,956.00	0
Industrial Park	235.22	1000sqft	9.00	235,224.00	0
Manufacturing	211.70	1000sqft	24.30	211,702.00	0
Refrigerated Warehouse-No Rail	423.40	1000sqft	24.30	423,403.00	0
Unrefrigerated Warehouse-No Rail	156.82	1000sqft	9.00	156,816.00	0
Unrefrigerated Warehouse-No Rail	740.96	1000sqft	24.30	740,956.00	0
Other Asphalt Surfaces	3.30	Acre	3.30	143,748.00	0
Other Non-Asphalt Surfaces	11.50	Acre	11.50	500,940.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	502.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Renaissance Ranch-onsite - Riverside-South Coast County, Winter

Project Characteristics - 2017 SEC CO2 intensity factor per Edison International Sustainability templet.

Land Use - Lot acreage updated to match that of the Project. Open space cpnseervation= non-asphalt surface. Open space conservation habitat was not accounted for in the modeling as no grading or other ground disturbances will take place.

Construction Phase - Construction timing updated to reflect an opening year of 2025. Construction, paving and coating assumed to occur simultaneously.

Off-road Equipment -

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Trips and VMT - No hauling trips- all dirt will be balanced on the project site.

Grading - Project is estimated to cut approximately 1.8 million cubic yards of soil- split between phases.

Vehicle Trips - Mobile emissions are modeled separately to account for fleet mix.

Energy Use -

Water And Wastewater - Water use updated to match the information provided in the project description that accounts for 172,800 gpd generated by the project.

Construction Off-road Equipment Mitigation - "Mitigation" accounts SCAQMD rule 403

Energy Mitigation - Energy use reflects 2019 title 24 standards. Increase in efficiency per CEC 2019 building energy efficiency standards frequently asked questions (2018)

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	310.00	200.00
tblConstructionPhase	NumDays	3,100.00	810.00
tblConstructionPhase	NumDays	220.00	810.00
tblConstructionPhase	NumDays	220.00	810.00

tblGrading	AcresOfGrading	1,000.00	775.00
tblGrading	MaterialExported	0.00	900,000.00
tblGrading	MaterialExported	0.00	900,000.00
tblLandUse	LandUseSquareFeet	740,960.00	740,956.00
tblLandUse	LandUseSquareFeet	235,220.00	235,224.00
tblLandUse	LandUseSquareFeet	211,700.00	211,702.00
tblLandUse	LandUseSquareFeet	423,400.00	423,403.00
tblLandUse	LandUseSquareFeet	156,820.00	156,816.00
tblLandUse	LandUseSquareFeet	740,960.00	740,956.00
tblLandUse	LotAcreage	17.01	24.30
tblLandUse	LotAcreage	5.40	9.00
tblLandUse	LotAcreage	4.86	24.30
tblLandUse	LotAcreage	9.72	24.30
tblLandUse	LotAcreage	3.60	9.00
tblLandUse	LotAcreage	17.01	24.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	502.65
tblSolidWaste	SolidWasteGenerationRate	843.91	843.90
tblTripsAndVMT	HaulingTripNumber	112,500.00	0.00
tblTripsAndVMT	HaulingTripNumber	112,500.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	18.00
tblTripsAndVMT	WorkerTripNumber	40.00	20.00
tblTripsAndVMT	WorkerTripNumber	30.00	15.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	ST_TR	1.49	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	SU_TR	0.62	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblVehicleTrips	WD_TR	3.82	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	171,347,000.00	12,614,400.00

tblWater	IndoorWaterUseRate	54,394,625.00	12,614,400.00
tblWater	IndoorWaterUseRate	48,955,625.00	12,614,400.00
tblWater	IndoorWaterUseRate	97,911,250.00	12,614,400.00
tblWater	IndoorWaterUseRate	207,611,625.00	12,614,400.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.8601	81.0445	42.8457	0.0778	37.2835	4.0901	41.3736	20.0585	3.7629	23.8214	0.0000	7,543.2486	7,543.2486	2.3880	0.0000	7,602.9487
2022	43.1763	105.0171	119.0533	0.3813	37.2835	3.2711	40.5098	20.0585	3.0094	23.0267	0.0000	38,335.3310	38,335.3310	4.0747	0.0000	38,437.1989
2023	42.0447	88.8750	114.0120	0.3723	21.2504	2.6973	23.9477	5.7109	2.5235	8.2344	0.0000	37,426.1139	37,426.1139	3.7778	0.0000	37,520.5589
2024	41.3534	84.9716	111.0583	0.3667	21.2503	2.4200	23.6702	5.7108	2.2627	7.9735	0.0000	36,871.0130	36,871.0130	3.7259	0.0000	36,964.1593
2025	40.6296	80.3267	107.7739	0.3604	21.2502	2.1274	23.3776	5.7108	1.9885	7.6993	0.0000	36,240.9451	36,240.9451	3.6728	0.0000	36,332.7641
Maximum	**43.1763**	**105.0171**	**119.0533**	**0.3813**	**37.2835**	**4.0901**	**41.3736**	**20.0585**	**3.7629**	**23.8214**	**0.0000**	**38,335.3310**	**38,335.3310**	**4.0747**	**0.0000**	**38,437.1989**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.8601	81.0445	42.8457	0.0778	14.5933	4.0901	18.6834	7.8382	3.7629	11.6011	0.0000	7,543.2486	7,543.2486	2.3880	0.0000	7,602.9487
2022	42.6476	98.2322	120.2905	0.3813	14.5933	3.2711	17.8196	7.8382	3.0094	10.8064	0.0000	38,335.3310	38,335.3310	4.0747	0.0000	38,437.1989
2023	41.5537	82.7354	115.3505	0.3723	14.0685	2.4350	16.5034	3.9480	2.2835	6.2315	0.0000	37,426.1139	37,426.1139	3.7778	0.0000	37,520.5589
2024	40.8969	79.3767	112.5013	0.3667	14.0683	2.1813	16.2497	3.9480	2.0445	5.9925	0.0000	36,871.0130	36,871.0130	3.7259	0.0000	36,964.1593
2025	40.2062	75.3204	109.2839	0.3604	14.0682	1.9083	15.9765	3.9479	1.7882	5.7362	0.0000	36,240.9450	36,240.9450	3.6728	0.0000	36,332.7641
Maximum	**42.6476**	**98.2322**	**120.2905**	**0.3813**	**14.5933**	**4.0901**	**18.6834**	**7.8382**	**3.7629**	**11.6011**	**0.0000**	**38,335.3310**	**38,335.3310**	**4.0747**	**0.0000**	**38,437.1989**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.08**	**5.34**	**-1.12**	**0.00**	**48.39**	**4.93**	**44.25**	**51.93**	**4.86**	**42.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Energy	1.6400	14.9089	12.5235	0.0895		1.1331	1.1331		1.1331	1.1331		17,890.7017	17,890.7017	0.3429	0.3280	17,997.0172
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**57.9928**	**14.9113**	**12.7805**	**0.0895**	**0.0000**	**1.1340**	**1.1340**	**0.0000**	**1.1340**	**1.1340**		**17,891.2541**	**17,891.2541**	**0.3444**	**0.3280**	**17,997.6055**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Energy	1.4749	13.4085	11.2631	0.0805		1.0190	1.0190		1.0190	1.0190		16,090.1546	16,090.1546	0.3084	0.2950	16,185.7704
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**57.8277**	**13.4108**	**11.5201**	**0.0805**	**0.0000**	**1.0200**	**1.0200**	**0.0000**	**1.0200**	**1.0200**		**16,090.7070**	**16,090.7070**	**0.3098**	**0.2950**	**16,186.3587**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.28**	**10.06**	**9.86**	**10.06**	**0.00**	**10.06**	**10.06**	**0.00**	**10.06**	**10.06**	**0.00**	**10.06**	**10.06**	**10.02**	**10.06**	**10.06**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2021	1/14/2022	5	120	
2	Grading	Grading	1/15/2022	10/21/2022	5	200	
3	Building Construction	Building Construction	10/22/2022	11/30/2025	5	810	
4	Paving	Paving	10/22/2022	11/28/2025	5	810	
5	Architectural Coating	Architectural Coating	10/22/2022	11/30/2025	5	810	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 14.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,763,586; Non-Residential Outdoor: 1,254,529; Striped Parking Area: 38,681 (Architectural Coating – sqft)

OffRoad Equipment

Renaissance Ranch-onsite - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	6	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	8	8.00	97	0.37
Grading	Excavators	4	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	6	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	6	7.00	97	0.37
Building Construction	Welders	2	8.00	46	0.45
Paving	Pavers	4	8.00	130	0.42
Paving	Paving Equipment	4	8.00	132	0.36
Paving	Rollers	4	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	14	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	16	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	1,325.00	517.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	265.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.0823	0.0000	37.0823	20.0052	0.0000	20.0052			0.0000			0.0000
Off-Road	7.7764	80.9942	42.3085	0.0760		4.0889	4.0889		3.7618	3.7618		7,371.3138	7,371.3138	2.3840		7,430.9146
Total	**7.7764**	**80.9942**	**42.3085**	**0.0760**	**37.0823**	**4.0889**	**41.1712**	**20.0052**	**3.7618**	**23.7670**		**7,371.3138**	**7,371.3138**	**2.3840**		**7,430.9146**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	**0.0838**	**0.0503**	**0.5372**	**1.7200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**171.9348**	**171.9348**	**3.9700e-003**		**172.0342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.4621	0.0000	14.4621	7.8020	0.0000	7.8020			0.0000			0.0000
Off-Road	7.7764	80.9942	42.3085	0.0760		4.0889	4.0889		3.7618	3.7618	0.0000	7,371.3138	7,371.3138	2.3840		7,430.9146
Total	**7.7764**	**80.9942**	**42.3085**	**0.0760**	**14.4621**	**4.0889**	**18.5510**	**7.8020**	**3.7618**	**11.5638**	**0.0000**	**7,371.3138**	**7,371.3138**	**2.3840**		**7,430.9146**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0838	0.0503	0.5372	1.7200e-003	0.1312	1.1900e-003	0.1324	0.0362	1.0900e-003	0.0373		171.9348	171.9348	3.9700e-003		172.0342
Total	**0.0838**	**0.0503**	**0.5372**	**1.7200e-003**	**0.1312**	**1.1900e-003**	**0.1324**	**0.0362**	**1.0900e-003**	**0.0373**		**171.9348**	**171.9348**	**3.9700e-003**		**172.0342**

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					37.0823	0.0000	37.0823	20.0052	0.0000	20.0052			0.0000			0.0000
Off-Road	6.3403	66.1670	39.3955	0.0761		3.2252	3.2252		2.9671	2.9671		7,372.1237	7,372.1237	2.3843		7,431.7311
Total	**6.3403**	**66.1670**	**39.3955**	**0.0761**	**37.0823**	**3.2252**	**40.3074**	**20.0052**	**2.9671**	**22.9723**		**7,372.1237**	**7,372.1237**	**2.3843**		**7,431.7311**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0786	0.0452	0.4947	1.6600e-003	0.2012	1.1500e-003	0.2024	0.0534	1.0600e-003	0.0544		165.6610	165.6610	3.5700e-003		165.7503
Total	**0.0786**	**0.0452**	**0.4947**	**1.6600e-003**	**0.2012**	**1.1500e-003**	**0.2024**	**0.0534**	**1.0600e-003**	**0.0544**		**165.6610**	**165.6610**	**3.5700e-003**		**165.7503**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.4621	0.0000	14.4621	7.8020	0.0000	7.8020			0.0000			0.0000
Off-Road	6.3403	66.1670	39.3955	0.0761		3.2252	3.2252		2.9671	2.9671	0.0000	7,372.1237	7,372.1237	2.3843		7,431.7311
Total	**6.3403**	**66.1670**	**39.3955**	**0.0761**	**14.4621**	**3.2252**	**17.6872**	**7.8020**	**2.9671**	**10.7692**	**0.0000**	**7,372.1237**	**7,372.1237**	**2.3843**		**7,431.7311**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0786	0.0452	0.4947	1.6600e-003	0.1312	1.1500e-003	0.1324	0.0362	1.0600e-003	0.0373		165.6610	165.6610	3.5700e-003		165.7503
Total	**0.0786**	**0.0452**	**0.4947**	**1.6600e-003**	**0.1312**	**1.1500e-003**	**0.1324**	**0.0362**	**1.0600e-003**	**0.0373**		**165.6610**	**165.6610**	**3.5700e-003**		**165.7503**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.7235	0.0000	16.7235	7.1505	0.0000	7.1505			0.0000			0.0000
Off-Road	7.2497	77.6870	58.0830	0.1242		3.2698	3.2698		3.0082	3.0082		12,022.8211	12,022.8211	3.8884		12,120.0317
Total	**7.2497**	**77.6870**	**58.0830**	**0.1242**	**16.7235**	**3.2698**	**19.9932**	**7.1505**	**3.0082**	**10.1587**		**12,022.8211**	**12,022.8211**	**3.8884**		**12,120.0317**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0873	0.0503	0.5497	1.8500e-003	0.2236	1.2800e-003	0.2248	0.0593	1.1800e-003	0.0605		184.0678	184.0678	3.9700e-003		184.1670
Total	**0.0873**	**0.0503**	**0.5497**	**1.8500e-003**	**0.2236**	**1.2800e-003**	**0.2248**	**0.0593**	**1.1800e-003**	**0.0605**		**184.0678**	**184.0678**	**3.9700e-003**		**184.1670**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5222	0.0000	6.5222	2.7887	0.0000	2.7887			0.0000			0.0000
Off-Road	7.2497	77.6870	58.0830	0.1242		3.2698	3.2698		3.0082	3.0082	0.0000	12,022.8211	12,022.8211	3.8884		12,120.0317
Total	**7.2497**	**77.6870**	**58.0830**	**0.1242**	**6.5222**	**3.2698**	**9.7919**	**2.7887**	**3.0082**	**5.7969**	**0.0000**	**12,022.8211**	**12,022.8211**	**3.8884**		**12,120.0317**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0873	0.0503	0.5497	1.8500e-003	0.1458	1.2800e-003	0.1471	0.0402	1.1800e-003	0.0414		184.0678	184.0678	3.9700e-003		184.1670
Total	**0.0873**	**0.0503**	**0.5497**	**1.8500e-003**	**0.1458**	**1.2800e-003**	**0.1471**	**0.0402**	**1.1800e-003**	**0.0414**		**184.0678**	**184.0678**	**3.9700e-003**		**184.1670**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4125	31.2313	32.7268	0.0539		1.6180	1.6180		1.5223	1.5223		5,108.6672	5,108.6672	1.2239		5,139.2644
Total	**3.4125**	**31.2313**	**32.7268**	**0.0539**		**1.6180**	**1.6180**		**1.5223**	**1.5223**		**5,108.6672**	**5,108.6672**	**1.2239**		**5,139.2644**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1969	44.6862	9.4259	0.1278	3.3104	0.0790	3.3894	0.9531	0.0755	1.0286		13,477.0080	13,477.0080	1.0676		13,503.6981
Worker	5.7832	3.3294	36.4168	0.1223	14.8104	0.0850	14.8954	3.9278	0.0782	4.0060		12,194.4903	12,194.4903	0.2630		12,201.0651
Total	**6.9802**	**48.0155**	**45.8427**	**0.2501**	**18.1208**	**0.1639**	**18.2847**	**4.8809**	**0.1538**	**5.0346**		**25,671.4982**	**25,671.4982**	**1.3306**		**25,704.7632**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8838	24.4464	33.9640	0.0539		1.3305	1.3305		1.2592	1.2592	0.0000	5,108.6672	5,108.6672	1.2239		5,139.2644
Total	**2.8838**	**24.4464**	**33.9640**	**0.0539**		**1.3305**	**1.3305**		**1.2592**	**1.2592**	**0.0000**	**5,108.6672**	**5,108.6672**	**1.2239**		**5,139.2644**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1969	44.6862	9.4259	0.1278	2.3671	0.0790	2.4461	0.7216	0.0755	0.7971		13,477.0080	13,477.0080	1.0676		13,503.6981
Worker	5.7832	3.3294	36.4168	0.1223	9.6601	0.0850	9.7451	2.6636	0.0782	2.7419		12,194.4903	12,194.4903	0.2630		12,201.0651
Total	**6.9802**	**48.0155**	**45.8427**	**0.2501**	**12.0272**	**0.1639**	**12.1912**	**3.3852**	**0.1538**	**3.5390**		**25,671.4982**	**25,671.4982**	**1.3306**		**25,704.7632**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1455	28.7698	32.4880	0.0539		1.3995	1.3995		1.3169	1.3169		5,110.4199	5,110.4199	1.2157		5,140.8121
Total	**3.1455**	**28.7698**	**32.4880**	**0.0539**		**1.3995**	**1.3995**		**1.3169**	**1.3169**		**5,110.4199**	**5,110.4199**	**1.2157**		**5,140.8121**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9145	33.4808	8.0820	0.1244	3.3103	0.0353	3.3456	0.9531	0.0337	0.9868		13,126.7662	13,126.7662	0.8141		13,147.1198
Worker	5.4396	3.0009	33.5595	0.1176	14.8104	0.0830	14.8933	3.9278	0.0764	4.0042		11,731.7097	11,731.7097	0.2364		11,737.6193
Total	**6.3541**	**36.4817**	**41.6415**	**0.2420**	**18.1206**	**0.1183**	**18.2389**	**4.8808**	**0.1101**	**4.9909**		**24,858.4759**	**24,858.4759**	**1.0505**		**24,884.7391**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6546	22.6302	33.8266	0.0539		1.1372	1.1372		1.0769	1.0769	0.0000	5,110.4198	5,110.4198	1.2157		5,140.8121
Total	**2.6546**	**22.6302**	**33.8266**	**0.0539**		**1.1372**	**1.1372**		**1.0769**	**1.0769**	**0.0000**	**5,110.4198**	**5,110.4198**	**1.2157**		**5,140.8121**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9145	33.4808	8.0820	0.1244	2.3670	0.0353	2.4023	0.7215	0.0337	0.7553		13,126.7662	13,126.7662	0.8141		13,147.1198
Worker	5.4396	3.0009	33.5595	0.1176	9.6601	0.0830	9.7431	2.6636	0.0764	2.7400		11,731.7097	11,731.7097	0.2364		11,737.6193
Total	**6.3541**	**36.4817**	**41.6415**	**0.2420**	**12.0271**	**0.1183**	**12.1453**	**3.3852**	**0.1101**	**3.4952**		**24,858.4759**	**24,858.4759**	**1.0505**		**24,884.7391**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9431	26.8876	32.3336	0.0539		1.2266	1.2266		1.1538	1.1538		5,111.3978	5,111.3978	1.2087		5,141.6153
Total	**2.9431**	**26.8876**	**32.3336**	**0.0539**		**1.2266**	**1.2266**		**1.1538**	**1.1538**		**5,111.3978**	**5,111.3978**	**1.2087**		**5,141.6153**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8970	33.3024	7.8221	0.1239	3.3102	0.0350	3.3452	0.9530	0.0335	0.9865		13,080.1674	13,080.1674	0.7963		13,100.0752
Worker	5.1421	2.7200	31.3961	0.1134	14.8104	0.0821	14.8925	3.9278	0.0756	4.0033		11,311.1719	11,311.1719	0.2157		11,316.5630
Total	**6.0391**	**36.0225**	**39.2182**	**0.2373**	**18.1205**	**0.1171**	**18.2376**	**4.8808**	**0.1090**	**4.9898**		**24,391.3393**	**24,391.3393**	**1.0120**		**24,416.6382**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4866	21.2926	33.7767	0.0539		0.9880	0.9880		0.9356	0.9356	0.0000	5,111.3978	5,111.3978	1.2087		5,141.6153
Total	**2.4866**	**21.2926**	**33.7767**	**0.0539**		**0.9880**	**0.9880**		**0.9356**	**0.9356**	**0.0000**	**5,111.3978**	**5,111.3978**	**1.2087**		**5,141.6153**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8970	33.3024	7.8221	0.1239	2.3669	0.0350	2.4019	0.7215	0.0335	0.7550		13,080.1674	13,080.1674	0.7963		13,100.0752
Worker	5.1421	2.7200	31.3961	0.1134	9.6601	0.0821	9.7422	2.6636	0.0756	2.7392		11,311.1719	11,311.1719	0.2157		11,316.5630
Total	**6.0391**	**36.0225**	**39.2182**	**0.2373**	**12.0270**	**0.1171**	**12.1441**	**3.3851**	**0.1090**	**3.4941**		**24,391.3393**	**24,391.3393**	**1.0120**		**24,416.6382**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7348	24.9394	32.1693	0.0539		1.0551	1.0551		0.9925	0.9925		5,112.9487	5,112.9487	1.2019		5,142.9961
Total	**2.7348**	**24.9394**	**32.1693**	**0.0539**		**1.0551**	**1.0551**		**0.9925**	**0.9925**		**5,112.9487**	**5,112.9487**	**1.2019**		**5,142.9961**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8745	32.9339	7.5729	0.1231	3.3100	0.0345	3.3446	0.9530	0.0330	0.9860		12,998.4326	12,998.4326	0.7758		13,017.8275
Worker	4.8720	2.4760	29.1067	0.1088	14.8104	0.0806	14.8910	3.9278	0.0742	4.0020		10,858.5420	10,858.5420	0.1956		10,863.4325
Total	**5.7464**	**35.4098**	**36.6796**	**0.2320**	**18.1204**	**0.1152**	**18.2356**	**4.8808**	**0.1072**	**4.9880**		**23,856.9746**	**23,856.9746**	**0.9714**		**23,881.2599**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3114	19.9331	33.6793	0.0539		0.8360	0.8360		0.7923	0.7923	0.0000	5,112.9487	5,112.9487	1.2019		5,142.9961
Total	**2.3114**	**19.9331**	**33.6793**	**0.0539**		**0.8360**	**0.8360**		**0.7923**	**0.7923**	**0.0000**	**5,112.9487**	**5,112.9487**	**1.2019**		**5,142.9961**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8745	32.9339	7.5729	0.1231	2.3668	0.0345	2.4013	0.7215	0.0330	0.7545		12,998.4326	12,998.4326	0.7758		13,017.8275
Worker	4.8720	2.4760	29.1067	0.1088	9.6601	0.0806	9.7407	2.6636	0.0742	2.7378		10,858.5420	10,858.5420	0.1956		10,863.4325
Total	**5.7464**	**35.4098**	**36.6796**	**0.2320**	**12.0269**	**0.1152**	**12.1420**	**3.3851**	**0.1072**	**3.4923**		**23,856.9746**	**23,856.9746**	**0.9714**		**23,881.2599**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2056	22.2498	29.1610	0.0456		1.1358	1.1358		1.0449	1.0449		4,415.3206	4,415.3206	1.4280		4,451.0207
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2163**	**22.2498**	**29.1610**	**0.0456**		**1.1358**	**1.1358**		**1.0449**	**1.0449**		**4,415.3206**	**4,415.3206**	**1.4280**		**4,451.0207**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0655	0.0377	0.4123	1.3800e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0508	138.0508	2.9800e-003		138.1253
Total	**0.0655**	**0.0377**	**0.4123**	**1.3800e-003**	**0.1677**	**9.6000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**138.0508**	**138.0508**	**2.9800e-003**		**138.1253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2056	22.2498	29.1610	0.0456		1.1358	1.1358		1.0449	1.0449	0.0000	4,415.3206	4,415.3206	1.4280		4,451.0207
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2163**	**22.2498**	**29.1610**	**0.0456**		**1.1358**	**1.1358**		**1.0449**	**1.0449**	**0.0000**	**4,415.3206**	**4,415.3206**	**1.4280**		**4,451.0207**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0655	0.0377	0.4123	1.3800e-003	0.1094	9.6000e-004	0.1103	0.0302	8.9000e-004	0.0310		138.0508	138.0508	2.9800e-003		138.1253
Total	**0.0655**	**0.0377**	**0.4123**	**1.3800e-003**	**0.1094**	**9.6000e-004**	**0.1103**	**0.0302**	**8.9000e-004**	**0.0310**		**138.0508**	**138.0508**	**2.9800e-003**		**138.1253**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0655	20.3833	29.1684	0.0456		1.0204	1.0204		0.9388	0.9388		4,415.1683	4,415.1683	1.4280		4,450.8672
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0761**	**20.3833**	**29.1684**	**0.0456**		**1.0204**	**1.0204**		**0.9388**	**0.9388**		**4,415.1683**	**4,415.1683**	**1.4280**		**4,450.8672**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787
Total	**0.0616**	**0.0340**	**0.3799**	**1.3300e-003**	**0.1677**	**9.4000e-004**	**0.1686**	**0.0445**	**8.6000e-004**	**0.0453**		**132.8118**	**132.8118**	**2.6800e-003**		**132.8787**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0655	20.3833	29.1684	0.0456		1.0204	1.0204		0.9388	0.9388	0.0000	4,415.1683	4,415.1683	1.4280		4,450.8672
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0761**	**20.3833**	**29.1684**	**0.0456**		**1.0204**	**1.0204**		**0.9388**	**0.9388**	**0.0000**	**4,415.1683**	**4,415.1683**	**1.4280**		**4,450.8672**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0340	0.3799	1.3300e-003	0.1094	9.4000e-004	0.1103	0.0302	8.6000e-004	0.0310		132.8118	132.8118	2.6800e-003		132.8787
Total	**0.0616**	**0.0340**	**0.3799**	**1.3300e-003**	**0.1094**	**9.4000e-004**	**0.1103**	**0.0302**	**8.6000e-004**	**0.0310**		**132.8118**	**132.8118**	**2.6800e-003**		**132.8787**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9763	19.0492	29.2515	0.0456		0.9370	0.9370		0.8621	0.8621		4,415.0944	4,415.0944	1.4279		4,450.7927
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9870**	**19.0492**	**29.2515**	**0.0456**		**0.9370**	**0.9370**		**0.8621**	**0.8621**		**4,415.0944**	**4,415.0944**	**1.4279**		**4,450.7927**

