APPENDIX A

Air Quality/Greenhouse Gas Emissions Assessment and Energy Consumption Modeling Results

Air Quality & Greenhouse Gas Emissions Assessment
Cactus Avenue and Nason Street Commercial Office and Retail Development Project

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Moreno Valley, California

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/m3	Micrograms per cubic meter; ppm = parts per million
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
AB	Assembly Bill
ATCM	Airborne Toxics Control Measure
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ASF	Age Sensitive Factor
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act

LIST OF ACRONYMS AND ABBREVIATIONS

CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
County	Riverside County
DC	Downtown Center
DPM	Diesel particulate matter
ED	Exposure duration
EF	Exposure factor
EO	Executive Order
FAH	Fraction of time at home
GHG	Greenhouse gas
GLC	Ground Level Concentrations
GWP	Global warming potential
HRA	Health Risk Assessment
IPCC	Intergovernmental Panel on Climate Change
L/kg	Liter per kilogram
LSTs	Localized significance threshold
MATES	Multiple Air Toxics Exposure
MEIR	Maximumly Exposed Individual Resident
MEIW	Maximumly Exposed Individual Resident
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen dioxide
NO_x	Nitric oxides
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
PM	Particulate matter
PM_{10}	Coarse particulate matter
$PM_{2.5}$	Fine particulate matter
PMI	Point of Maximum Impact
ppb	Parts per billion
ppm	Parts per million
Project	Cactus Avenue and Nason Street Commercial Office and Retail Development Project
RCPG	Regional Comprehensive Plan and Guide
REL	Reference Exposure Level
ROGs	Reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_x	Sulfur oxides

LIST OF ACRONYMS AND ABBREVIATIONS

SRA	Source receptor area
SoCAB	South Coast Air Basin
Square-Foot	sf
TACs	Toxic air contaminants
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle Mile Trip

1.0 INTRODUCTION

This report documents the results of an Air Quality and Greenhouse Gas (GHG) Emissions Assessment completed for the Cactus Avenue and Nason Street Commercial Office and Retail Development Project (Project), which includes the construction of an 89,745-square-foot (sf) commercial/retail development in the City of Moreno Valley in Riverside County. 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 and human health risk.

1.1 Project Location and Description

The 8.4-acre Project Site is located within the City of Moreno Valley in northwest Riverside County (Figure 1-1. Project Vicinity and Figure 1-2. Project Location), specifically on the northeast corner of Nason Street and Cactus Avenue, east of the Riverside University Health System Medical Center and approximately two miles south of State Route 60 and five miles east of Interstate 215. The Project is depicted on the U.S. Geological Survey Sunnymead 7.5-minute topographic quadrangle. The elevation at the Project Site is approximately 1,550 feet above mean sea level. Currently vacant, the Project Site is bounded by more vacant land to the north, residential land uses to the east and south, and medical offices to the west.

The Project proposes to construct a total of seven buildings on the 8.4-acre site, consisting of three mixed use medical/ office buildings, two drive-thru food service buildings, one retail/ restaurant building, and one convenience store building associated with a gasoline station with 12 fueling positions. The Project's expected gasoline throughput is 1,200,000 gallons per year. Each building would include associated parking. A breakdown of building type, square footage, and parking provided is shown in Table 1-1 below.

Building Number			
Building Number	**Land Use Type**	**Building Square Footage**	**Parking Provided**
1	Fast Food Restaurant with Drive-Thru	3,500 sf	36 stalls
2	Retail/ Restaurant	8,000 sf (4,500 sf Retail & 3,500 sf Restaurant)	50 stalls
3	Fast Food/Specialty Restaurant with Drive-Thru	2,100 sf	25 stalls
4	Convenience Store with 12-Fueling Position Gas Station	3,995 sf	20 stalls
5	Medical Office Building #1 (2-Story)	16,000 sf	153 stalls
6	Medical Office Building #2 (2-Story)	16,000 sf	
7	Medical Office Building #3 (3-Story)	40,000 sf	164 stalls
	Total:	**89,745 sf**	**448 stalls**

The Proposed Project would include two entry/exit driveways along Cactus Avenue, a single entry/exit driveway along Nason Street, and one more along the private street along the northern boundary of the Project Site. The Proposed Project would also include four water retention areas, two located between Buildings 5 and 6, and the other two located between Buildings 6 and 7.