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0582	0.0308	0.3554	1.2800e-003	0.1677	9.3000e-004	0.1686	0.0445	8.6000e-004	0.0453		128.0510	128.0510	2.4400e-003		128.1120
Total	**0.0582**	**0.0308**	**0.3554**	**1.2800e-003**	**0.1677**	**9.3000e-004**	**0.1686**	**0.0445**	**8.6000e-004**	**0.0453**		**128.0510**	**128.0510**	**2.4400e-003**		**128.1120**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9763	19.0492	29.2515	0.0456		0.9370	0.9370		0.8621	0.8621	0.0000	4,415.0944	4,415.0944	1.4279		4,450.7927
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9870**	**19.0492**	**29.2515**	**0.0456**		**0.9370**	**0.9370**		**0.8621**	**0.8621**	**0.0000**	**4,415.0944**	**4,415.0944**	**1.4279**		**4,450.7927**

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0582	0.0308	0.3554	1.2800e-003	0.1094	9.3000e-004	0.1103	0.0302	8.6000e-004	0.0310		128.0510	128.0510	2.4400e-003		128.1120
Total	**0.0582**	**0.0308**	**0.3554**	**1.2800e-003**	**0.1094**	**9.3000e-004**	**0.1103**	**0.0302**	**8.6000e-004**	**0.0310**		**128.0510**	**128.0510**	**2.4400e-003**		**128.1120**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8303	17.1633	29.1559	0.0456		0.8371	0.8371		0.7701	0.7701		4,413.4903	4,413.4903	1.4274		4,449.1756
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8410**	**17.1633**	**29.1559**	**0.0456**		**0.8371**	**0.8371**		**0.7701**	**0.7701**		**4,413.4903**	**4,413.4903**	**1.4274**		**4,449.1756**

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0280	0.3295	1.2300e-003	0.1677	9.1000e-004	0.1686	0.0445	8.4000e-004	0.0453		122.9269	122.9269	2.2100e-003		122.9823
Total	**0.0552**	**0.0280**	**0.3295**	**1.2300e-003**	**0.1677**	**9.1000e-004**	**0.1686**	**0.0445**	**8.4000e-004**	**0.0453**		**122.9269**	**122.9269**	**2.2100e-003**		**122.9823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8303	17.1633	29.1559	0.0456		0.8371	0.8371		0.7701	0.7701	0.0000	4,413.4903	4,413.4903	1.4274		4,449.1756
Paving	0.0107					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8410**	**17.1633**	**29.1559**	**0.0456**		**0.8371**	**0.8371**		**0.7701**	**0.7701**	**0.0000**	**4,413.4903**	**4,413.4903**	**1.4274**		**4,449.1756**

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0280	0.3295	1.2300e-003	0.1094	9.1000e-004	0.1103	0.0302	8.4000e-004	0.0310		122.9269	122.9269	2.2100e-003		122.9823
Total	**0.0552**	**0.0280**	**0.3295**	**1.2300e-003**	**0.1094**	**9.1000e-004**	**0.1103**	**0.0302**	**8.4000e-004**	**0.0310**		**122.9269**	**122.9269**	**2.2100e-003**		**122.9823**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4091	2.8170	3.6272	5.9400e-003		0.1634	0.1634		0.1634	0.1634		562.8961	562.8961	0.0367		563.8123
Total	**29.3452**	**2.8170**	**3.6272**	**5.9400e-003**		**0.1634**	**0.1634**		**0.1634**	**0.1634**		**562.8961**	**562.8961**	**0.0367**		**563.8123**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1567	0.6659	7.2834	0.0245	2.9621	0.0170	2.9791	0.7856	0.0157	0.8012		2,438.8981	2,438.8981	0.0526		2,440.2130
Total	**1.1567**	**0.6659**	**7.2834**	**0.0245**	**2.9621**	**0.0170**	**2.9791**	**0.7856**	**0.0157**	**0.8012**		**2,438.8981**	**2,438.8981**	**0.0526**		**2,440.2130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4091	2.8170	3.6272	5.9400e-003		0.1634	0.1634		0.1634	0.1634	0.0000	562.8961	562.8961	0.0367		563.8123
Total	**29.3452**	**2.8170**	**3.6272**	**5.9400e-003**		**0.1634**	**0.1634**		**0.1634**	**0.1634**	**0.0000**	**562.8961**	**562.8961**	**0.0367**		**563.8123**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1567	0.6659	7.2834	0.0245	1.9320	0.0170	1.9490	0.5327	0.0157	0.5484		2,438.8981	2,438.8981	0.0526		2,440.2130
Total	**1.1567**	**0.6659**	**7.2834**	**0.0245**	**1.9320**	**0.0170**	**1.9490**	**0.5327**	**0.0157**	**0.5484**		**2,438.8981**	**2,438.8981**	**0.0526**		**2,440.2130**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416		562.8961	562.8961	0.0337		563.7380
Total	**29.3194**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**		**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0879	0.6002	6.7119	0.0235	2.9621	0.0166	2.9787	0.7856	0.0153	0.8008		2,346.3419	2,346.3419	0.0473		2,347.5239
Total	**1.0879**	**0.6002**	**6.7119**	**0.0235**	**2.9621**	**0.0166**	**2.9787**	**0.7856**	**0.0153**	**0.8008**		**2,346.3419**	**2,346.3419**	**0.0473**		**2,347.5239**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3833	2.6060	3.6222	5.9400e-003		0.1416	0.1416		0.1416	0.1416	0.0000	562.8961	562.8961	0.0337		563.7380
Total	**29.3194**	**2.6060**	**3.6222**	**5.9400e-003**		**0.1416**	**0.1416**		**0.1416**	**0.1416**	**0.0000**	**562.8961**	**562.8961**	**0.0337**		**563.7380**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0879	0.6002	6.7119	0.0235	1.9320	0.0166	1.9486	0.5327	0.0153	0.5480		2,346.3419	2,346.3419	0.0473		2,347.5239
Total	**1.0879**	**0.6002**	**6.7119**	**0.0235**	**1.9320**	**0.0166**	**1.9486**	**0.5327**	**0.0153**	**0.5480**		**2,346.3419**	**2,346.3419**	**0.0473**		**2,347.5239**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3615	2.4376	3.6203	5.9400e-003		0.1218	0.1218		0.1218	0.1218		562.8961	562.8961	0.0317		563.6885
Total	**29.2976**	**2.4376**	**3.6203**	**5.9400e-003**		**0.1218**	**0.1218**		**0.1218**	**0.1218**		**562.8961**	**562.8961**	**0.0317**		**563.6885**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0284	0.5440	6.2792	0.0227	2.9621	0.0164	2.9785	0.7856	0.0151	0.8007		2,262.2344	2,262.2344	0.0431		2,263.3126
Total	**1.0284**	**0.5440**	**6.2792**	**0.0227**	**2.9621**	**0.0164**	**2.9785**	**0.7856**	**0.0151**	**0.8007**		**2,262.2344**	**2,262.2344**	**0.0431**		**2,263.3126**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3615	2.4376	3.6203	5.9400e-003		0.1218	0.1218		0.1218	0.1218	0.0000	562.8961	562.8961	0.0317		563.6885
Total	**29.2976**	**2.4376**	**3.6203**	**5.9400e-003**		**0.1218**	**0.1218**		**0.1218**	**0.1218**	**0.0000**	**562.8961**	**562.8961**	**0.0317**		**563.6885**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0284	0.5440	6.2792	0.0227	1.9320	0.0164	1.9484	0.5327	0.0151	0.5478		2,262.2344	2,262.2344	0.0431		2,263.3126
Total	**1.0284**	**0.5440**	**6.2792**	**0.0227**	**1.9320**	**0.0164**	**1.9484**	**0.5327**	**0.0151**	**0.5478**		**2,262.2344**	**2,262.2344**	**0.0431**		**2,263.3126**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030		562.8961	562.8961	0.0307		563.6637
Total	**29.2778**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**		**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.9744	0.4952	5.8213	0.0218	2.9621	0.0161	2.9782	0.7856	0.0148	0.8004		2,171.7084	2,171.7084	0.0391		2,172.6865
Total	**0.9744**	**0.4952**	**5.8213**	**0.0218**	**2.9621**	**0.0161**	**2.9782**	**0.7856**	**0.0148**	**0.8004**		**2,171.7084**	**2,171.7084**	**0.0391**		**2,172.6865**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.9361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**29.2778**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.9744	0.4952	5.8213	0.0218	1.9320	0.0161	1.9481	0.5327	0.0148	0.5476		2,171.7084	2,171.7084	0.0391		2,172.6865
Total	**0.9744**	**0.4952**	**5.8213**	**0.0218**	**1.9320**	**0.0161**	**1.9481**	**0.5327**	**0.0148**	**0.5476**		**2,171.7084**	**2,171.7084**	**0.0391**		**2,172.6865**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Manufacturing	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Industrial Park	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Manufacturing	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Other Asphalt Surfaces	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Other Non-Asphalt Surfaces	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Refrigerated Warehouse-No Rail	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Unrefrigerated Warehouse-No Rail	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Renaissance Ranch-onsite - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.4749	13.4085	11.2631	0.0805		1.0190	1.0190		1.0190	1.0190		16,090.1546	16,090.1546	0.3084	0.2950	16,185.7704
NaturalGas Unmitigated	1.6400	14.9089	12.5235	0.0895		1.1331	1.1331		1.1331	1.1331		17,890.7017	17,890.7017	0.3429	0.3280	17,997.0172

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	65955.2	0.7113	6.4662	5.4316	0.0388		0.4914	0.4914		0.4914	0.4914		7,759.4393	7,759.4393	0.1487	0.1423	7,805.5498
Industrial Park	2236.24	0.0241	0.2192	0.1842	1.3200e-003		0.0167	0.0167		0.0167	0.0167		263.0870	263.0870	5.0400e-003	4.8200e-003	264.6504
Manufacturing	18844.4	0.2032	1.8475	1.5519	0.0111		0.1404	0.1404		0.1404	0.1404		2,216.9857	2,216.9857	0.0425	0.0406	2,230.1601
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	60042	0.6475	5.8865	4.9446	0.0353		0.4474	0.4474		0.4474	0.4474		7,063.7677	7,063.7677	0.1354	0.1295	7,105.7441
Unrefrigerated Warehouse-No Rail	4120.93	0.0444	0.4040	0.3394	2.4200e-003		0.0307	0.0307		0.0307	0.0307		484.8157	484.8157	9.2900e-003	8.8900e-003	487.6967
Unrefrigerated Warehouse-No Rail	872.155	9.4100e-003	0.0855	0.0718	5.1000e-004		6.5000e-003	6.5000e-003		6.5000e-003	6.5000e-003		102.6064	102.6064	1.9700e-003	1.8800e-003	103.2162
Total		**1.6400**	**14.9089**	**12.5235**	**0.0895**		**1.1331**	**1.1331**		**1.1331**	**1.1331**		**17,890.7017**	**17,890.7017**	**0.3429**	**0.3280**	**17,997.0172**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	56.6009	0.6104	5.5491	4.6613	0.0333		0.4217	0.4217		0.4217	0.4217		6,658.9316	6,658.9316	0.1276	0.1221	6,698.5023
Industrial Park	1.56537	0.0169	0.1535	0.1289	9.2000e-004		0.0117	0.0117		0.0117	0.0117		184.1609	184.1609	3.5300e-003	3.3800e-003	185.2552
Manufacturing	16.1717	0.1744	1.5855	1.3318	9.5100e-003		0.1205	0.1205		0.1205	0.1205		1,902.5544	1,902.5544	0.0365	0.0349	1,913.8604
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	58.911	0.6353	5.7756	4.8515	0.0347		0.4389	0.4389		0.4389	0.4389		6,930.7079	6,930.7079	0.1328	0.1271	6,971.8937
Unrefrigerated Warehouse-No Rail	0.614375	6.6300e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003		72.2794	72.2794	1.3900e-003	1.3300e-003	72.7089
Unrefrigerated Warehouse-No Rail	2.90292	0.0313	0.2846	0.2391	1.7100e-003		0.0216	0.0216		0.0216	0.0216		341.5204	341.5204	6.5500e-003	6.2600e-003	343.5499
Total		**1.4749**	**13.4085**	**11.2631**	**0.0804**		**1.0190**	**1.0190**		**1.0190**	**1.0190**		**16,090.1546**	**16,090.1546**	**0.3084**	**0.2950**	**16,185.7704**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Unmitigated	56.3528	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	49.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0237	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Total	**56.3528**	**2.3300e-003**	**0.2570**	**2.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**		**0.5524**	**0.5524**	**1.4400e-003**		**0.5883**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.4214					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	49.9077					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0237	2.3300e-003	0.2570	2.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004		0.5524	0.5524	1.4400e-003		0.5883
Total	**56.3528**	**2.3300e-003**	**0.2570**	**2.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**		**0.5524**	**0.5524**	**1.4400e-003**		**0.5883**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Renaissance Ranch Operational Mobile Source Emissions

Vehicle Class	Daily VMT[1]	Pollutant	Run Emission Rate[2] (Gram/Mile)	Idle Emission Rate (Gram/Vehicle/Day)	Start Emission Rate[3] (Grams/Start/Day)	Total Grams Daily	Total Pounds Daily
Passenger Automobiles	46552	**NOx**	0.204193	0.002654748	0.066197554	9558.90	**21.0878**
		ROG[4]	0.051149	0.000604688	0.071806673	2393.47	**5.2802**
		PM10	0.004022	0.00000359	0.000543465	187.29	**0.4132**
		PM2.5	0.003733	0.0002324	0.000499874	178.44	**0.3936**
		CO	1.915756	0.00537596	0.711919455	89292.50	**196.9876**
		SOx	0.007152	0.00000033	0.000178281	332.96	**0.7345**

[1] Daily VMT calculated per CaLLEMod v 2016.3.2, which provides average distance traveled per trip type.

[2]Particulate matter Run emissions account for tire wear and brake wear.

[3]Start emissions account for 4 autombile starts daily.

[4]ROG emissions account for Hotsoak emissions per trip and Restloss and Diurnalsoak emissions daily.

All emission factors sourced from EMFAC2017.

Renaissance Ranch Operational Mobile Source Emissions

Vehicle Class	Daily VMT[1]	Pollutant	Run Emission Rate[2] (Gram/Mile)	Idle Emission Rate (Gram/Vehicle/Day)	Start Emission Rate[3] (Grams/Start/Day)	Total Grams Daily	Total Pounds Daily
Heavy Duty Trucks Represents a weighted average of Medium-heavy duty trucks and Heavy-heavy duty trucks as identified by the Project Traffic Assessment.	66502	**NOx**	1.966262	0.529059792	0.259082678	132833.18	**293.0424**
		ROG[4]	0.020231	0.043531149	0.001828266	1515.88	**3.3442**
		PM10	0.026952	0.000215574	0.000121	1793.24	**3.9560**
		PM2.5	0.025786	0.000206249	0.000111	1715.60	**3.7848**
		CO	0.236481	0.648679456	0.039331299	18266.87	**40.2984**
		SOx	0.012528	0.000975502	3.59763E-06	836.98	**1.8465**

[1] In order to more accurately account for the trip distribution patterns of freight trucks, the average trip length is calculated at 63.7 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

[2]Particulate matter Run emissions account for tire wear and brake wear.

[3]Start emissions account for 4 automobile starts daily.

[4]ROG emissions account for Hotsoak emissions per trip and Restloss and Diurnalsoak emissions daily.

All emission factors sourced from EMFAC2017.

ATTACHMENT B

Construction and Operational Health Risk Assessment- Diesel Particulate Matter

Health Risk Assessment

Renaissance Ranch Commerce Center Project

Riverside County, California

Prepared For:
County of Riverside Planning Department
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Riverside, California

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March 2021

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ENVIRONMENTAL CONSULTANTS

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Acronym List

ASF	Age Sensitivity Factor
ATCM	Airborne Toxics Control Measure
CAPCOA	California Air Pollution Control Officers Association ()
CARB	California Air Resources Board
CAA	Clean Air Act
CCR	California Code of Regulations
County	Riverside County
DPM	Diesel Particulate Matter
EV	Electric Vehicle
FAH	Fraction of Time at Home
GLCs	Ground Level Concentrations
HAPs	Hazardous Air Pollutants
I-5	Interstate 5
MEIR	Maximumly Exposed Individual Resident
MEIW	Maximumly Exposed Individual Worker
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
OEHHA	Office of Environmental Health Hazard Assessment
PM10	Particulate Matter under 10 microns
ROG	Reactive Organic Gas
REL	Reference Exposure Level
SCAQMD	South Coast Air Quality Management District
sf	Square Foot
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
USEPA	U.S. Environmental Protection Agency

1 INTRODUCTION

This report evaluates the potential health risks associated with the construction and operation of the Renaissance Ranch Commerce Center (Project), which includes the construction of a business park and light Industrial area in Riverside County (County), California. The purpose of this Health Risk Assessment (HRA) is to evaluate potential health risks associated with diesel particulate matter (DPM) generated by on and offsite Project vehicular traffic during construction and operation and from diesel fired off-road equipment such and cranes and backhoes utilized during construction. This HRA was prepared in accordance with the requirements of the Office of Environmental Health Hazard Assessment (OEHHA) and South Coast Air Quality Management District (SCAQMD) to determine if health risks are likely to occur to existing receptors in the vicinity of the proposed Project. Technical data is included in Appendices A – D of this document. There are no significant impacts across all applicable health risk categories analyzed for Project construction and operations as presented in Table 1.

Table 1. Results Summary

Receptor Type	Construction		Operations	
	Maximum Estimated Cancer Risk (per Million)	Maximum Chronic Hazard Index	Maximum Estimated Cancer Risk (per Million)	Maximum Chronic Hazard Index
Residential	4.64	0.002	7.84	0.0015
Worker	0.13	0.002	0.47	0.0015
School	0.01	4.1e-05	0.13	4.4e-05
Significance Threshold	**10**	**1**	**10**	**1**

Source: ECORP Consulting 2021. Refer to Appendix C for Model Data Outputs.

1.1 Project Description and Location

The Project site is in the western portion of unincorporated Riverside County, more specifically near the community of Lake Elsinore and adjacent to the Horsethief Canyon Ranch community. The Project site is a 157.1-acre property located east of Horsethief Canyon Road, south of Interstate 15 (I-15), north of Palomino Creek Drive, and north and west of Hostettler Road. Under existing conditions, the Project site is vacant and undeveloped but has been disturbed in the past by agricultural activities. The site is bound by medium-density residential uses to the south through south-west; a Wastewater Treatment Plant to the west; rural residences, a small area of open space and I-15 to the north; and open space and an existing construction storage yard to the east. For the purposes of this report, construction for this Project will start in 2021 and operations will begin in 2025.

The proposed Project includes an 18.0-acre Business Park and a 97.2-acre Light Industrial area. The rest of the 157.1-acre Project area would include 11.5 acres of open space, 27.1 acres of open space conservation habitat and 3.3 acres of circulation area for vehicle traffic. Additionally, the Project includes offsite water

improvements that would occur on Horsethief Canyon Road, between the northwest corner of the Project site and the existing point of connection located north of I-15.

2 SETTING

2.1 Environmental Setting

2.1.1 Topography, Air Quality and Meteorology

The proposed Project is in the unincorporated area of Riverside County which is within the South Coast Air Basin (SoCAB). The climate in Riverside is primarily Sunny with an average of 11 inches of rain per year. The elevation of the Project area ranges from 1,000 ft above sea level (ASL) to around 1,400 ft. ASL. To the north north-east and the south-west there are hilly regions with elevations ranging from 2,000 ft. ASL up to 4,500 ft. ASL.

2.1.2 Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds.

Hazardous Air Pollutants (HAPs) is a term used by the federal Clean Air Act (CAA) that includes a variety of pollutants generated or emitted by industrial production activities. HAPs are identified as TACs under the California CAA and 10 have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. CARB provides emission inventories for only the larger air basins.

TACs do not have ambient air quality standards because safe levels of TACs cannot be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fuel storage and transfer activities and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains TACs.

Diesel Particulate Matter

Diesel particulate matter (DPM) is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71

percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about five percent of total DPM. It should be noted that CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan, the Statewide Portable Equipment Registration Program, and the Diesel Off-Road Reporting System.

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in the year 2000 could cause 540 "excess" cancers in a population of one million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particulate pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen.

2.1.3 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 receptor to the Project site are rural residences located on Horsethief Canyon Road as well as residences located in the Horsethief Canyon Ranch Community located directly adjacent to the southern and western Project site boundary. The installation of the proposed offsite water line would occur directly adjacent to a rural residence located on Horsethief Canyon Road.

2.2 Regulatory Setting

2.2.1 Federal - Clean Air Act

The Federal Clean Air Act (CAA) was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The CAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the U.S. Environmental Protection Agency (USEPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and diesel particulate matter. More recently, the USEPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the CAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The CAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

2.2.2 State - California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with 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 (T-BACT) 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 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.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Risk Reduction Plan) in October 2000. The Risk Reduction Plan's goals included an 85 percent reduction in DPM by 2020 from the 2000 baseline (CARB 2000). The Risk Reduction Plan includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Airborne Toxic Control Measure for In-Use Diesel-Fired Transport Refrigeration Units

On February 26, 2004 CARB approved an ATCM for transport refrigeration units (TRUs) with amendments in 2010 and 2011. This regulation was put in place to address DPM emitted from TRUs. The latest update to this measure can be found in the Final Regulation Order California Code of Regulations (CCR), Title 13, Division 3, Chapter 9, Article 8, Section 2477. Table 4 of Section 2477 sets forth emission limits on in-use TRUs over 25 hp. The Tier 4 limits in this table go into effect in 2025.

2.2.3 Local – South Coast Air Quality Management District

The SCAQMD is the air pollution control agency with jurisdiction over the Project site. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained. 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.

2.2.4 Thresholds of Significance

The SCAQMD thresholds for what constitute an exposure of substantial air toxics are as follows.

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.

- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of 1 in one million.

Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to TAC exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10-in-one-million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million, which is 100 times more than the SCAQMD's threshold of 10 in one million.

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse

health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

3 METHODOLOGY

This HRA evaluates the potential exposure of residential, worker, and school (1) receptors within a half mile of the Project site to TACs generated by the vehicular traffic and off-road equipment during construction and operation of the Project. The HARP2 model provided by CARB, with regulatory default settings, was used to perform the dispersion and health risk modeling for this analysis. HARP2 implements the latest regulatory guidance to develop inputs to the U.S. EPA AERMOD dispersion model for dispersion and as the inputs for calculations for the various health risk levels. Conservative estimates and information from the Traffic Analysis (Urban Crossroads 2020) prepared for the Project were used to model DPM emissions from associated on and off-site diesel truck traffic during operations. CalEEMod was used to estimate the emissions from diesel fired off-road equipment and diesel truck traffic during construction. All roadway sources within a quarter mile of the Project site boundary were included in modeling analysis.

3.1 Dispersion Modeling

The air dispersion modeling for the HRA was performed using the USEPA AERMOD Version 19121 dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The alberhill30m.dem file found at CARB's website for HARP Digital Elevation Model Files was used for elevation data for all sources and receptors in the Project domain. All regulatory defaults were used for dispersion modeling as configured in the latest version of HARP2 (CARB 2019).

AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Pre-processed meteorological data files provided by SCAQMD using USEPA's AERMET program designed to create AERMOD input files for the Lake Elsinore monitoring station were selected as being the most representative meteorology based on proximity (SCAQMD 2020). The closest available Upper Air at Miramar Marine Corps Air Station in San Diego was also used by SCAQMD to produce these files. A wind rose displaying the data from ELSI station used in this analysis (2012 – 2016) and the station's location relative to the Project site can be found in Figures A-1 and A-2, respectively in Appendix A of this report.

The unit emission rate of one gram per second was utilized in AERMOD to create plot files which established source receptor relationships later to be combined in HARP with the emissions inventory to calculate the ground level concentrations (GLCs) related to Project operations. This allows for variable annual emissions to account for the proposed construction schedule and changes in operational emission rates over time. All AERMOD inputs and output file can be found in Appendix D and the AERMOD plot and AERMET files can be found in the supplemental data package submitted with this report.

Receptors were placed every 50 meters and within 200 meters from the Project boundary and every 100 meters to a half mile from the Project boundary. The land use map found in Figure 1-4 of the Renaissance Ranch Specific Plan No. 333, Amendment No. 1 (Riverside 2021) was used to classify the receptors to

residential, worker and school child. A map of all receptors used for this dispersion analysis is presented as Figure A-3 found in Appendix A of this document.

3.2 Emissions Estimation

Operational Emission Sources

Project related onsite and offsite roadway sources were entered into AERMOD as thirteen-line sources. These sources all have distances relative to the projected onsite roadways and the existing surface streets. Roadway sources all have a width of 7.4 meters using standard line sizing and an estimated two lanes. Roadway sources were modeled for all roads where trucks are allowed to travel per the Renaissance Ranch Specific Plan (Riverside 2021). This does not include the South East entrance to the Project site which would be for light duty vehicles only. Thus, the emissions from this entrance are considered negligible for the purposes of this analysis. Onsite idling at loading bays was modeled as three separate line sources with widths of 35 meters in the estimated locations of Project loading bays. The placement of the onsite idling sources were all 300 feet from the nearest house per the site plan listed above (Riverside 2021) and to represent the 'worst case' scenario since the exact building location is not known at the time of this report. A map of all operational sources is presented as Figure A-4 in appendix A of this document.

Daily truck trips were identified in in the Traffic Analysis prepared for the Project (Urban Crossroads 2020). The estimated ratio of trips on each roadway link along with the daily trips were combined with an estimated operational schedule of five days a week for 50 weeks a year to estimate the annual emissions from each link.

Emission factors for PM_{10} exhaust emissions were generated using EMFAC2021 for idling; and 5, 15, and 45 miles per hour which were used to create composite emission factors for average onsite and offsite truck traffic. The ratio of Heavy Duty and Medium Duty trucks in the Traffic Analysis prepared for the Project was also utilized in the onsite and offsite composite emission factors. These emission factors where then multiplied by the annual trips by link with the distance for each roadway link and idle time to calculate emissions from traffic and idling related to the Project, respectively. Idling was estimated at 10 minutes per trip conservatively to account for any trucks that go over the five-minute idling rule put in place for this Project by the Specific Plan (Riverside 2021). EMFAC2021 emission factors for 2025 and 2030 on were utilized to calculate two sets of annual emissions used for modeling from 2025 through 2030 and 2030 on for the various risk scenarios.

Emissions from the potential TRUs were also included in the calculated emissions. The Tier 4 PM emission factors from the latest amendment of the CARB TRU ATCM (CARB 2011) were used to estimate DPM emission rates from TRUs. Load factors and the average HP for each of the TRUs were estimated using information from CARB's Draft 2019 Update to the Emissions Inventory for TRUs (CARB 2019). The ratio of trucks with TRUs to those without was generated using the ratio of refrigerated space to that of total space utilized for the proposed light industrial area. Emissions from TRUs during idling were estimated at five minutes each trip as the average time to plug in the TRU as plug in capabilities for refrigerated warehouse space are required in the Specific Plan (Riverside 2021). Annual emissions from TRUs were then

added to the exhaust idling and traffic emissions for each operational source. Detailed calculations for operational emissions can be found in Appendix B of this document.

Construction Emission Sources

All on and off-site diesel truck traffic related to Project construction activities was modeled using the same source parameters listed above for operations. Emission factors were generated using EMFAC2021 for construction in the year 2021 to and conservatively utilized throughout the proposed period of construction.

Construction off-road equipment was modeled as 748 volume sources spaced 20 meters apart per SCAQMD construction HRA guidance (SCAQMD 2003). 124 of the volume sources were used to represent the business park and 624 were used to represent the light industrial area. Per the landscape buffer established in Chapter 4 Design Guidelines of the Renaissance Ranch Specific Plan (Riverside 2021) the volume sources for the business park were place 10 feet from the fence line and 100 feet from the fence line in the Light Industrial area. Annual off-road PM_{10} exhaust emissions generated using the CalEEMod model were used to represent emissions from onsite off-road diesel equipment used throughout construction. The annual emissions for the worst-case scenario (2022) were used to conservatively estimate annual construction emissions for the estimated Project duration of five years.

A map of all construction sources is presented as Figure A-5 in Appendix A of this document. Detailed calculations for construction emissions can be found in Appendix C of this document.

3.3 Health Risk Estimation

A health risk computation was performed to determine the risk of developing an excess cancer and chronic non-cancer risk calculated for 70-year, 30-year, 25-year and 9-year exposure scenarios for operational emissions and 5-years for construction emissions. Per OEHHA guidance, the 25-year scenario was used to model the health risk for workers at business locations and the 70, 30, and 9 year scenarios were used for residents at in residential areas. Risk during construction was also modeled utilizing worker factors and residential factors to find the Maximumly Exposed Individual Resident (MEIR), Maximumly Exposed Individual Resident (MEIW) and maximumly exposed school child. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual (2015) as implemented in CARB's HARP2 program (CARB 2019). No acute health risk was analyzed as DPM does not have associated acute risk (OEHHA 2015) The risk associated with traffic emissions related to Project operations was assessed as risk associated with future Project operations.

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations are calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home, and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\textbf{Dose-air} = (C_{air} * \{BR/BW\} * A * EF * 10^{-6})$$

Where:

Dose-air = dose through inhalation (mg/kg/day)

C_{air} = air concentration ($\mu g/m^3$) from air dispersion model

{BR/BW} = daily breathing rate normalized to body weight (L/kg body weight – day) (361 L\kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 861 L/kg BW-day for 2<9 years, 745 L/kg BW-day for 2<16 years, 335 L/kg BW-day for 16<30 years, and 290 L/kg BW-day 16<70 years)

A = Inhalation absorption factor (unitless [1])

EF = exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])

10^{-6} = conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <2 years, 85 percent of time is spent at home; from age 2 through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$\textbf{Risk}_{\textbf{inh-res}} = (\textbf{Dose}_{\textbf{air}} * \textbf{CPH} * \textbf{ASF} * \textbf{ED/AT} * \textbf{FAH})$$

Where:

$Risk_{inh-res}$ = residential inhalation cancer risk (potential chances per million)

$Dose_{air}$ = daily dose through inhalation (mg/kg-day)

CPF = inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)

ASF = age sensitivity factor for a specified age group (unitless)

ED = exposure duration (in years) for a specified age group (0.25 years for 3rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)

AT = averaging time of lifetime cancer risk (years)

FAH = fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

Hazard Quotient = Ci/RELi

Where:

Ci = Concentration in the air of substance i (annual average concentration in µg/m3)

RELi = Chronic noncancer Reference Exposure Level for substance i (µg/m3)

4 IMPACT ANALYSIS

4.1 Carcinogenic Risk

Cancer risk calculations for existing residential receptors are based on 70-, 30-, and 9-year exposure periods to for operations and a 5-year exposure period for construction. As described above, the calculated cancer risk accounts for 350 days per year of exposure to existing residential receptors. While the average American spends 87 percent of their life indoors (USEPA 2001), neither the pollutant dispersion modeling nor the health risk calculations account for the reduced exposure structures provide. Instead health risk calculations account for the equivalent exposure of continual outdoor living. The calculated carcinogenic risk at Project vicinity receptors is depicted in Table 2.

Table 2. Cancer Risk Summary by Pollutant

Exposure Scenario	Total Risk
Operation	
70-Year Exposure Resident	7.84
30-Year Exposure Resident	6.60
9-Year Exposure Resident	4.59
25-Year Exposure Worker	0.47
9-Year Exposure School	0.13
Construction	
5-Year Exposure Resident	4.64
5-Year Exposure Worker	0.13
5-Year Exposure (School)	0.01
Significance Threshold	**10**

As shown, impacts related to cancer risk for all modeled scenarios would be below the 10 in one million threshold for both operations and construction. These calculations do not account for any pollutant-reducing remedial components inherent to the Project or the Project site.

For construction emissions the Maximumly Exposed Individual Resident (MEIR) receptor is located 150 feet north of the site has a 5-year cancer risk of 4.64 related to the Project. The Maximumly Exposed Individual Worker (MEIW) is located around a quarter mile north of the project site in a large industrial area 5-year cancer risk of 0.13 in one million. The maximumly exposed school child is located at Luiseno Elementary School south of the project with a nine-year cancer risk of 0.01. The locations of cancer risk MEIR and MEIW can be seen in Figure A-4 found in Appendix A of this document. Detailed cancer risk results for all modeled receptors can be found in Appendix D of this document and the supplemental materials provided with this report.

For operational emissions the Maximumly Exposed Individual Resident (MEIR) receptor is located 150 feet north of the site has a 70-year cancer risk of 7.84 related to the Project. The Maximumly Exposed Individual Worker (MEIW) is located at the wastewater treatment plant which borders the Project site directly to the west and has a 25-year cancer risk of 0.47 in one million. The maximumly exposed school child is located at Luiseno Elementary School south of the project with a nine-year cancer risk of 0.13. The locations of cancer and non-cancer chronic risk MEIR and MEIW can be seen in Figure A-7 found in Appendix A of this document. Detailed cancer risk results for all modeled receptors can be found in Appendix D of this document and the supplemental material provided with this report.

4.2 Non-Carcinogenic Hazards

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. As mentioned above no acute risk was analyzed for this report as DPM has no identified acute risk.

An chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the REL. The highest maximum chronic hazard indexes for residents, workers and school children as a result of the proposed Project construction and operations as a result of DPM exposure is shown in Table 3.

Table 3. Non-Carcinogenic Health Risk Summary

Exposure Scenario	Maximum Residential Hazard	Maximum Worker Hazard	Maximum Sensitive Receptor Hazard
Operation	0.0015	0.0015	4.4e-05
Construction	0.002	0.002	4.1e-05
Significance Threshold	**1**	**1**	**1**

Source: ECORP Consulting 2021. Refer to Appendix D for Model Data Outputs.

As shown in Table 3, impacts related to non-cancer risk (chronic hazard index) as a result of the Project site would not surpass significance thresholds. As only DPM emissions were analyzed for this Project the MEIR, MEIW and maximumly effected school child are the same for Chronic Hazard as they are for cancer risk and their locations are identified in figures A-6 and A-7 in Appendix A of this document for construction and operations, respectively.