In addition to Project Site development, the Project proposes several offsite improvements to vicinity traffic facilities. These improvements include:

- Construction of a right-in-right-out driveway on Nason Street and a “right in, right out” (RIRO) driveway on Cactus Avenue. “RIGHT TURN ONLY” signs (R3-5R) should be posted at both driveways.
- Modification of the traffic signal at Hospital Road and Nason Street to accommodate the proposed east approach of the intersection to provide one lane in each direction.
- Widening of Cactus Avenue to its ultimate width along the Project frontage to provide one westbound left-turn lane and two through lanes.
- Installation of a traffic signal at the four- way intersection of Cactus Avenue and Lynn Lee Lane/Driveway "B". (Traffic signal is warranted).
- Potential extension of the westbound left-turn lane on Cactus Avenue at Nason Street to provide 300 feet of storage length.

- Potential extension of the northbound left-turn lane on Nason Street at Cactus Avenue to provide 300 feet of storage length.
- Potential construction of an ADA-compliant access ramp at each of the proposed driveways.
- The potential installation of a new bus stop and turn-out on Nason Street north of Cactus Avenue.

Construction of the Proposed Project is anticipated to occur in three phases and take approximately eighteen months. Construction staging areas would be located within the Project Site.

Figure 1-1 Project Vicinity

Figure 1-2 Project Location

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

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

2.1.1.1 Temperature and Precipitation

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

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

2.1.1.2 Humidity

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

2.1.1.3 Wind

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

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

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

2.1.1.4 Inversion

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

2.1.2.1 Carbon Monoxide

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

2.1.2.2 Nitrogen Oxides

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

2.1.2.3 Ozone

O_3 is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROGs 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. NO_x 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.

2.1.2.4 Particulate Matter

PM includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM_{10}) and small 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 (SO_x) 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. 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.

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 Gasoline Vapor

Gasoline vapor consists of the TACs, benzene, ethyl benzene, n-hexane, naphthalene, propylene (or propene), xylenes, and toluene. However, of all the TACs in gasoline, benzene is the most toxic component of gas station emissions (CAPCOA & CARB 2022a). According to the California Air Pollution Control Officers Association (CAPCOA), benzene is the most important substance driving cancer risk, while xylene, another air toxic associated with gasoline stations, is the only substance which is associated with acute adverse health effects (CAPCOA 1997). According to CAPCOA, not until the benzene emissions are three orders of magnitude above the rate of an increase of 10 per million cancer risk, do the emissions of xylene begin to cause acute adverse health effects. Approximately 84 percent of the benzene emitted in California comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. Benzene is highly carcinogenic and occurs throughout California. Benzene also has non-cancer health effects. Brief inhalation exposure to high concentrations can cause central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness.

Neurological symptoms of inhalation exposure to benzene include drowsiness, dizziness, headaches, and unconsciousness. Ingestion of large amounts of benzene may result in vomiting, dizziness, and convulsions. Exposure to liquid and vapor may irritate the skin, eyes, and upper respiratory tract. Redness and blisters may result from dermal exposure to benzene. Chronic inhalation of certain levels of benzene causes blood disorders because benzene specifically affects bone marrow, which produces blood cells. Aplastic anemia, excessive bleeding, and damage to the immune system (by changes in blood levels of antibodies and loss of white blood cells) may develop. Increased incidence of leukemia (cancer of the tissues that form white blood cells) has been observed in humans occupationally exposed to benzene.