5 REFFERENCES

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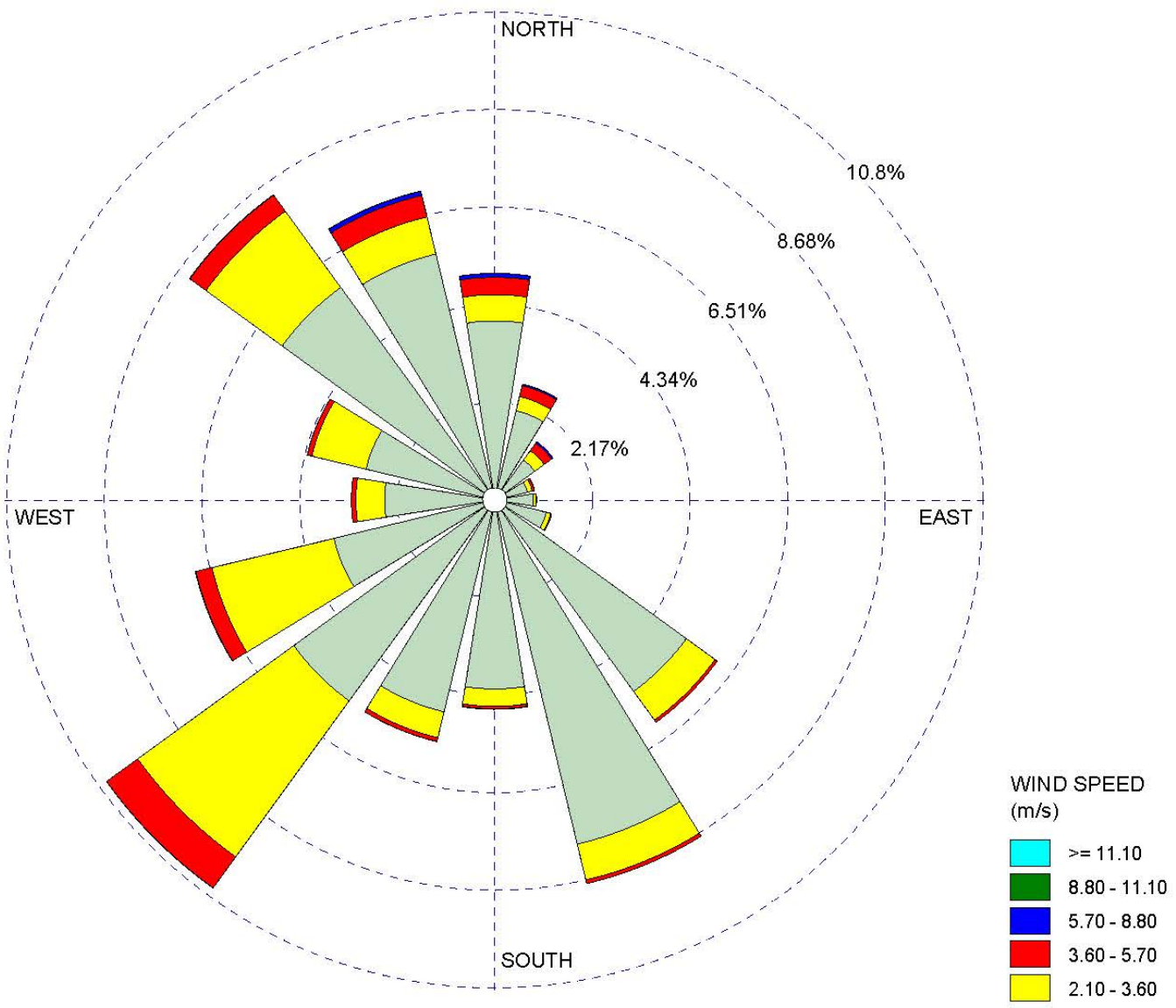
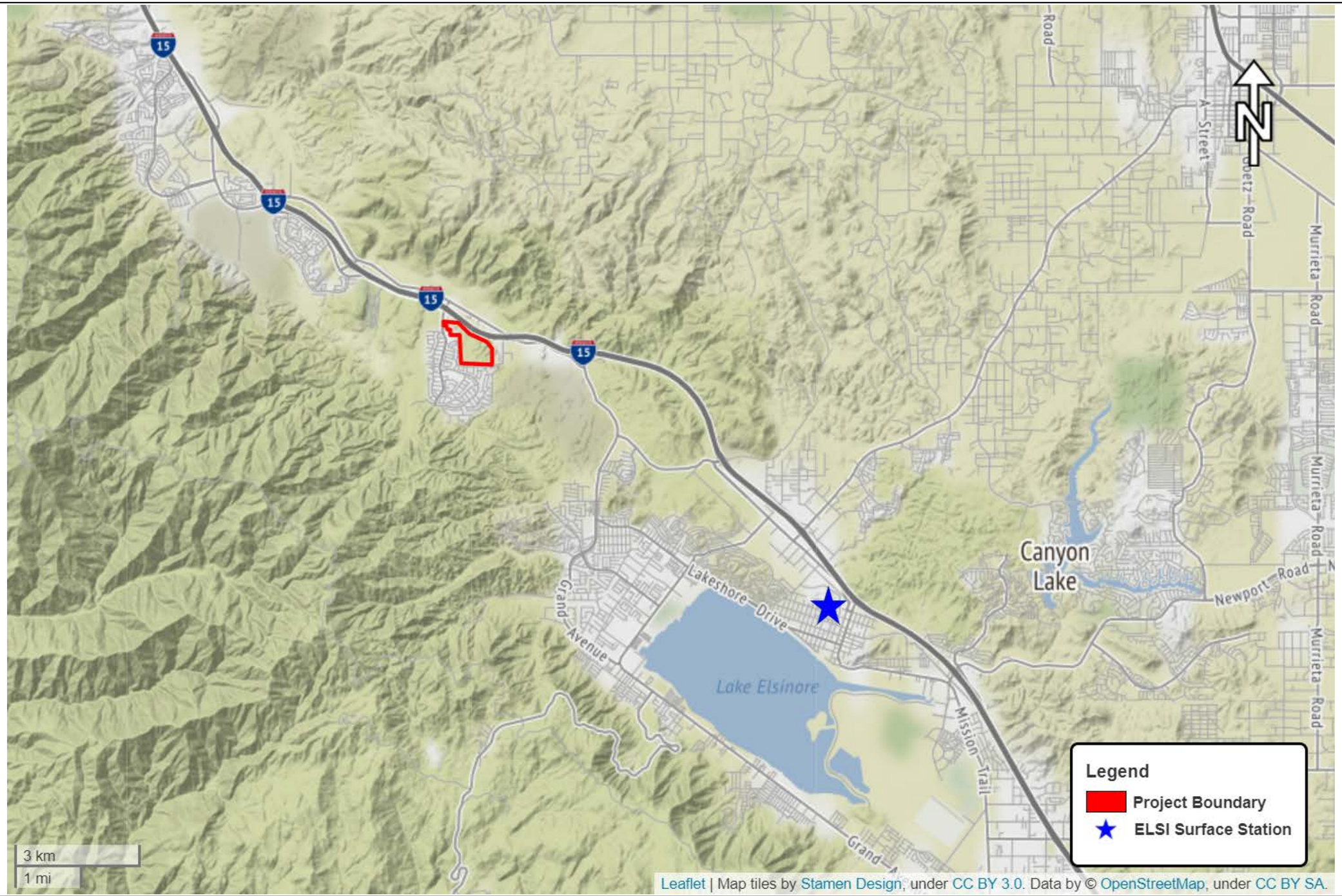
Location and Wind Figures

WIND ROSE PLOT:	DISPLAY:
Lake Elsinor Airport Wind Data - 2012 thorugh 2016 **Processed AERMET Surface (.SFC) File**	**Wind Speed** **Direction (blowing from)**



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
AERMET Surface File Data	**Start Date: 1/1/2012 - 00:00** **End Date: 12/31/2016 - 23:59**		
		MODELER:	
	CALM WINDS: **21.15%**	TOTAL COUNT: **43346 hrs.**	
	AVG. WIND SPEED: **1.28 m/s**	DATE: **3/23/2021**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software



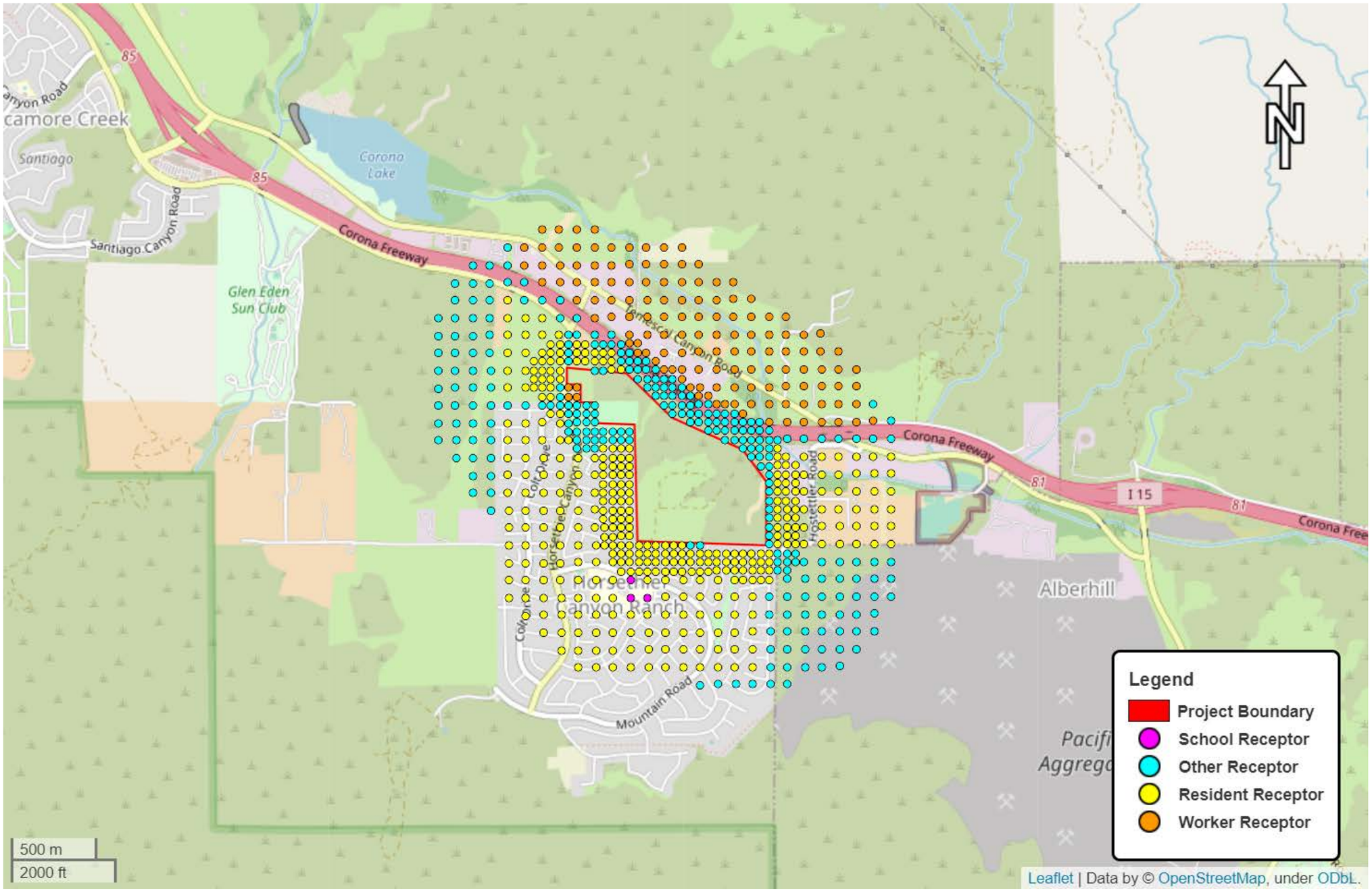
Location: N:\2016\2016-130 MedMen Cultivation\MAPS\Borders\MedMen Site Plan.mxd *(AA)-mapping_guest 9/13/2016*

Map Date: *3/11/2021*
Photo (or Base) Source: *OpenStreetMap*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Exhibit A-2 Surface Data Location

2020-103 Renaissance Ranch



Map Date: *3/23/2021*
Photo (or Base) Source: *OpenStreetMap s2021*

ECORP Consulting, Inc.
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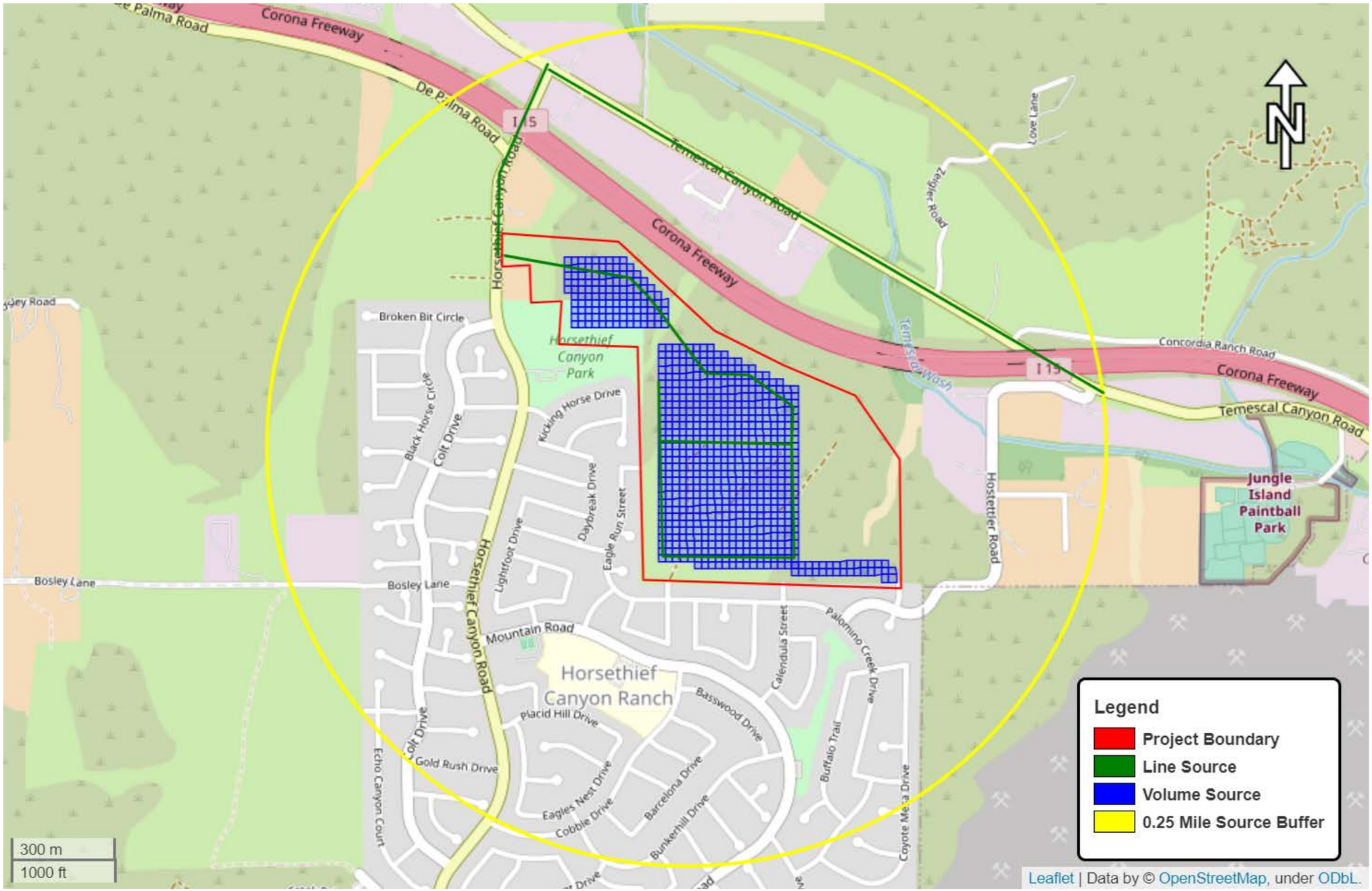
Figure A-3 Receptor Map

2020-121 RenRanch



Map Date: *3/23/2021*
Photo (or Base) Source: *OpenStreetMap s2021*

ECORP Consulting, Inc.
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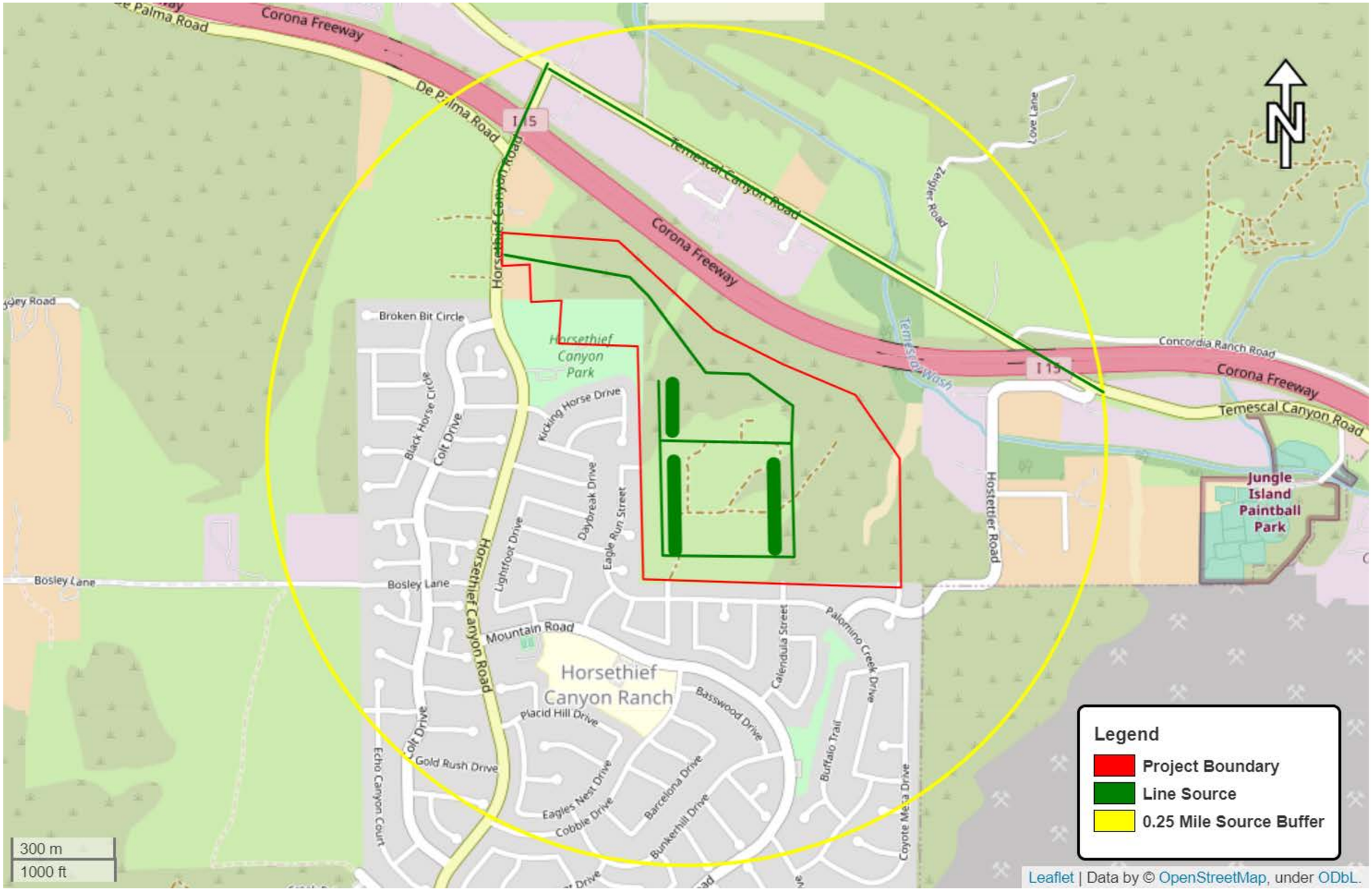
Figure A-4 Construction Sources

2020-121 RenRanch

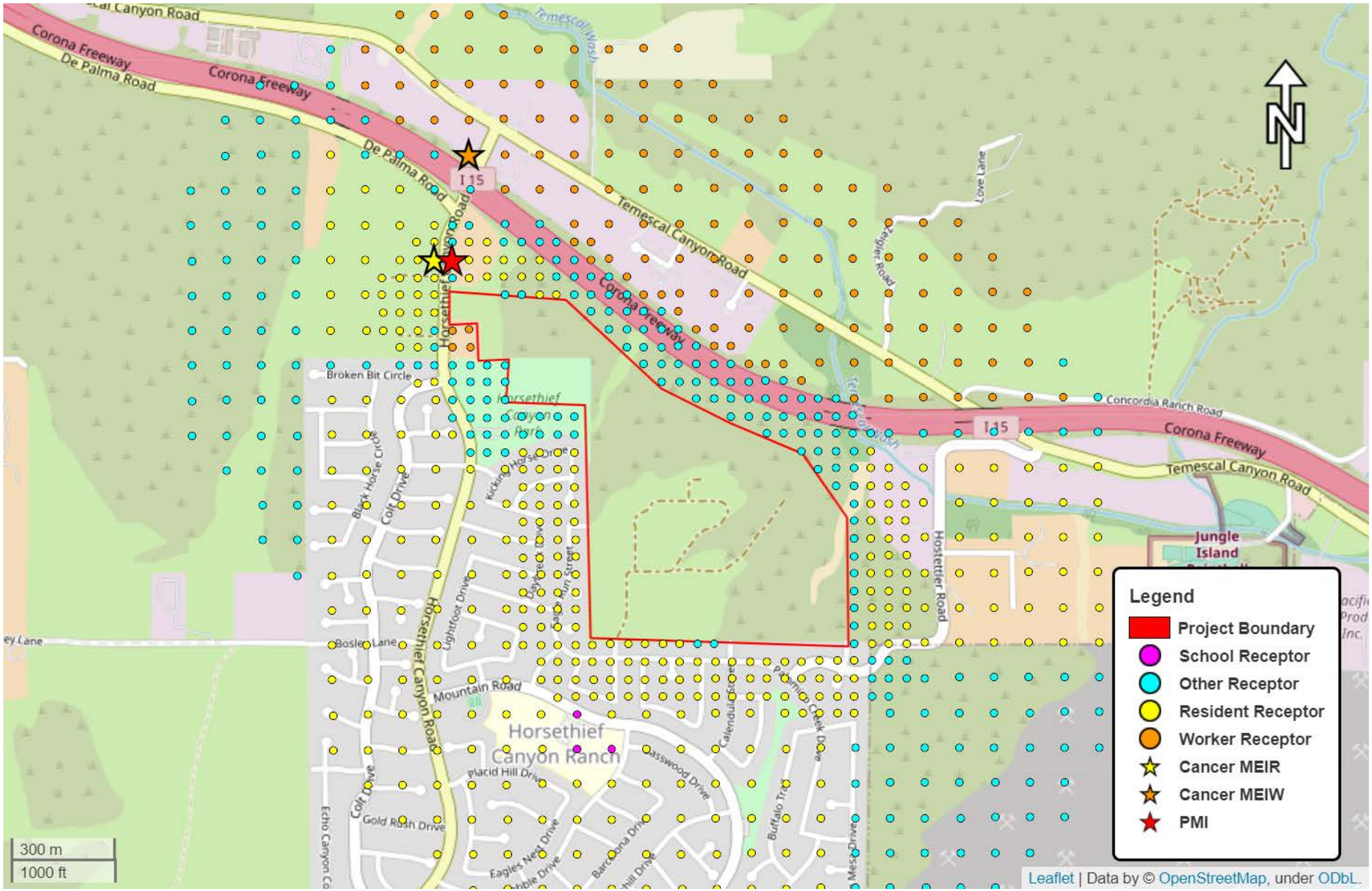


Map Date: *3/23/2021*
Photo (or Base) Source: *OpenStreetMap s2021*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure A-5 Operational Sources

2020-121 RenRanch

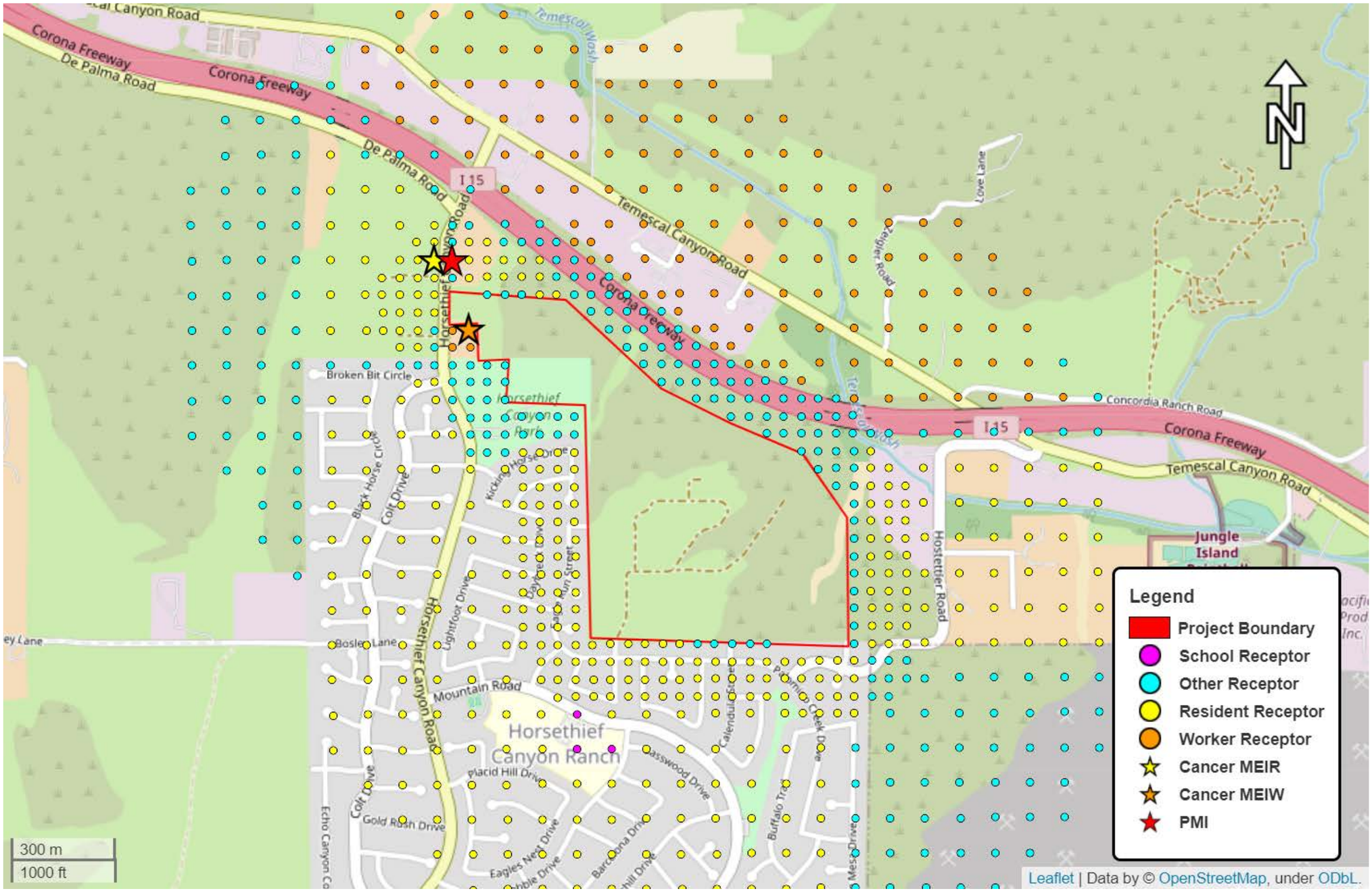


Map Date: *3/23/2021*
Photo (or Base) Source: *OpenStreetMap s2021*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure A-6 Construction Impacts

2020-121 RenRanch



Map Date: *3/23/2021*
Photo (or Base) Source: *OpenStreetMap s2021*

ECORP Consulting, Inc.
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Figure A-7 Operational Impacts

2020-121 RenRanch

Operation Emissions Calculations

Table B-1. Modeled Roadway Dimensions

Roadway Link Description	AERMOD ID	Length (miles)	Width (m)	Area (m^2)
Link 1 Onsite	Link1a	0.23	7.4	2,704.64
Link 1 Onsite	Link1b	0.05	7.4	578.60
Link 1 Onsite	Link1c	0.17	7.4	2,010.23
Link 1 Onsite	Link1d	0.08	7.4	920.10
Link 1 Onsite	Link1e	0.10	7.4	1,140.20
Link 1 Onsite	Link1f	0.07	7.4	794.16
Link 2 Onsite	Link2a	0.23	7.4	2,785.86
Link 2 Onsite	Link2b	0.20	7.4	2,386.41
Link 2 Onsite	Link2c	0.23	7.4	2,770.44
Link 2 Onsite	Link2d	0.31	7.4	3,679.65
Link 3 Offsite	Link3a	0.21	7.4	2,537.45
Link 3 Offsite	Link3b	0.14	7.4	1,696.14
Link 4 offsite	Link4	1.14	7.4	13,610.96

(1) All roadways modeled as two lanes with standard 3.7 meter width per lane.

(2) Site to Montague captures eastbound and westbound traffic

Table B-2. Total Haul Trip Information

Trip Type	Trips/Day
Vendor Heavy Duty Trucks (Building Construction)	517

Note: All grading material assumed to remain on site and no new material will be brought onsite

Daily truck trips from CalEEMod for building and road construction and materials

Table B-3. Modeled Roadway Trip Information

	Truck Trips		
Roadway Link	Percentage Total Trips	Hourly	Average Daily
Link 1 Onsite	100%	64.6	517
Link 1 Onsite	100%	64.6	517
Link 1 Onsite	100%	64.6	517
Link 1 Onsite	100%	64.6	517
Link 1 Onsite	100%	64.6	517
Link 1 Onsite	100%	64.6	517
Link 2 Onsite	25%	16.2	129.25
Link 2 Onsite	25%	16.2	129.25
Link 2 Onsite	25%	16.2	129.25
Link 2 Onsite	25%	16.2	129.25
Link 3 Offsite	100%	64.6	517
Link 3 Offsite	100%	64.6	517
Link 4 offsite	50%	32.3	258.5

(1) Offiste truck emissions calcuated for roadway within .25 miles of the site.

Table B-4. Onroad DPM Emission Rates

	DPM Emission Rates[1] (g/mi)					
Vehicle Type	Idle[2]	5 mph	15 mph	45 mph	Onsite Composite[4]	Offsite Composite[5]
HHDT	0.039	0.041	0.024	0.020	0.027	0.021
MHDT	0.018	0.069	0.048	0.039	0.051	0.039
Station Customer Composite[3]	0.028	0.055	0.036	0.030	0.039	0.030

(1) DPM Emission Rates conservativly represented using EMFAC2017 PM10 Exhaust emission factors for 2022.

(2) Idle emission rates in grams per minute.

(3) Vender diesel vehicle fleet mix estimated at 50% HHDT 50% MDV per CalEEMod.

(4) Onsite Composite factor is 85% @ 15 mph + 15% @ 5 mph + 1 minute idle per mile

(5) Offsite Composite factor is 80% @ 45 mph + 10% @ 15 mph + 10% @ 5 mph + .1 minute idle per mile

Table B-5. Modeled Roadway Emission Rates

Roadway Link	DPM Emissions[1,2]	
	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Link 1 Onsite	0.0013	2.5518
Link 1 Onsite	0.0003	0.5459
Link 1 Onsite	0.0009	1.8966
Link 1 Onsite	0.0004	0.8681
Link 1 Onsite	0.0005	1.0758
Link 1 Onsite	0.0004	0.7493
Link 2 Onsite	0.0003	0.6571
Link 2 Onsite	0.0003	0.5629
Link 2 Onsite	0.0003	0.6535
Link 2 Onsite	0.0004	0.8679
Link 3 Offsite	0.0012	2.3941
Link 3 Offsite	0.0008	1.6003
Link 4 offsite	0.0032	6.4210

(1) Peak Hourly Emissions = DPM Emission Rate (g/mi) * Peak Hourly Trips * Link Length (mi) / 453.6 (g/lb)

(2) Annual Emissions = DPM Emission Rate (g/mi) * Daily Trips * Link Length (mi) * 365 (days/yr) / 453.6 (g/lb)

Table B-6. Construction Phase Information

Phase Name	Start Date	End Date
Site Preperation	8/1/2021	1/14/2022
Grading	1/15/2022	10/21/2022
Building Construction	10/22/2022	11/30/2025
Paving	10/22/2022	11/28/2025
Architectural Coating	10/22/2022	11/30/2025

Source: CalEEMod - Annual Consite Construction

Table B-7. Construction Offroad Equipment List

Phase Name	Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	6	8	247	0.4
Site Preparation	Tractors/Loaders/Backhoes	8	8	97	0.37
Grading	Excavators	4	8	158	0.38
Grading	Graders	2	8	187	0.41
Grading	Rubber Tired Dozers	2	8	247	0.4
Grading	Scrapers	4	8	367	0.48
Grading	Tractors/Loaders/Backhoes	4	8	97	0.37
Building Construction	Cranes	2	7	231	0.29
Building Construction	Forklifts	6	8	89	0.2
Building Construction	Generator Sets	2	8	84	0.74
Building Construction	Tractors/Loaders/Backhoes	6	7	97	0.37
Building Construction	Welders	2	8	46	0.45
Paving	Pavers	4	8	130	0.42
Paving	Paving Equipment	4	8	132	0.36
Paving	Rollers	4	8	80	0.38
Architectural Coating	Air Compressors	2	6	78	0.48

Source: CalEEMod - Annual Onsite Construction

B.8 Annual Onsite Offroad DPM Exhaust Construction Emissions by Phase

Phase	Emissions (tons/yr)					Total (tons)
	2021	2022	2023	2024	2025	
Site Preparation	0.2249	0.0161	--	--	--	0.2410
Grading	--	0.3270	--	--	--	0.3270
Building Construction	--	0.0333	0.1478	0.1294	0.0995	0.4100
Paving	--	0.0284	0.1327	0.1228	0.0996	0.3835
Architectural Coating	--	0.0041	0.0184	0.0160	0.0123	0.0508
Annual DPM Emissions	**0.2249**	**0.4089**	**0.2989**	**0.2682**	**0.2114**	**1.4123**
Emissions (lbs/yr) per Volume Source[1]	**0.6013**	**1.0933**	**0.7992**	**0.7171**	**0.5652**	**3.7762**

Source: CalEEMod - Annual Onsite Construction

Note: Emissions for 2022 were used as a worst case to model all five years of construction

(1) Emissions per Volume Source (lbs/yr) = Total Offroad Emissions (tons/yr) * 2000 (lb/ton) / 748 (# VS)

Construction Emissions Calculations

Table C-1. Modeled Roadway Dimensions

Roadway Link Description	AERMOD ID	Length (miles)	Width (m)	Area (m^2)
Link 1 Onsite	Link1a	0.23	7.4	2,704.64
Link 1 Onsite	Link1b	0.05	7.4	578.60
Link 1 Onsite	Link1c	0.17	7.4	2,010.23
Link 1 Onsite	Link1d	0.08	7.4	920.10
Link 1 Onsite	Link1e	0.10	7.4	1,140.20
Link 1 Onsite	Link1f	0.07	7.4	794.16
Link 2 Onsite	Link2a	0.23	7.4	2,785.86
Link 2 Onsite	Link2b	0.20	7.4	2,386.41
Link 2 Onsite	Link2c	0.23	7.4	2,770.44
Link 2 Onsite	Link2d	0.31	7.4	3,679.65
Link 3 Offsite	Link3a	0.21	7.4	2,537.45
Link 3 Offsite	Link3b	0.14	7.4	1,696.14
Link 4 Offsite	Link4	1.14	7.4	13,610.96
North West Idle Zone	Idle1	0.16	35	8,881.44
South West Idle Zone	Idle2	0.08	35	4,776.27
South East Idle Zone	Idle3	0.16	35	9,127.25

(1) All roadways modeled as two lanes with standard 3.7 meter width per lane.

(2) Site to Montague captures eastbound and westbound traffic

Table C-2. Total Haul Trip Information

Trip Type	Trips/Day
Vendor Heavy Duty Trucks (Building Construction)	1044

Note: All grading material assumed to remain on site and no new material will be brought onsite

Daily truck trips from CalEEMod for building and road construction and materials

Table C-3. Modeled Roadway Trip Information

	Truck Trips		
Roadway Link	**Percentage Total Trips**	**Hourly**	**Average Daily**
Link 1 Onsite	100%	130.5	1044
Link 1 Onsite	95%	124.0	991.8
Link 1 Onsite	90%	117.5	939.6
Link 1 Onsite	85%	110.9	887.4
Link 1 Onsite	80%	104.4	835.2
Link 1 Onsite	70%	91.4	730.8
Link 2 Onsite	50%	65.3	522
Link 2 Onsite	40%	52.2	417.6
Link 2 Onsite	30%	39.2	313.2
Link 2 Onsite	20%	26.1	208.8
Link 3 Offsite	100%	130.5	1044
Link 3 Offsite	100%	130.5	1044
Link 4 Offsite	50%	65.3	522
North West Idle Zone	20%	26.1	208.8
South West Idle Zone	40%	52.2	417.6
South East Idle Zone	40%	52.2	417.6

(1) Offiste truck emissions calcuated for roadway within .25 miles of the site.

Table C-4. Onroad DPM Emission Rates

Vehicle Type	DPM Emission Rates[1] (g/mi)					
	Idle[2]	5 mph	15 mph	45 mph	Onsite Composite[4]	Offsite Composite[5]
2025 Emission Rates						
HHDT	0.010	0.011	0.007	0.013	0.008	0.011
MHDT	0.055	0.042	0.021	0.006	0.025	0.015
Truck Composite[3]	0.018	0.016	0.010	0.012	0.011	0.012

(1) DPM Emission Rates conservativly represented using EMFAC2017 PM10 Exhaust emission factors for 2025.

(2) EMFAC2021 Idle emission rates in grams per hour. 10 minutes per trip assumed for idling duration.

(3) Vender diesel vehicle fleet mix estimated at 83% HHDT 17% MDV per CalEEMod.

(4) Onsite Composite factor is 85% @ 15 mph + 15% @ 5 mph

(5) Offsite Composite factor is 60% @ 45 mph + 30% @ 15 mph + 10% @ 5 mph + 0.5 minute idle per mile

Table C-5. Transport Refrigeration Unit Emission Caclulations and factors

Factor Type	Factor	Units
Load Factor[1]	0.46	unitless
Tier 4 Diesel TRU Standard[2]	0.02	gPM/hp-hr
Average HP[1]	37.5	hp
% Daily Trips[4]	20%	percent
Average Time before plug in[3]	5	Minutes
Calculated Emissions Factors		
Idling Emissions per Trip[5]	0.00006	lbs/trip
Onsite Emissions per Mile[6]	0.00006	lbs/mile
Offsite Emissions per Mile[6]	0.00002	lbs/mile

(1) Source: Draft 2019 Update to Emissions Inventory for Transport Refrigeration Units (CARB, 2019)

(2) Source: Final Regulation Order CCR Title 13, Division 3, Ch 9, Article 8 Section 2477

(3) Source: Conservative Engineering Estimate

(4) Ratio of Cold Storage to total Light Industrial Square Footage

(5) Idling Emissions per Trip (lb/trip) = Average HP (hp) * Load Factor (unitless) * PM EF (gPM/hp-hr) * Time Onsite (minutes) / 60 (min/hr) / 456.3 (grams/lb)

(6) Emissions per Mile (lb/mile) = Average HP (hp) * Load Factor (unitless) * PM EF (gPM/hp-hr) / Average Speed (mph) / 456.3 (grams/lb)

Table C-6. Modeled Roadway Emission Rates

Roadway Link	2025 DPM Emissions[1,2]	
	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Link 1 Onsite	0.0011	2.1132
Link 1 Onsite	0.0002	0.4295
Link 1 Onsite	0.0007	1.4136
Link 1 Onsite	0.0003	0.6111
Link 1 Onsite	0.0004	0.7127
Link 1 Onsite	0.0002	0.4344
Link 2 Onsite	0.0005	1.0883
Link 2 Onsite	0.0004	0.7458
Link 2 Onsite	0.0003	0.6494
Link 2 Onsite	0.0003	0.5750
Link 3 Offsite	0.0008	1.6612
Link 3 Offsite	0.0006	1.1104
Link 4 Offsite	0.0022	4.4555
idle NW	0.0002	0.3568
idle SW	0.0004	0.7137
idle SE	0.0004	0.7137

(1) Peak Hourly Emissions = DPM Emission Rate (g/mi) * Peak Hourly Trips * Link Length (mi) / 453.6 (g/lb)

(2) Annual Emissions = (DPM Emission Rate (g/mi) * Daily Trips * Link Length (mi) / 453.6 (g/lb) + TRU emissions) * (5 (days/week) * 50 (weeks/yr))

AERMOD and HARP2 Files

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   POLLUTID OTHER
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   LOCATION Link1e LINE  460960.9  3732633  461084.4  3732541  396.92
   LOCATION Link1f LINE  461084.4  3732541  461082.2  3732434  399.49
   LOCATION Link2a LINE  460705.8  3732446  461082  3732433  410.45
   LOCATION Link2b LINE  461082  3732433  461086.1  3732111  403.52
   LOCATION Link2c LINE  461086.1  3732111  460711.8  3732117  417.94
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   LOCATION Link3b LINE  460245.8  3733208  460239.1  3732979  382.27
   LOCATION Link4 LINE  460388.9  3733508  461975.2  3732577  369.3
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   LOCATION Idle2 LINE  460740.1  3732471  460748  3732607  403.83
   LOCATION Idle3 LINE  461030.5  3732124  461032.8  3732385  414.59
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   SRCPARAM Link1c 0.0004974554402245843 5 7.4 1.4
   SRCPARAM Link1d 0.0010086838126148576 5 7.4 1.4
   SRCPARAM Link1e 0.0008770402026120932 5 7.4 1.4
   SRCPARAM Link1f 0.0012591881788516833 5 7.4 1.4
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   SRCPARAM Link2c 0.0003609539740219677 5 7.4 1.4
   SRCPARAM Link2d 0.00027176474253544076 5 7.4 1.4
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   SRCPARAM Idle2 0.00021 5 35 1.4
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```
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   SRCGROUP Link1b Link1b
   SRCGROUP Link1c Link1c
   SRCGROUP Link1d Link1d
   SRCGROUP Link1e Link1e
   SRCGROUP Link1f Link1f
   SRCGROUP Link2a Link2a
   SRCGROUP Link2b Link2b
   SRCGROUP Link2c Link2c
   SRCGROUP Link2d Link2d
   SRCGROUP Link3a Link3a
   SRCGROUP Link3b Link3b
   SRCGROUP Link4 Link4
   SRCGROUP Idle1 Idle1
   SRCGROUP Idle2 Idle2
   SRCGROUP Idle3 Idle3
SO FINISHED
**
**RECEPTORS
RE STARTING
   INCLUDED "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\RENAISSANCE RANCH_AERMAP.REC"
RE FINISHED
**
**MET PATHWAY
ME STARTING
ME SURFFILE "C:\Users\wduvall\Documents\Reniassance
Ranch\met_data\LakeElsinoreADJU\ELSI_V9_ADJU\ELSI_v9.SFC"
ME PROFFILE "C:\Users\wduvall\Documents\Reniassance
Ranch\met_data\LakeElsinoreADJU\ELSI_V9_ADJU\ELSI_v9.PFL"
ME SURFDATA 3171 2012
ME UAIRDATA 3190 2012
ME SITEDATA 99999 2012
ME PROFBASE 0
ME FINISHED
**
**OUTPUT PATHWAY
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   PLOTFILE 1 Link1a 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink1a.PLT" 31
   PLOTFILE 1 Link1b 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink1b.PLT" 32
   PLOTFILE 1 Link1c 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink1c.PLT" 33
   PLOTFILE 1 Link1d 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink1d.PLT" 34
   PLOTFILE 1 Link1e 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink1e.PLT" 35
```