2.1.5 Ambient Air Quality

Ambient air quality at the Project Site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout California. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region. The Perris air quality monitoring station, located at 237½ North D Street, approximately 8.7 miles south of the Project Site, monitors ambient concentrations of O_3 and PM_{10}. The Rubidoux - Mission Boulevard air quality monitoring station, located at 5888 Mission Boulevard, approximately 14.2 miles northwest of the Project Site, monitors ambient concentrations of $PM_{2.5}$. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project Area.

Table 2-2 summarizes the published data concerning O_3 and PM_{10} from the Perris monitoring station and data concerning $PM_{2.5}$ from the Rubidoux - Mission Boulevard monitoring station. O_3, PM_{10} and $PM_{2.5}$ are the pollutant species most potently affecting the Project region.

Table 2-2. Summary of Ambient Air Quality Data

Pollutant Standards	2019	2020	2021
O_3 - Perris Monitoring Station			
Max 1-hour concentration (ppm)	0.118	0.125	0.117
Max 8-hour concentration (ppm) (state/federal)	0.096 / 0.095	0.106 / 0.106	0.094 / 0.094
Number of days above 1-hour standard (state)	28	34	25
Number of days above 8-hour standard (state/federal)	66 / 64	77 /74	60 / 55
PM_{10} - Perris Monitoring Station			
Max 24-hour concentration ($\mu g/m^3$) (state/federal)	92.1 / 97.0	87.6 / 92.3	73.5 / 77.5
Number of days above 24-hour standard (state/federal)	24.5 / 0	* / *	*/ *
$PM_{2.5}$ - Rubidoux - Mission Boulevard Monitoring Station			
Max 24-hour concentration ($\mu g/m^3$) (state/federal)	57.6 / 55.7	61.9 / 59.9	82.1 / 82.1
Number of days above federal 24-hour standard	5.0	12.0	11.0

Source: CARB 2022a
$\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million
* = 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} and $PM_{2.5}$ 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 Riverside County portion of the SoCAB, which encompasses the Project Site, is included in Table 2-3.

Table 2-3. Attainment Status of Criteria Pollutants in the Riverside County Portion of the SoCAB		
Pollutant	**State Designation**	**Federal Designation**
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

Source: CARB 2022b

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$ and PM_{10} (CARB 2022b).

2.1.6 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 construction and offsite improvements in the areas adjacent to the Project Site. The nearest sensitive land uses that will be impacted by onsite activities consist of single-family residences located adjacent to the eastern site boundary. The nearest sensitive land uses that will be impacted by offsite construction improvements (widening Cactus Avenue and installing traffic signal at the intersection of Cactus Avenue and Lynn Lee Lane) consist of a single-family residential neighborhood south of the Project Site across Cactus Avenue.

2.2 Regulatory Framework

2.2.1 Federal

2.2.1.1 Clean Air Act

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

2.2.2.1 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, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

2.2.2.2 California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The SCAQMD has recently adopted the 2022 Air Quality Management Plan (2022 AQMP) and submitted to the USEPA for approval. However, the 2016 Air Quality Management Plan (2016 AQMP) is currently the most recent USEPA-approved SIP for the SoCAB. Therefore, the 2016 AQMP will be utilized until the USEPA approval is granted for the 2022 AQMD. 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 GHGs 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 level. These agencies (USEPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 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 eight-hour O_3 SIP requirements. 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.
- 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 eight-hour Ozone Control Plan. In 2012, the 2012 AQMP was submitted to CARB and the USEPA for concurrent review and approval for inclusion in the SIP. The 2012 AQMP was approved by CARB on January 25, 2013.

- In 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP includes strategies and measures to meet the following NAAQS:
  - 2008 eight-hour O_3 (75 parts per billion [ppb]) by 2013
  - 2012 Annual $PM_{2.5}$ (12 μg/m^3) by 2025
  - 1997 eight-hour O_3 (80 ppb) by 2023
  - 1979 one-hour O_3 (120 ppb) by 2022
  - 2006 24-hour $PM_{2.5}$ (35 μg/m^3) by 2019

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

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

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

2.2.3 Local

2.2.3.1 South Coast Air Quality Management District

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

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

- **Rule 201 & Rule 203 (Permit to Construct & Permit to Operate)** – Rule 201 requires a "Permit to Construct" prior to the installation of any equipment "the use of which may cause the issuance of air contaminants . . ." and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate.
- **Rule 212 (Standards for Approving Permits and Issuing Public Notice)**- This rule requires the applicant to show that the equipment used of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminates in violation of Section 41700, 4170 or 44300 of the Health and Safety Code or of these rules.
- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible PM are prohibited from crossing any property line. This rule is intended to reduce PM_{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 workday to remove soil tracked onto the paved surface.

- **Rule 461 (Gasoline Transfer and Dispensing)** – This rule applies to the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or motor vehicle fuel tank.
- **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 (MATES) Study in the South Coast Air Basin, MATES IV," shows that cancer risk has decreased more than 50 percent between MATES III and MATES IV. 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.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

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

1) Conflict with or obstruct implementation of any applicable air quality plan.

2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

3) Expose sensitive receptors to substantial pollutant concentrations.

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

2.3.1.1 South Coast Air Quality Management District Regional Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (SCAQMD) may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2-4.

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.

2.3.1.2 South Coast Air Quality Management District Localized Significance Thresholds

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO_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. The Project Site is located within SCAQMD SRA 24 (Perris Valley). Table 2-5 shows the LSTs for a one-, two-, and five-acre project site in SRA 24 with sensitive receptors located within 25 meters of the Project Site.

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

Project Size	Pollutant (pounds per day) Construction/ Operations			
	NO_2	CO	PM_{10}	$PM_{2.5}$
1 Acre	118 / 118	602 / 602	4 / 1	3 / 1
2 Acres	170 /170	883 / 883	7 / 2	4 / 1
5 Acres	270 / 270	1,577 / 1,577	13 / 4	8 / 2

Source: SCAQMD 2009

2.3.1.3 Health Risk Thresholds

In addition to the emission of criteria air pollutants, this Projects evaluates the health risk from operations of the Proposed Project. Specifically, the activities occurring at the proposed gasoline dispensing facility.

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.

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by the SCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Riverside County and information provided by the Project proponent. Operational air pollutant emissions were based on the Project Site plans and traffic trip generation rates from K2 Traffic Engineering, Inc. (2020). Lastly, CalEEMod does not account for ROG emissions associated with gasoline vapors that are released during fuel dispensing activities. In order to calculate these emissions, the CAPCOA's Gasoline Service Station Industry Wide Risk Assessment Guidelines (1997) is employed.

Additionally, health risks associated with gasoline vapor and DPM concentrations that would be emitted by the proposed gasoline dispensing station and the heavy-duty trucks delivering gasoline to the site during 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 from the U.S. EPA AERMOD pollutant dispersion model for calculations of 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 are 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). Project specific methodology is discussed further in Section 2.3.3.4.

2.3.3 Impact Analysis Impact Analysis

2.3.3.1 Project Construction-Generated Criteria Air Quality Emissions

Regional Construction Significance Analysis

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

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. According to information provided by the Project proponent, construction is anticipated to be completed in three phases and last approximately eighteen months. See Attachment A for more information regarding the construction assumptions, including construction equipment, phasing 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 Year One	5.52	39.9	37.1	0.05	7.17	4.32
Construction Year Two	1.20	11.6	28.8	0.04	2.28	1.15
SCAQMD Regional Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Emissions taken of the season, summer or winter, with the highest outputs. 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.

As shown in Table 2-6, emissions generated during Project construction would not exceed the SCAQMD's regional thresholds of significance. Therefore, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, and no health effects from Project criteria pollutants would occur.