```
   PLOTFILE 1 Link1f 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink1f.PLT" 36
   PLOTFILE 1 Link2a 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink2a.PLT" 37
   PLOTFILE 1 Link2b 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink2b.PLT" 38
   PLOTFILE 1 Link2c 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink2c.PLT" 39
   PLOTFILE 1 Link2d 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink2d.PLT" 40
   PLOTFILE 1 Link3a 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink3a.PLT" 41
   PLOTFILE 1 Link3b 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink3b.PLT" 42
   PLOTFILE 1 Link4 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRLink4.PLT" 43
   PLOTFILE 1 Idle1 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRIdle1.PLT" 44
   PLOTFILE 1 Idle2 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRIdle2.PLT" 45
   PLOTFILE 1 Idle3 1ST "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\MAX1HRIdle3.PLT" 46
   PLOTFILE PERIOD Link1a "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink1a.PLT" 47
   PLOTFILE PERIOD Link1b "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink1b.PLT" 48
   PLOTFILE PERIOD Link1c "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink1c.PLT" 49
   PLOTFILE PERIOD Link1d "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink1d.PLT" 50
   PLOTFILE PERIOD Link1e "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink1e.PLT" 51
   PLOTFILE PERIOD Link1f "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink1f.PLT" 52
   PLOTFILE PERIOD Link2a "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink2a.PLT" 53
   PLOTFILE PERIOD Link2b "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink2b.PLT" 54
   PLOTFILE PERIOD Link2c "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink2c.PLT" 55
   PLOTFILE PERIOD Link2d "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink2d.PLT" 56
   PLOTFILE PERIOD Link3a "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink3a.PLT" 57
   PLOTFILE PERIOD Link3b "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink3b.PLT" 58
   PLOTFILE PERIOD Link4 "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODLink4.PLT" 59
   PLOTFILE PERIOD Idle1 "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODIdle1.PLT" 60
```

```
   PLOTFILE PERIOD Idle2 "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODIdle2.PLT" 61
   PLOTFILE PERIOD Idle3 "C:\Users\wduvall\Documents\Reniassance Ranch\RENAISSANCE
RANCH\plt\PERIODIdle3.PLT" 62
OU FINISHED
```

ATTACHMENT C

CalEEMod Output File for Greenhouse Gas Emissions

Renaissance Ranch-offsite

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Area estimated from google earth.

Construction Phase - Paving and painting assumed to occur at the same time.

Off-road Equipment -

Off-road Equipment - Equipment updated to accurately reflect project- a crane is not needed.

Off-road Equipment - Equipment updated to match project- no more than one mixer will be needed for the project area.

Off-road Equipment -

Construction Off-road Equipment Mitigation - Mitigation accounts for county requirments to adhear to SCAQMD rule 403.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	9.7600e-003	0.0621	0.0735	1.2000e-004	1.2700e-003	3.3500e-003	4.6200e-003	3.0000e-004	3.1600e-003	3.4600e-003	0.0000	10.7450	10.7450	2.3600e-003	0.0000	10.8040
Maximum	**9.7600e-003**	**0.0621**	**0.0735**	**1.2000e-004**	**1.2700e-003**	**3.3500e-003**	**4.6200e-003**	**3.0000e-004**	**3.1600e-003**	**3.4600e-003**	**0.0000**	**10.7450**	**10.7450**	**2.3600e-003**	**0.0000**	**10.8040**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	9.7600e-003	0.0621	0.0735	1.2000e-004	7.6000e-004	3.3500e-003	4.1100e-003	2.0000e-004	3.1600e-003	3.3600e-003	0.0000	10.7450	10.7450	2.3600e-003	0.0000	10.8040
Maximum	**9.7600e-003**	**0.0621**	**0.0735**	**1.2000e-004**	**7.6000e-004**	**3.3500e-003**	**4.1100e-003**	**2.0000e-004**	**3.1600e-003**	**3.3600e-003**	**0.0000**	**10.7450**	**10.7450**	**2.3600e-003**	**0.0000**	**10.8040**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.16**	**0.00**	**11.04**	**33.33**	**0.00**	**2.89**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	5-23-2021	8-22-2021	0.0706	0.0706
		Highest	0.0706	0.0706

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5900e-003	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5900e-003**	**0.0000**	**2.6000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-004**	**5.0000e-004**	**0.0000**	**0.0000**	**5.3000e-004**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.5900e-003	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.5900e-003**	**0.0000**	**2.6000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-004**	**5.0000e-004**	**0.0000**	**0.0000**	**5.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/7/2021	7/7/2021	5	1	
2	Installation of water line	Trenching	7/8/2021	7/21/2021	5	10	
3	Paving	Paving	7/22/2021	7/28/2021	5	5	
4	Architectural Coating	Architectural Coating	7/22/2021	7/28/2021	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.46

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,200 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Installation of water line	Concrete/Industrial Saws	1	7.00	81	0.73
Installation of water line	Cranes	0	4.00	231	0.29
Installation of water line	Excavators	1	8.00	158	0.38
Installation of water line	Forklifts	1	6.00	89	0.20
Installation of water line	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation of water line	4	10.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	**3.2000e-004**	**3.9100e-003**	**2.0100e-003**	**0.0000**	**2.7000e-004**	**1.5000e-004**	**4.2000e-004**	**3.0000e-005**	**1.4000e-004**	**1.7000e-004**	**0.0000**	**0.4276**	**0.4276**	**1.4000e-004**	**0.0000**	**0.4310**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0222	0.0222	0.0000	0.0000	0.0222
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0222**	**0.0222**	**0.0000**	**0.0000**	**0.0222**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	3.9100e-003	2.0100e-003	0.0000		1.5000e-004	1.5000e-004		1.4000e-004	1.4000e-004	0.0000	0.4276	0.4276	1.4000e-004	0.0000	0.4310
Total	**3.2000e-004**	**3.9100e-003**	**2.0100e-003**	**0.0000**	**1.0000e-004**	**1.5000e-004**	**2.5000e-004**	**1.0000e-005**	**1.4000e-004**	**1.5000e-004**	**0.0000**	**0.4276**	**0.4276**	**1.4000e-004**	**0.0000**	**0.4310**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	8.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0222	0.0222	0.0000	0.0000	0.0222
Total	**1.0000e-005**	**1.0000e-005**	**8.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0222**	**0.0222**	**0.0000**	**0.0000**	**0.0222**

3.3 Installation of water line - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2500e-003	0.0380	0.0481	7.0000e-005		2.1500e-003	2.1500e-003		2.0400e-003	2.0400e-003	0.0000	6.4895	6.4895	1.4700e-003	0.0000	6.5264
Total	**4.2500e-003**	**0.0380**	**0.0481**	**7.0000e-005**		**2.1500e-003**	**2.1500e-003**		**2.0400e-003**	**2.0400e-003**	**0.0000**	**6.4895**	**6.4895**	**1.4700e-003**	**0.0000**	**6.5264**

3.3 Installation of water line - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4000e-003	2.7000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.3660	0.3660	3.0000e-005	0.0000	0.3667
Worker	2.1000e-004	1.4000e-004	1.5700e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4444	0.4444	1.0000e-005	0.0000	0.4447
Total	**2.5000e-004**	**1.5400e-003**	**1.8400e-003**	**0.0000**	**6.4000e-004**	**0.0000**	**6.5000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.8104**	**0.8104**	**4.0000e-005**	**0.0000**	**0.8113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2500e-003	0.0380	0.0481	7.0000e-005		2.1500e-003	2.1500e-003		2.0400e-003	2.0400e-003	0.0000	6.4895	6.4895	1.4700e-003	0.0000	6.5264
Total	**4.2500e-003**	**0.0380**	**0.0481**	**7.0000e-005**		**2.1500e-003**	**2.1500e-003**		**2.0400e-003**	**2.0400e-003**	**0.0000**	**6.4895**	**6.4895**	**1.4700e-003**	**0.0000**	**6.5264**

3.3 Installation of water line - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4000e-003	2.7000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3660	0.3660	3.0000e-005	0.0000	0.3667
Worker	2.1000e-004	1.4000e-004	1.5700e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.4444	0.4444	1.0000e-005	0.0000	0.4447
Total	**2.5000e-004**	**1.5400e-003**	**1.8400e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.8104**	**0.8104**	**4.0000e-005**	**0.0000**	**0.8113**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4700e-003	0.0147	0.0160	2.0000e-005		8.0000e-004	8.0000e-004		7.4000e-004	7.4000e-004	0.0000	2.0903	2.0903	6.6000e-004	0.0000	2.1068
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4700e-003**	**0.0147**	**0.0160**	**2.0000e-005**		**8.0000e-004**	**8.0000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.0903**	**2.0903**	**6.6000e-004**	**0.0000**	**2.1068**

3.4 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	7.9000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2222	0.2222	1.0000e-005	0.0000	0.2223
Total	**1.1000e-004**	**7.0000e-005**	**7.9000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2222**	**0.2222**	**1.0000e-005**	**0.0000**	**0.2223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4700e-003	0.0147	0.0160	2.0000e-005		8.0000e-004	8.0000e-004		7.4000e-004	7.4000e-004	0.0000	2.0903	2.0903	6.6000e-004	0.0000	2.1068
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4700e-003**	**0.0147**	**0.0160**	**2.0000e-005**		**8.0000e-004**	**8.0000e-004**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**2.0903**	**2.0903**	**6.6000e-004**	**0.0000**	**2.1068**

3.4 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	7.9000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.2222	0.2222	1.0000e-005	0.0000	0.2223
Total	**1.1000e-004**	**7.0000e-005**	**7.9000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2222**	**0.2222**	**1.0000e-005**	**0.0000**	**0.2223**

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.7800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**3.3300e-003**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0444	0.0444	0.0000	0.0000	0.0445
Total	**2.0000e-005**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**6.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0444**	**0.0444**	**0.0000**	**0.0000**	**0.0445**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.7800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5000e-004	3.8200e-003	4.5400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**3.3300e-003**	**3.8200e-003**	**4.5400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.6000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0444	0.0444	0.0000	0.0000	0.0445
Total	**2.0000e-005**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0444**	**0.0444**	**0.0000**	**0.0000**	**0.0445**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.5900e-003	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Unmitigated	1.5900e-003	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Total	**1.5900e-003**	**0.0000**	**2.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.0000e-004**	**5.0000e-004**	**0.0000**	**0.0000**	**5.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-004	5.0000e-004	0.0000	0.0000	5.3000e-004
Total	**1.5900e-003**	**0.0000**	**2.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.0000e-004**	**5.0000e-004**	**0.0000**	**0.0000**	**5.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Renaissance Ranch-onsite

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	740.96	1000sqft	24.30	740,956.00	0
Industrial Park	235.22	1000sqft	9.00	235,224.00	0
Manufacturing	211.70	1000sqft	24.30	211,702.00	0
Refrigerated Warehouse-No Rail	423.40	1000sqft	24.30	423,403.00	0
Unrefrigerated Warehouse-No Rail	156.82	1000sqft	9.00	156,816.00	0
Unrefrigerated Warehouse-No Rail	740.96	1000sqft	24.30	740,956.00	0
Other Asphalt Surfaces	3.30	Acre	3.30	143,748.00	0
Other Non-Asphalt Surfaces	11.50	Acre	11.50	500,940.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	502.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Renaissance Ranch-onsite - Riverside-South Coast County, Annual

Project Characteristics - 2017 SEC CO2 intensity factor per Edison International Sustainability templet.

Land Use - Lot acreage updated to match that of the Project. Open space cpnseervation= non-asphalt surface. Open space conservation habitat was not accounted for in the modeling as no grading or other ground disturbances will take place.

Construction Phase - Construction timing updated to reflect an opening year of 2025. Construction, paving and coating assumed to occur simultaneously.

Off-road Equipment -

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Off-road Equipment - Equipment doubled to account for accelerated timeline compared with CalEEMod defaults

Trips and VMT - No hauling trips- all dirt will be balanced on the project site.

Grading - Project is estimated to cut approximately 1.8 million cubic yards of soil- split between phases.

Vehicle Trips - Mobile emissions are modeled separately to account for fleet mix.

Energy Use -

Water And Wastewater - Water use updated to match the information provided in the project description that accounts for 172,800 gpd generated by the project.

Construction Off-road Equipment Mitigation - "Mitigation" accounts SCAQMD rule 403

Energy Mitigation - Energy use reflects 2019 title 24 standards. Increase in efficiency per CEC 2019 building energy efficiency standards frequently asked questions (2018)

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	310.00	200.00
tblConstructionPhase	NumDays	3,100.00	810.00
tblConstructionPhase	NumDays	220.00	810.00
tblConstructionPhase	NumDays	220.00	810.00

tblGrading	AcresOfGrading	1,000.00	775.00
tblGrading	MaterialExported	0.00	900,000.00
tblGrading	MaterialExported	0.00	900,000.00
tblLandUse	LandUseSquareFeet	740,960.00	740,956.00
tblLandUse	LandUseSquareFeet	235,220.00	235,224.00
tblLandUse	LandUseSquareFeet	211,700.00	211,702.00
tblLandUse	LandUseSquareFeet	423,400.00	423,403.00
tblLandUse	LandUseSquareFeet	156,820.00	156,816.00
tblLandUse	LandUseSquareFeet	740,960.00	740,956.00
tblLandUse	LotAcreage	17.01	24.30
tblLandUse	LotAcreage	5.40	9.00
tblLandUse	LotAcreage	4.86	24.30
tblLandUse	LotAcreage	9.72	24.30
tblLandUse	LotAcreage	3.60	9.00
tblLandUse	LotAcreage	17.01	24.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	502.65
tblSolidWaste	SolidWasteGenerationRate	843.91	843.90
tblTripsAndVMT	HaulingTripNumber	112,500.00	0.00
tblTripsAndVMT	HaulingTripNumber	112,500.00	0.00
tblTripsAndVMT	WorkerTripNumber	35.00	18.00
tblTripsAndVMT	WorkerTripNumber	40.00	20.00
tblTripsAndVMT	WorkerTripNumber	30.00	15.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	ST_TR	1.49	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	SU_TR	0.62	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblVehicleTrips	WD_TR	3.82	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	171,347,000.00	12,614,400.00

tblWater	IndoorWaterUseRate	54,394,625.00	12,614,400.00
tblWater	IndoorWaterUseRate	48,955,625.00	12,614,400.00
tblWater	IndoorWaterUseRate	97,911,250.00	12,614,400.00
tblWater	IndoorWaterUseRate	207,611,625.00	12,614,400.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4319	4.4575	2.3581	4.2800e-003	2.0552	0.2250	2.2801	1.1039	0.2070	1.3109	0.0000	376.5925	376.5925	0.1192	0.0000	379.5714
2022	1.8294	10.7521	9.0834	0.0227	2.4556	0.4207	2.8763	0.9697	0.3883	1.3580	0.0000	2,027.0549	2,027.0549	0.4552	0.0000	2,038.4346
2023	5.3920	11.6329	15.0417	0.0492	2.7178	0.3506	3.0684	0.7314	0.3280	1.0594	0.0000	4,491.6673	4,491.6673	0.4413	0.0000	4,502.7007
2024	5.3458	11.2086	14.7555	0.0489	2.7387	0.3169	3.0556	0.7371	0.2963	1.0334	0.0000	4,458.4516	4,458.4516	0.4386	0.0000	4,469.4160
2025	4.7724	9.6271	12.9961	0.0436	2.4878	0.2531	2.7409	0.6695	0.2366	0.9061	0.0000	3,980.0675	3,980.0675	0.3927	0.0000	3,989.8851
Maximum	**5.3920**	**11.6329**	**15.0417**	**0.0492**	**2.7387**	**0.4207**	**3.0684**	**1.1039**	**0.3883**	**1.3580**	**0.0000**	**4,491.6673**	**4,491.6673**	**0.4552**	**0.0000**	**4,502.7007**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.4319	4.4575	2.3581	4.2800e-003	0.8044	0.2250	1.0293	0.4314	0.2070	0.6383	0.0000	376.5920	376.5920	0.1192	0.0000	379.5709
2022	1.8162	10.5825	9.1143	0.0227	1.1065	0.4135	1.5199	0.4225	0.3817	0.8042	0.0000	2,027.0533	2,027.0533	0.4552	0.0000	2,038.4329
2023	5.3282	10.8348	15.2157	0.0492	1.8020	0.3165	2.1185	0.5067	0.2968	0.8034	0.0000	4,491.6659	4,491.6659	0.4413	0.0000	4,502.6993
2024	5.2860	10.4756	14.9446	0.0489	1.8159	0.2857	2.1016	0.5105	0.2678	0.7783	0.0000	4,458.4502	4,458.4502	0.4386	0.0000	4,469.4145
2025	4.7220	9.0313	13.1758	0.0436	1.6495	0.2270	1.8766	0.4638	0.2127	0.6765	0.0000	3,980.0662	3,980.0662	0.3927	0.0000	3,989.8838
Maximum	**5.3282**	**10.8348**	**15.2157**	**0.0492**	**1.8159**	**0.4135**	**2.1185**	**0.5105**	**0.3817**	**0.8042**	**0.0000**	**4,491.6659**	**4,491.6659**	**0.4552**	**0.0000**	**4,502.6993**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.05**	**4.82**	**-1.06**	**0.00**	**42.37**	**6.30**	**38.34**	**44.56**	**6.19**	**34.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**5-22-2021**	**8-21-2021**	0.6668	0.6668
3	**8-22-2021**	**11-21-2021**	2.9211	2.9211
4	**11-22-2021**	**2-21-2022**	2.7878	2.7878
5	**2-22-2022**	**5-21-2022**	2.7041	2.7041
6	**5-22-2022**	**8-21-2022**	2.7953	2.7953
7	**8-22-2022**	**11-21-2022**	3.4941	3.4131

8	**11-22-2022**	**2-21-2023**	4.5484	4.3208
9	**2-22-2023**	**5-21-2023**	4.1682	3.9575
10	**5-22-2023**	**8-21-2023**	4.3140	4.0962
11	**8-22-2023**	**11-21-2023**	4.3070	4.0892
12	**11-22-2023**	**2-21-2024**	4.2163	4.0092
13	**2-22-2024**	**5-21-2024**	4.0670	3.8725
14	**5-22-2024**	**8-21-2024**	4.1625	3.9637
15	**8-22-2024**	**11-21-2024**	4.1558	3.9570
16	**11-22-2024**	**2-21-2025**	4.0510	3.8637
17	**2-22-2025**	**5-21-2025**	3.8512	3.6786
18	**5-22-2025**	**8-21-2025**	3.9860	3.8076
19	**8-22-2025**	**9-30-2025**	1.7330	1.6555
		Highest	4.5484	4.3208

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	10.2830	2.9000e-004	0.0321	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0626	0.0626	1.6000e-004	0.0000	0.0667
Energy	0.2993	2.7209	2.2855	0.0163		0.2068	0.2068		0.2068	0.2068	0.0000	10,016.8414	10,016.8414	0.4638	0.1385	10,069.7138
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	551.0941	0.0000	551.0941	32.5687	0.0000	1,365.3123
Water						0.0000	0.0000		0.0000	0.0000	20.0098	187.2459	207.2558	2.0660	0.0508	274.0332
Total	**10.5823**	**2.7212**	**2.3177**	**0.0163**	**0.0000**	**0.2069**	**0.2069**	**0.0000**	**0.2069**	**0.2069**	**571.1039**	**10,204.1500**	**10,775.2539**	**35.0987**	**0.1893**	**11,709.1260**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	10.2830	2.9000e-004	0.0321	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0626	0.0626	1.6000e-004	0.0000	0.0667
Energy	0.2692	2.4470	2.0555	0.0147		0.1860	0.1860		0.1860	0.1860	0.0000	9,472.5732	9,472.5732	0.4439	0.1301	9,522.4434
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	551.0941	0.0000	551.0941	32.5687	0.0000	1,365.3123
Water						0.0000	0.0000		0.0000	0.0000	16.0079	149.7967	165.8046	1.6528	0.0406	219.2266
Total	**10.5522**	**2.4473**	**2.0877**	**0.0147**	**0.0000**	**0.1861**	**0.1861**	**0.0000**	**0.1861**	**0.1861**	**567.1020**	**9,622.4326**	**10,189.5345**	**34.6656**	**0.1707**	**11,107.0490**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.28**	**10.06**	**9.92**	**10.10**	**0.00**	**10.06**	**10.06**	**0.00**	**10.06**	**10.06**	**0.70**	**5.70**	**5.44**	**1.23**	**9.81**	**5.14**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2021	1/14/2022	5	120	
2	Grading	Grading	1/15/2022	10/21/2022	5	200	
3	Building Construction	Building Construction	10/22/2022	11/30/2025	5	810	
4	Paving	Paving	10/22/2022	11/28/2025	5	810	
5	Architectural Coating	Architectural Coating	10/22/2022	11/30/2025	5	810	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 14.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,763,586; Non-Residential Outdoor: 1,254,529; Striped Parking Area: 38,681 (Architectural Coating – sqft)

OffRoad Equipment

Renaissance Ranch-onsite - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	6	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	8	8.00	97	0.37
Grading	Excavators	4	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	6	8.00	89	0.20
Building Construction	Generator Sets	2	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	6	7.00	97	0.37
Building Construction	Welders	2	8.00	46	0.45
Paving	Pavers	4	8.00	130	0.42
Paving	Paving Equipment	4	8.00	132	0.36
Paving	Rollers	4	8.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	14	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	16	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	18	1,325.00	517.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	265.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0443	0.0000	2.0443	1.1010	0.0000	1.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4277	4.4547	2.3270	4.1800e-003		0.2249	0.2249		0.2069	0.2069	0.0000	367.7929	367.7929	0.1190	0.0000	370.7667
Total	**0.4277**	**4.4547**	**2.3270**	**4.1800e-003**	**2.0443**	**0.2249**	**2.2692**	**1.1010**	**0.2069**	**1.3079**	**0.0000**	**367.7929**	**367.7929**	**0.1190**	**0.0000**	**370.7667**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2400e-003	2.8600e-003	0.0312	1.0000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9500e-003	0.0000	8.7996	8.7996	2.0000e-004	0.0000	8.8047
Total	**4.2400e-003**	**2.8600e-003**	**0.0312**	**1.0000e-004**	**0.0109**	**7.0000e-005**	**0.0110**	**2.8900e-003**	**6.0000e-005**	**2.9500e-003**	**0.0000**	**8.7996**	**8.7996**	**2.0000e-004**	**0.0000**	**8.8047**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7973	0.0000	0.7973	0.4294	0.0000	0.4294	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4277	4.4547	2.3270	4.1800e-003		0.2249	0.2249		0.2069	0.2069	0.0000	367.7925	367.7925	0.1190	0.0000	370.7662
Total	**0.4277**	**4.4547**	**2.3270**	**4.1800e-003**	**0.7973**	**0.2249**	**1.0222**	**0.4294**	**0.2069**	**0.6363**	**0.0000**	**367.7925**	**367.7925**	**0.1190**	**0.0000**	**370.7662**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2400e-003	2.8600e-003	0.0312	1.0000e-004	7.1100e-003	7.0000e-005	7.1700e-003	1.9600e-003	6.0000e-005	2.0200e-003	0.0000	8.7996	8.7996	2.0000e-004	0.0000	8.8047
Total	**4.2400e-003**	**2.8600e-003**	**0.0312**	**1.0000e-004**	**7.1100e-003**	**7.0000e-005**	**7.1700e-003**	**1.9600e-003**	**6.0000e-005**	**2.0200e-003**	**0.0000**	**8.7996**	**8.7996**	**2.0000e-004**	**0.0000**	**8.8047**

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2377	0.0000	0.2377	0.1079	0.0000	0.1079	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3308	0.1970	3.8000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	33.4394	33.4394	0.0108	0.0000	33.7098
Total	**0.0317**	**0.3308**	**0.1970**	**3.8000e-004**	**0.2377**	**0.0161**	**0.2538**	**0.1079**	**0.0148**	**0.1228**	**0.0000**	**33.4394**	**33.4394**	**0.0108**	**0.0000**	**33.7098**

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.3000e-004	2.6100e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7708	0.7708	2.0000e-005	0.0000	0.7712
Total	**3.6000e-004**	**2.3000e-004**	**2.6100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7708**	**0.7708**	**2.0000e-005**	**0.0000**	**0.7712**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0927	0.0000	0.0927	0.0421	0.0000	0.0421	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3308	0.1970	3.8000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	33.4394	33.4394	0.0108	0.0000	33.7097
Total	**0.0317**	**0.3308**	**0.1970**	**3.8000e-004**	**0.0927**	**0.0161**	**0.1088**	**0.0421**	**0.0148**	**0.0569**	**0.0000**	**33.4394**	**33.4394**	**0.0108**	**0.0000**	**33.7097**

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.3000e-004	2.6100e-003	1.0000e-005	6.5000e-004	1.0000e-005	6.5000e-004	1.8000e-004	1.0000e-005	1.8000e-004	0.0000	0.7708	0.7708	2.0000e-005	0.0000	0.7712
Total	**3.6000e-004**	**2.3000e-004**	**2.6100e-003**	**1.0000e-005**	**6.5000e-004**	**1.0000e-005**	**6.5000e-004**	**1.8000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.7708**	**0.7708**	**2.0000e-005**	**0.0000**	**0.7712**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6724	0.0000	1.6724	0.7151	0.0000	0.7151	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7250	7.7687	5.8083	0.0124		0.3270	0.3270		0.3008	0.3008	0.0000	1,090.6920	1,090.6920	0.3528	0.0000	1,099.5108
Total	**0.7250**	**7.7687**	**5.8083**	**0.0124**	**1.6724**	**0.3270**	**1.9993**	**0.7151**	**0.3008**	**1.0159**	**0.0000**	**1,090.6920**	**1,090.6920**	**0.3528**	**0.0000**	**1,099.5108**

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0300e-003	5.2000e-003	0.0580	1.9000e-004	0.0220	1.3000e-004	0.0221	5.8400e-003	1.2000e-004	5.9600e-003	0.0000	17.1282	17.1282	3.7000e-004	0.0000	17.1375
Total	**8.0300e-003**	**5.2000e-003**	**0.0580**	**1.9000e-004**	**0.0220**	**1.3000e-004**	**0.0221**	**5.8400e-003**	**1.2000e-004**	**5.9600e-003**	**0.0000**	**17.1282**	**17.1282**	**3.7000e-004**	**0.0000**	**17.1375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6522	0.0000	0.6522	0.2789	0.0000	0.2789	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7250	7.7687	5.8083	0.0124		0.3270	0.3270		0.3008	0.3008	0.0000	1,090.6907	1,090.6907	0.3528	0.0000	1,099.5095
Total	**0.7250**	**7.7687**	**5.8083**	**0.0124**	**0.6522**	**0.3270**	**0.9792**	**0.2789**	**0.3008**	**0.5797**	**0.0000**	**1,090.6907**	**1,090.6907**	**0.3528**	**0.0000**	**1,099.5095**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0300e-003	5.2000e-003	0.0580	1.9000e-004	0.0144	1.3000e-004	0.0145	3.9700e-003	1.2000e-004	4.0800e-003	0.0000	17.1282	17.1282	3.7000e-004	0.0000	17.1375
Total	**8.0300e-003**	**5.2000e-003**	**0.0580**	**1.9000e-004**	**0.0144**	**1.3000e-004**	**0.0145**	**3.9700e-003**	**1.2000e-004**	**4.0800e-003**	**0.0000**	**17.1282**	**17.1282**	**3.7000e-004**	**0.0000**	**17.1375**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0853	0.7808	0.8182	1.3500e-003		0.0405	0.0405		0.0381	0.0381	0.0000	115.8626	115.8626	0.0278	0.0000	116.5566
Total	**0.0853**	**0.7808**	**0.8182**	**1.3500e-003**		**0.0405**	**0.0405**		**0.0381**	**0.0381**	**0.0000**	**115.8626**	**115.8626**	**0.0278**	**0.0000**	**116.5566**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0288	1.1354	0.2160	3.2700e-003	0.0816	1.9400e-003	0.0836	0.0236	1.8500e-003	0.0254	0.0000	312.6229	312.6229	0.0228	0.0000	313.1926
Worker	0.1331	0.0861	0.9606	3.1400e-003	0.3641	2.1200e-003	0.3662	0.0967	1.9600e-003	0.0986	0.0000	283.6862	283.6862	6.1600e-003	0.0000	283.8403
Total	**0.1618**	**1.2215**	**1.1766**	**6.4100e-003**	**0.4457**	**4.0600e-003**	**0.4498**	**0.1202**	**3.8100e-003**	**0.1240**	**0.0000**	**596.3091**	**596.3091**	**0.0290**	**0.0000**	**597.0329**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0721	0.6112	0.8491	1.3500e-003		0.0333	0.0333		0.0315	0.0315	0.0000	115.8625	115.8625	0.0278	0.0000	116.5564
Total	**0.0721**	**0.6112**	**0.8491**	**1.3500e-003**		**0.0333**	**0.0333**		**0.0315**	**0.0315**	**0.0000**	**115.8625**	**115.8625**	**0.0278**	**0.0000**	**116.5564**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0288	1.1354	0.2160	3.2700e-003	0.0585	1.9400e-003	0.0604	0.0179	1.8500e-003	0.0197	0.0000	312.6229	312.6229	0.0228	0.0000	313.1926
Worker	0.1331	0.0861	0.9606	3.1400e-003	0.2378	2.1200e-003	0.2399	0.0657	1.9600e-003	0.0676	0.0000	283.6862	283.6862	6.1600e-003	0.0000	283.8403
Total	**0.1618**	**1.2215**	**1.1766**	**6.4100e-003**	**0.2963**	**4.0600e-003**	**0.3004**	**0.0836**	**3.8100e-003**	**0.0874**	**0.0000**	**596.3091**	**596.3091**	**0.0290**	**0.0000**	**597.0329**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4089	3.7401	4.2234	7.0100e-003		0.1819	0.1819		0.1712	0.1712	0.0000	602.6923	602.6923	0.1434	0.0000	606.2766
Total	**0.4089**	**3.7401**	**4.2234**	**7.0100e-003**		**0.1819**	**0.1819**		**0.1712**	**0.1712**	**0.0000**	**602.6923**	**602.6923**	**0.1434**	**0.0000**	**606.2766**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1145	4.4153	0.9781	0.0165	0.4245	4.5000e-003	0.4290	0.1225	4.3000e-003	0.1268	0.0000	1,582.8089	1,582.8089	0.0907	0.0000	1,585.0765
Worker	0.6499	0.4036	4.6044	0.0157	1.8933	0.0108	1.9040	0.5027	9.9300e-003	0.5127	0.0000	1,419.1806	1,419.1806	0.0288	0.0000	1,419.9006
Total	**0.7643**	**4.8189**	**5.5824**	**0.0322**	**2.3177**	**0.0153**	**2.3330**	**0.6252**	**0.0142**	**0.6394**	**0.0000**	**3,001.9895**	**3,001.9895**	**0.1195**	**0.0000**	**3,004.9771**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3451	2.9419	4.3975	7.0100e-003		0.1478	0.1478		0.1400	0.1400	0.0000	602.6916	602.6916	0.1434	0.0000	606.2759
Total	**0.3451**	**2.9419**	**4.3975**	**7.0100e-003**		**0.1478**	**0.1478**		**0.1400**	**0.1400**	**0.0000**	**602.6916**	**602.6916**	**0.1434**	**0.0000**	**606.2759**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1145	4.4153	0.9781	0.0165	0.3042	4.5000e-003	0.3087	0.0929	4.3000e-003	0.0972	0.0000	1,582.8089	1,582.8089	0.0907	0.0000	1,585.0765
Worker	0.6499	0.4036	4.6044	0.0157	1.2366	0.0108	1.2473	0.3415	9.9300e-003	0.3515	0.0000	1,419.1806	1,419.1806	0.0288	0.0000	1,419.9006
Total	**0.7643**	**4.8189**	**5.5824**	**0.0322**	**1.5407**	**0.0153**	**1.5560**	**0.4345**	**0.0142**	**0.4487**	**0.0000**	**3,001.9895**	**3,001.9895**	**0.1195**	**0.0000**	**3,004.9771**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3856	3.5223	4.2357	7.0600e-003		0.1607	0.1607		0.1512	0.1512	0.0000	607.4447	607.4447	0.1436	0.0000	611.0357
Total	**0.3856**	**3.5223**	**4.2357**	**7.0600e-003**		**0.1607**	**0.1607**		**0.1512**	**0.1512**	**0.0000**	**607.4447**	**607.4447**	**0.1436**	**0.0000**	**611.0357**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1132	4.4250	0.9525	0.0166	0.4277	4.5100e-003	0.4322	0.1234	4.3100e-003	0.1277	0.0000	1,588.9819	1,588.9819	0.0894	0.0000	1,591.2169
Worker	0.6182	0.3686	4.3433	0.0152	1.9078	0.0108	1.9186	0.5066	9.9000e-003	0.5165	0.0000	1,379.0193	1,379.0193	0.0265	0.0000	1,379.6811
Total	**0.7313**	**4.7936**	**5.2958**	**0.0318**	**2.3355**	**0.0153**	**2.3508**	**0.6300**	**0.0142**	**0.6442**	**0.0000**	**2,968.0012**	**2,968.0012**	**0.1159**	**0.0000**	**2,970.8980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3258	2.7893	4.4247	7.0600e-003		0.1294	0.1294		0.1226	0.1226	0.0000	607.4439	607.4439	0.1436	0.0000	611.0350
Total	**0.3258**	**2.7893**	**4.4247**	**7.0600e-003**		**0.1294**	**0.1294**		**0.1226**	**0.1226**	**0.0000**	**607.4439**	**607.4439**	**0.1436**	**0.0000**	**611.0350**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1132	4.4250	0.9525	0.0166	0.3065	4.5100e-003	0.3110	0.0936	4.3100e-003	0.0980	0.0000	1,588.9819	1,588.9819	0.0894	0.0000	1,591.2169
Worker	0.6182	0.3686	4.3433	0.0152	1.2461	0.0108	1.2568	0.3442	9.9000e-003	0.3541	0.0000	1,379.0193	1,379.0193	0.0265	0.0000	1,379.6811
Total	**0.7313**	**4.7936**	**5.2958**	**0.0318**	**1.5526**	**0.0153**	**1.5678**	**0.4378**	**0.0142**	**0.4520**	**0.0000**	**2,968.0012**	**2,968.0012**	**0.1159**	**0.0000**	**2,970.8980**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3254	2.9678	3.8282	6.4200e-003		0.1256	0.1256		0.1181	0.1181	0.0000	551.9683	551.9683	0.1298	0.0000	555.2121
Total	**0.3254**	**2.9678**	**3.8282**	**6.4200e-003**		**0.1256**	**0.1256**		**0.1181**	**0.1181**	**0.0000**	**551.9683**	**551.9683**	**0.1298**	**0.0000**	**555.2121**

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1002	3.9750	0.8364	0.0150	0.3885	4.0500e-003	0.3926	0.1121	3.8700e-003	0.1160	0.0000	1,434.1873	1,434.1873	0.0791	0.0000	1,436.1655
Worker	0.5313	0.3049	3.6584	0.0133	1.7331	9.5900e-003	1.7426	0.4602	8.8300e-003	0.4690	0.0000	1,202.5602	1,202.5602	0.0218	0.0000	1,203.1054
Total	**0.6315**	**4.2798**	**4.4948**	**0.0283**	**2.1216**	**0.0136**	**2.1352**	**0.5723**	**0.0127**	**0.5850**	**0.0000**	**2,636.7475**	**2,636.7475**	**0.1009**	**0.0000**	**2,639.2709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2751	2.3720	4.0078	6.4200e-003		0.0995	0.0995		0.0943	0.0943	0.0000	551.9676	551.9676	0.1298	0.0000	555.2114
Total	**0.2751**	**2.3720**	**4.0078**	**6.4200e-003**		**0.0995**	**0.0995**		**0.0943**	**0.0943**	**0.0000**	**551.9676**	**551.9676**	**0.1298**	**0.0000**	**555.2114**

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1002	3.9750	0.8364	0.0150	0.2784	4.0500e-003	0.2825	0.0851	3.8700e-003	0.0889	0.0000	1,434.1873	1,434.1873	0.0791	0.0000	1,436.1655
Worker	0.5313	0.3049	3.6584	0.0133	1.1319	9.5900e-003	1.1415	0.3126	8.8300e-003	0.3215	0.0000	1,202.5602	1,202.5602	0.0218	0.0000	1,203.1054
Total	**0.6315**	**4.2798**	**4.4948**	**0.0283**	**1.4103**	**0.0136**	**1.4240**	**0.3977**	**0.0127**	**0.4104**	**0.0000**	**2,636.7475**	**2,636.7475**	**0.1009**	**0.0000**	**2,639.2709**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0551	0.5562	0.7290	1.1400e-003		0.0284	0.0284		0.0261	0.0261	0.0000	100.1378	100.1378	0.0324	0.0000	100.9475
Paving	2.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0554**	**0.5562**	**0.7290**	**1.1400e-003**		**0.0284**	**0.0284**		**0.0261**	**0.0261**	**0.0000**	**100.1378**	**100.1378**	**0.0324**	**0.0000**	**100.9475**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5100e-003	9.7000e-004	0.0109	4.0000e-005	4.1200e-003	2.0000e-005	4.1500e-003	1.0900e-003	2.0000e-005	1.1200e-003	0.0000	3.2115	3.2115	7.0000e-005	0.0000	3.2133
Total	**1.5100e-003**	**9.7000e-004**	**0.0109**	**4.0000e-005**	**4.1200e-003**	**2.0000e-005**	**4.1500e-003**	**1.0900e-003**	**2.0000e-005**	**1.1200e-003**	**0.0000**	**3.2115**	**3.2115**	**7.0000e-005**	**0.0000**	**3.2133**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0551	0.5562	0.7290	1.1400e-003		0.0284	0.0284		0.0261	0.0261	0.0000	100.1377	100.1377	0.0324	0.0000	100.9473
Paving	2.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0554**	**0.5562**	**0.7290**	**1.1400e-003**		**0.0284**	**0.0284**		**0.0261**	**0.0261**	**0.0000**	**100.1377**	**100.1377**	**0.0324**	**0.0000**	**100.9473**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5100e-003	9.7000e-004	0.0109	4.0000e-005	2.6900e-003	2.0000e-005	2.7200e-003	7.4000e-004	2.0000e-005	7.7000e-004	0.0000	3.2115	3.2115	7.0000e-005	0.0000	3.2133
Total	**1.5100e-003**	**9.7000e-004**	**0.0109**	**4.0000e-005**	**2.6900e-003**	**2.0000e-005**	**2.7200e-003**	**7.4000e-004**	**2.0000e-005**	**7.7000e-004**	**0.0000**	**3.2115**	**3.2115**	**7.0000e-005**	**0.0000**	**3.2133**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2685	2.6498	3.7919	5.9300e-003		0.1327	0.1327		0.1220	0.1220	0.0000	520.6985	520.6985	0.1684	0.0000	524.9086
Paving	1.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2699**	**2.6498**	**3.7919**	**5.9300e-003**		**0.1327**	**0.1327**		**0.1220**	**0.1220**	**0.0000**	**520.6985**	**520.6985**	**0.1684**	**0.0000**	**524.9086**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3600e-003	4.5700e-003	0.0521	1.8000e-004	0.0214	1.2000e-004	0.0216	5.6900e-003	1.1000e-004	5.8000e-003	0.0000	16.0662	16.0662	3.3000e-004	0.0000	16.0744
Total	**7.3600e-003**	**4.5700e-003**	**0.0521**	**1.8000e-004**	**0.0214**	**1.2000e-004**	**0.0216**	**5.6900e-003**	**1.1000e-004**	**5.8000e-003**	**0.0000**	**16.0662**	**16.0662**	**3.3000e-004**	**0.0000**	**16.0744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2685	2.6498	3.7919	5.9300e-003		0.1327	0.1327		0.1220	0.1220	0.0000	520.6979	520.6979	0.1684	0.0000	524.9080
Paving	1.3900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2699**	**2.6498**	**3.7919**	**5.9300e-003**		**0.1327**	**0.1327**		**0.1220**	**0.1220**	**0.0000**	**520.6979**	**520.6979**	**0.1684**	**0.0000**	**524.9080**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3600e-003	4.5700e-003	0.0521	1.8000e-004	0.0140	1.2000e-004	0.0141	3.8700e-003	1.1000e-004	3.9800e-003	0.0000	16.0662	16.0662	3.3000e-004	0.0000	16.0744
Total	**7.3600e-003**	**4.5700e-003**	**0.0521**	**1.8000e-004**	**0.0140**	**1.2000e-004**	**0.0141**	**3.8700e-003**	**1.1000e-004**	**3.9800e-003**	**0.0000**	**16.0662**	**16.0662**	**3.3000e-004**	**0.0000**	**16.0744**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2589	2.4954	3.8320	5.9700e-003		0.1228	0.1228		0.1129	0.1129	0.0000	524.6951	524.6951	0.1697	0.0000	528.9376
Paving	1.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2603**	**2.4954**	**3.8320**	**5.9700e-003**		**0.1228**	**0.1228**		**0.1129**	**0.1129**	**0.0000**	**524.6951**	**524.6951**	**0.1697**	**0.0000**	**528.9376**

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-003	4.1700e-003	0.0492	1.7000e-004	0.0216	1.2000e-004	0.0217	5.7400e-003	1.1000e-004	5.8500e-003	0.0000	15.6115	15.6115	3.0000e-004	0.0000	15.6190
Total	**7.0000e-003**	**4.1700e-003**	**0.0492**	**1.7000e-004**	**0.0216**	**1.2000e-004**	**0.0217**	**5.7400e-003**	**1.1000e-004**	**5.8500e-003**	**0.0000**	**15.6115**	**15.6115**	**3.0000e-004**	**0.0000**	**15.6190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2589	2.4954	3.8319	5.9700e-003		0.1228	0.1228		0.1129	0.1129	0.0000	524.6945	524.6945	0.1697	0.0000	528.9369
Paving	1.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2603**	**2.4954**	**3.8319**	**5.9700e-003**		**0.1228**	**0.1228**		**0.1129**	**0.1129**	**0.0000**	**524.6945**	**524.6945**	**0.1697**	**0.0000**	**528.9369**

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-003	4.1700e-003	0.0492	1.7000e-004	0.0141	1.2000e-004	0.0142	3.9000e-003	1.1000e-004	4.0100e-003	0.0000	15.6115	15.6115	3.0000e-004	0.0000	15.6190
Total	**7.0000e-003**	**4.1700e-003**	**0.0492**	**1.7000e-004**	**0.0141**	**1.2000e-004**	**0.0142**	**3.9000e-003**	**1.1000e-004**	**4.0100e-003**	**0.0000**	**15.6115**	**15.6115**	**3.0000e-004**	**0.0000**	**15.6190**

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2178	2.0424	3.4696	5.4300e-003		0.0996	0.0996		0.0916	0.0916	0.0000	476.4583	476.4583	0.1541	0.0000	480.3107
Paving	1.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2191**	**2.0424**	**3.4696**	**5.4300e-003**		**0.0996**	**0.0996**		**0.0916**	**0.0916**	**0.0000**	**476.4583**	**476.4583**	**0.1541**	**0.0000**	**480.3107**

3.5 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0100e-003	3.4500e-003	0.0414	1.5000e-004	0.0196	1.1000e-004	0.0197	5.2100e-003	1.0000e-004	5.3100e-003	0.0000	13.6139	13.6139	2.5000e-004	0.0000	13.6201
Total	**6.0100e-003**	**3.4500e-003**	**0.0414**	**1.5000e-004**	**0.0196**	**1.1000e-004**	**0.0197**	**5.2100e-003**	**1.0000e-004**	**5.3100e-003**	**0.0000**	**13.6139**	**13.6139**	**2.5000e-004**	**0.0000**	**13.6201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2178	2.0424	3.4696	5.4300e-003		0.0996	0.0996		0.0916	0.0916	0.0000	476.4577	476.4577	0.1541	0.0000	480.3101
Paving	1.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2191**	**2.0424**	**3.4696**	**5.4300e-003**		**0.0996**	**0.0996**		**0.0916**	**0.0916**	**0.0000**	**476.4577**	**476.4577**	**0.1541**	**0.0000**	**480.3101**

3.5 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0100e-003	3.4500e-003	0.0414	1.5000e-004	0.0128	1.1000e-004	0.0129	3.5400e-003	1.0000e-004	3.6400e-003	0.0000	13.6139	13.6139	2.5000e-004	0.0000	13.6201
Total	**6.0100e-003**	**3.4500e-003**	**0.0414**	**1.5000e-004**	**0.0128**	**1.1000e-004**	**0.0129**	**3.5400e-003**	**1.0000e-004**	**3.6400e-003**	**0.0000**	**13.6139**	**13.6139**	**2.5000e-004**	**0.0000**	**13.6201**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7234					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0704	0.0907	1.5000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	12.7663	12.7663	8.3000e-004	0.0000	12.7871
Total	**0.7336**	**0.0704**	**0.0907**	**1.5000e-004**		**4.0900e-003**	**4.0900e-003**		**4.0900e-003**	**4.0900e-003**	**0.0000**	**12.7663**	**12.7663**	**8.3000e-004**	**0.0000**	**12.7871**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0266	0.0172	0.1921	6.3000e-004	0.0728	4.2000e-004	0.0732	0.0193	3.9000e-004	0.0197	0.0000	56.7372	56.7372	1.2300e-003	0.0000	56.7681
Total	**0.0266**	**0.0172**	**0.1921**	**6.3000e-004**	**0.0728**	**4.2000e-004**	**0.0732**	**0.0193**	**3.9000e-004**	**0.0197**	**0.0000**	**56.7372**	**56.7372**	**1.2300e-003**	**0.0000**	**56.7681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7234					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.0704	0.0907	1.5000e-004		4.0900e-003	4.0900e-003		4.0900e-003	4.0900e-003	0.0000	12.7663	12.7663	8.3000e-004	0.0000	12.7870
Total	**0.7336**	**0.0704**	**0.0907**	**1.5000e-004**		**4.0900e-003**	**4.0900e-003**		**4.0900e-003**	**4.0900e-003**	**0.0000**	**12.7663**	**12.7663**	**8.3000e-004**	**0.0000**	**12.7870**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0266	0.0172	0.1921	6.3000e-004	0.0476	4.2000e-004	0.0480	0.0131	3.9000e-004	0.0135	0.0000	56.7372	56.7372	1.2300e-003	0.0000	56.7681
Total	**0.0266**	**0.0172**	**0.1921**	**6.3000e-004**	**0.0476**	**4.2000e-004**	**0.0480**	**0.0131**	**3.9000e-004**	**0.0135**	**0.0000**	**56.7372**	**56.7372**	**1.2300e-003**	**0.0000**	**56.7681**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.3388	0.4709	7.7000e-004		0.0184	0.0184		0.0184	0.0184	0.0000	66.3846	66.3846	3.9700e-003	0.0000	66.4839
Total	**3.8115**	**0.3388**	**0.4709**	**7.7000e-004**		**0.0184**	**0.0184**		**0.0184**	**0.0184**	**0.0000**	**66.3846**	**66.3846**	**3.9700e-003**	**0.0000**	**66.4839**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1300	0.0807	0.9209	3.1400e-003	0.3787	2.1600e-003	0.3808	0.1006	1.9900e-003	0.1025	0.0000	283.8361	283.8361	5.7600e-003	0.0000	283.9801
Total	**0.1300**	**0.0807**	**0.9209**	**3.1400e-003**	**0.3787**	**2.1600e-003**	**0.3808**	**0.1006**	**1.9900e-003**	**0.1025**	**0.0000**	**283.8361**	**283.8361**	**5.7600e-003**	**0.0000**	**283.9801**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.3388	0.4709	7.7000e-004		0.0184	0.0184		0.0184	0.0184	0.0000	66.3845	66.3845	3.9700e-003	0.0000	66.4838
Total	**3.8115**	**0.3388**	**0.4709**	**7.7000e-004**		**0.0184**	**0.0184**		**0.0184**	**0.0184**	**0.0000**	**66.3845**	**66.3845**	**3.9700e-003**	**0.0000**	**66.4838**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1300	0.0807	0.9209	3.1400e-003	0.2473	2.1600e-003	0.2495	0.0683	1.9900e-003	0.0703	0.0000	283.8361	283.8361	5.7600e-003	0.0000	283.9801
Total	**0.1300**	**0.0807**	**0.9209**	**3.1400e-003**	**0.2473**	**2.1600e-003**	**0.2495**	**0.0683**	**1.9900e-003**	**0.0703**	**0.0000**	**283.8361**	**283.8361**	**5.7600e-003**	**0.0000**	**283.9801**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7906					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0474	0.3193	0.4743	7.8000e-004		0.0160	0.0160		0.0160	0.0160	0.0000	66.8953	66.8953	3.7700e-003	0.0000	66.9894
Total	**3.8380**	**0.3193**	**0.4743**	**7.8000e-004**		**0.0160**	**0.0160**		**0.0160**	**0.0160**	**0.0000**	**66.8953**	**66.8953**	**3.7700e-003**	**0.0000**	**66.9894**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1236	0.0737	0.8687	3.0500e-003	0.3816	2.1500e-003	0.3837	0.1013	1.9800e-003	0.1033	0.0000	275.8039	275.8039	5.2900e-003	0.0000	275.9362
Total	**0.1236**	**0.0737**	**0.8687**	**3.0500e-003**	**0.3816**	**2.1500e-003**	**0.3837**	**0.1013**	**1.9800e-003**	**0.1033**	**0.0000**	**275.8039**	**275.8039**	**5.2900e-003**	**0.0000**	**275.9362**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7906					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0474	0.3193	0.4743	7.8000e-004		0.0160	0.0160		0.0160	0.0160	0.0000	66.8952	66.8952	3.7700e-003	0.0000	66.9893
Total	**3.8380**	**0.3193**	**0.4743**	**7.8000e-004**		**0.0160**	**0.0160**		**0.0160**	**0.0160**	**0.0000**	**66.8952**	**66.8952**	**3.7700e-003**	**0.0000**	**66.9893**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1236	0.0737	0.8687	3.0500e-003	0.2492	2.1500e-003	0.2514	0.0688	1.9800e-003	0.0708	0.0000	275.8039	275.8039	5.2900e-003	0.0000	275.9362
Total	**0.1236**	**0.0737**	**0.8687**	**3.0500e-003**	**0.2492**	**2.1500e-003**	**0.2514**	**0.0688**	**1.9800e-003**	**0.0708**	**0.0000**	**275.8039**	**275.8039**	**5.2900e-003**	**0.0000**	**275.9362**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.4434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0407	0.2726	0.4306	7.1000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	60.7674	60.7674	3.3100e-003	0.0000	60.8503
Total	**3.4841**	**0.2726**	**0.4306**	**7.1000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**60.7674**	**60.7674**	**3.3100e-003**	**0.0000**	**60.8503**

3.6 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1063	0.0610	0.7317	2.6600e-003	0.3466	1.9200e-003	0.3485	0.0920	1.7700e-003	0.0938	0.0000	240.5120	240.5120	4.3600e-003	0.0000	240.6211
Total	**0.1063**	**0.0610**	**0.7317**	**2.6600e-003**	**0.3466**	**1.9200e-003**	**0.3485**	**0.0920**	**1.7700e-003**	**0.0938**	**0.0000**	**240.5120**	**240.5120**	**4.3600e-003**	**0.0000**	**240.6211**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.4434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0407	0.2726	0.4306	7.1000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	60.7674	60.7674	3.3100e-003	0.0000	60.8502
Total	**3.4841**	**0.2726**	**0.4306**	**7.1000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**60.7674**	**60.7674**	**3.3100e-003**	**0.0000**	**60.8502**

3.6 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1063	0.0610	0.7317	2.6600e-003	0.2264	1.9200e-003	0.2283	0.0625	1.7700e-003	0.0643	0.0000	240.5120	240.5120	4.3600e-003	0.0000	240.6211
Total	**0.1063**	**0.0610**	**0.7317**	**2.6600e-003**	**0.2264**	**1.9200e-003**	**0.2283**	**0.0625**	**1.7700e-003**	**0.0643**	**0.0000**	**240.5120**	**240.5120**	**4.3600e-003**	**0.0000**	**240.6211**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Industrial Park	0.00	0.00	0.00		
Manufacturing	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Industrial Park	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Manufacturing	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Other Asphalt Surfaces	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Other Non-Asphalt Surfaces	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Refrigerated Warehouse-No Rail	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789
Unrefrigerated Warehouse-No Rail	0.554334	0.035376	0.188722	0.108173	0.012711	0.004530	0.017449	0.070039	0.001415	0.001123	0.004446	0.000892	0.000789

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Renaissance Ranch-onsite - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,808.6676	6,808.6676	0.3928	0.0813	6,842.7076
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7,054.8351	7,054.8351	0.4070	0.0842	7,090.1058
NaturalGas Mitigated	0.2692	2.4470	2.0555	0.0147		0.1860	0.1860		0.1860	0.1860	0.0000	2,663.9056	2,663.9056	0.0511	0.0488	2,679.7358
NaturalGas Unmitigated	0.2993	2.7209	2.2855	0.0163		0.2068	0.2068		0.2068	0.2068	0.0000	2,962.0063	2,962.0063	0.0568	0.0543	2,979.6080

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	2.40737e+007	0.1298	1.1801	0.9913	7.0800e-003		0.0897	0.0897		0.0897	0.0897	0.0000	1,284.6622	1,284.6622	0.0246	0.0236	1,292.2963
Industrial Park	816227	4.4000e-003	0.0400	0.0336	2.4000e-004		3.0400e-003	3.0400e-003		3.0400e-003	3.0400e-003	0.0000	43.5570	43.5570	8.3000e-004	8.0000e-004	43.8158
Manufacturing	6.8782e+006	0.0371	0.3372	0.2832	2.0200e-003		0.0256	0.0256		0.0256	0.0256	0.0000	367.0468	367.0468	7.0400e-003	6.7300e-003	369.2280
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	2.19153e+007	0.1182	1.0743	0.9024	6.4500e-003		0.0817	0.0817		0.0817	0.0817	0.0000	1,169.4860	1,169.4860	0.0224	0.0214	1,176.4356
Unrefrigerated Warehouse-No Rail	1.50414e+006	8.1100e-003	0.0737	0.0619	4.4000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	80.2667	80.2667	1.5400e-003	1.4700e-003	80.7437
Unrefrigerated Warehouse-No Rail	318336	1.7200e-003	0.0156	0.0131	9.0000e-005		1.1900e-003	1.1900e-003		1.1900e-003	1.1900e-003	0.0000	16.9877	16.9877	3.3000e-004	3.1000e-004	17.0886
Total		**0.2993**	**2.7209**	**2.2856**	**0.0163**		**0.2068**	**0.2068**		**0.2068**	**0.2068**	**0.0000**	**2,962.0063**	**2,962.0063**	**0.0568**	**0.0543**	**2,979.6080**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	2.06593e+007	0.1114	1.0127	0.8507	6.0800e-003		0.0770	0.0770		0.0770	0.0770	0.0000	1,102.4608	1,102.4608	0.0211	0.0202	1,109.0122
Industrial Park	571359	3.0800e-003	0.0280	0.0235	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003	0.0000	30.4899	30.4899	5.8000e-004	5.6000e-004	30.6711
Manufacturing	5.90268e+006	0.0318	0.2894	0.2431	1.7400e-003		0.0220	0.0220		0.0220	0.0220	0.0000	314.9892	314.9892	6.0400e-003	5.7700e-003	316.8611
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	2.15025e+007	0.1159	1.0541	0.8854	6.3200e-003		0.0801	0.0801		0.0801	0.0801	0.0000	1,147.4564	1,147.4564	0.0220	0.0210	1,154.2752
Unrefrigerated Warehouse-No Rail	1.05957e+006	5.7100e-003	0.0519	0.0436	3.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	56.5425	56.5425	1.0800e-003	1.0400e-003	56.8785
Unrefrigerated Warehouse-No Rail	224247	1.2100e-003	0.0110	9.2300e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	11.9667	11.9667	2.3000e-004	2.2000e-004	12.0378
Total		**0.2692**	**2.4471**	**2.0555**	**0.0147**		**0.1860**	**0.1860**		**0.1860**	**0.1860**	**0.0000**	**2,663.9056**	**2,663.9056**	**0.0511**	**0.0488**	**2,679.7358**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	7.5207e+006	1,714.7069	0.0989	0.0205	1,723.2796
Industrial Park	2.23933e+006	510.5638	0.0295	6.0900e-003	513.1164
Manufacturing	2.14878e+006	489.9169	0.0283	5.8500e-003	492.3663
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	1.69149e+007	3,856.5782	0.2225	0.0460	3,875.8592
Unrefrigerated Warehouse-No Rail	1.74866e+006	398.6905	0.0230	4.7600e-003	400.6837
Unrefrigerated Warehouse-No Rail	370086	84.3789	4.8700e-003	1.0100e-003	84.8007
Total		**7,054.8351**	**0.4070**	**0.0842**	**7,090.1058**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	7.03167e+006	1,603.2087	0.0925	0.0191	1,611.2239
Industrial Park	2.02269e+006	461.1700	0.0266	5.5000e-003	463.4756
Manufacturing	2.00905e+006	458.0602	0.0264	5.4700e-003	460.3503
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	1.67803e+007	3,825.8800	0.2207	0.0457	3,845.0075
Unrefrigerated Warehouse-No Rail	1.66641e+006	379.9385	0.0219	4.5400e-003	381.8380
Unrefrigerated Warehouse-No Rail	352679	80.4102	4.6400e-003	9.6000e-004	80.8122
Total		**6,808.6676**	**0.3928**	**0.0813**	**6,842.7076**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	10.2830	2.9000e-004	0.0321	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0626	0.0626	1.6000e-004	0.0000	0.0667
Unmitigated	10.2830	2.9000e-004	0.0321	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0626	0.0626	1.6000e-004	0.0000	0.0667

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1719					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.1082					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0321	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0626	0.0626	1.6000e-004	0.0000	0.0667
Total	**10.2830**	**2.9000e-004**	**0.0321**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0626**	**0.0626**	**1.6000e-004**	**0.0000**	**0.0667**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1719					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.1082					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.9600e-003	2.9000e-004	0.0321	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	0.0626	0.0626	1.6000e-004	0.0000	0.0667
Total	**10.2830**	**2.9000e-004**	**0.0321**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0626**	**0.0626**	**1.6000e-004**	**0.0000**	**0.0667**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	165.8046	1.6528	0.0406	219.2266
Unmitigated	207.2558	2.0660	0.0508	274.0332

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	12.6144 / 0	41.4512	0.4132	0.0102	54.8066
Industrial Park	12.6144 / 0	41.4512	0.4132	0.0102	54.8066
Manufacturing	12.6144 / 0	41.4512	0.4132	0.0102	54.8066
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	12.6144 / 0	41.4512	0.4132	0.0102	54.8066
Unrefrigerated Warehouse-No Rail	12.6144 / 0	41.4512	0.4132	0.0102	54.8066
Total		**207.2558**	**2.0660**	**0.0508**	**274.0332**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.0915 / 0	33.1609	0.3306	8.1200e-003	43.8453
Industrial Park	10.0915 / 0	33.1609	0.3306	8.1200e-003	43.8453
Manufacturing	10.0915 / 0	33.1609	0.3306	8.1200e-003	43.8453
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	10.0915 / 0	33.1609	0.3306	8.1200e-003	43.8453
Unrefrigerated Warehouse-No Rail	10.0915 / 0	33.1609	0.3306	8.1200e-003	43.8453
Total		**165.8046**	**1.6528**	**0.0406**	**219.2266**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	551.0941	32.5687	0.0000	1,365.3123
Unmitigated	551.0941	32.5687	0.0000	1,365.3123

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	918.79	186.5061	11.0222	0.0000	462.0609
Industrial Park	291.67	59.2064	3.4990	0.0000	146.6813
Manufacturing	262.51	53.2872	3.1492	0.0000	132.0167
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	398	80.7904	4.7746	0.0000	200.1548
Unrefrigerated Warehouse-No Rail	843.9	171.3041	10.1238	0.0000	424.3986
Total		**551.0941**	**32.5687**	**0.0000**	**1,365.3123**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	918.79	186.5061	11.0222	0.0000	462.0609
Industrial Park	291.67	59.2064	3.4990	0.0000	146.6813
Manufacturing	262.51	53.2872	3.1492	0.0000	132.0167
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	398	80.7904	4.7746	0.0000	200.1548
Unrefrigerated Warehouse-No Rail	843.9	171.3041	10.1238	0.0000	424.3986
Total		**551.0941**	**32.5687**	**0.0000**	**1,365.3123**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Renaissance Ranch Operational Mobile Source Emissions

Vehicle Class	Daily VMT[1]	Pollutant	Run Emission Rate[2] (Gram/Mile)	Idle Emission Rate (Gram/Vehicle/Day)	Start Emission Rate[2] (Grams/Start/Day)	Total Grams Daily	Metric Tons Daily	CO2e Annually
Passenger Automobiles	46552	**CO2**	2.642018	0.342760094	1.193015	129843.66	**0.1298**	
		CH4	0.020058	0.000137439	0.015684558	936.53	**0.0009**	**146**
		N2O	0.017049	3.54498E-05	0.008337167	794.40	**0.0008**	

[1] Daily VMT calculated per CaLLEMod v 2016.3.2, which provides average distance traveled per trip type.

[2]Start emissions account for 4 automobile starts daily.

All emission factors sourced from EMFAC2017.

Vehicle Class	Daily VMT[1]	Pollutant	Run Emission Rate[2] (Gram/Mile)	Idle Emission Rate (Gram/Vehicle/Day)	Start Emission Rate[2] (Grams/Start/Day)	Total Grams Daily	Metric Tons Daily	CO2e Annually
Heavy Duty Trucks	66502	**CO2**	1336.134360	103.5886778	0.363550337	89261261.93	**89.2613**	
		CH4	0.018084	0.00224874	0.000355023	1211.45	**0.0012**	**34138**
		N2O	0.204567	0.016262169	0.000287951	13667.79	**0.0137**	

[1] In order to more accurately account for the trip distribution patterns of freight trucks, the average trip length is calculated at 63.7 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

[2]Start emissions account for 4 automobile starts daily.

All emission factors sourced from EMFAC2017.