Localized Construction Significance Analysis

As previously described, the Project is proposing onsite construction and offsite improvements in the areas adjacent to the Project Site. The nearest sensitive receptors that would be impacted by onsite activities consist of single-family residences located adjacent to the eastern site boundary of the Project Site. The nearest sensitive receptors that would be impacted by offsite construction improvements (widening Cactus Avenue and installing traffic signal at the intersection of Cactus Avenue and Lynn Lee Lane) consist of a single-family residential neighborhood south of the Project Site across Cactus Avenue. For onsite and offsite construction, the nearest sensitive receptors are located less than 25 meters away. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific level proposed projects.

For this Project, the appropriate SRA for the localized significance thresholds is the Perris Valley, SRA 24. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. As previously described, the SCAQMD has produced lookup tables for projects that disturb one, two and five acres. The Proposed Project Site is approximately±8.4 acres and thus would disturb more than five acres during construction. As previously described, the SCAQMD has produced lookup tables for projects that disturb less than or equal to five acres daily. The SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than five acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 2-7 is used to determine the maximum daily disturbed acreage for comparison to LSTs. It is noted that Phase 1 & 2 site preparation and grading would occur simultaneously and all construction equipment for Phase 1 and Phase 2 building construction, paving and architectural coating is the same.

Table 2-7. Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Acres Graded/Disturbed per 8-Hour Day	Equipment Quantity	Operating Hours per Day	Acres Graded per Day
Phase 1 & 2 Site Preparation	Rubber Tired Dozer	0.5	3	8	1.5
	Tractors/Loaders/Backhoes	0.5	4	8	2.0
Phase 1 & 2 Site Preparation Total:					**3.5**
Phase 1 & 2 Site Grading	Grader	0.5	1	8	0.5
	Rubber Tired Dozer	0.5	1	8	0.5
	Tractors/Loaders/Backhoes	0.5	3	8	1.5
	Excavators	0.0	1	8	0.0
Phase 1 & 2 Grading Total:					**2.5**
Phase 1 & 2 Building Construction, Paving and Architectural Coating	Crane	0.0	1	7	0.0
	Forklifts	0.0	3	8	0.0
	Generator Sets	0.0	1	8	0.0
	Tractor/Loaders/Backhoes	0.5	3	7	1.5
	Welders	0.0	1	8	0.0
	Pavers	0.0	2	8	0.0
	Paving Equipment	0.0	2	8	0.0
	Rollers	0.0	2	8	0.0
	Air Compressors	0.0	1	6	0.0
Phase 1 & 2 Building Construction, Paving and Architectural Coating Total:					**1.5**
Phase 3 Site Preparation	Rubber Tired Dozer	0.5	1	8	0.5
	Tractors/Loaders/Backhoes	0.5	1	8	0.5
Phase 3 Site Preparation Total:					**1.0**
Phase 3 Site Grading	Grader	0.5	1	8	0.5
Phase 3 Grading Total:					**0.5**
Phase 3 Building Construction, Paving and Architectural Coating	Cranes	0.0	1	7	0.0
	Tractors/Loaders/Backhoes	0.5	1	8	0.5
	Welders	0.0	1	8	0.0
	Pavers	0.0	1	8	0.0
	Paving Equipment	0.0	1	8	0.0

	Rollers	0.0	1	8	0.0
	Air Compressors	0.0	1	8	0.0
Phase 3 Building Construction, Paving and Architectural Coating Total:					**0.5**

As described, the SCAQMD has produced lookup tables for projects that disturb one, two and five acres. As shown in Table 2-7, Project implementation could potentially disturb a total maximum of 3.5 acres daily during Phase 1 & 2 site preparation, 2.5 acres daily during Phase 1 & 2 site grading, 1.5 acres daily during the combined Phase 1 & 2 construction/paving/painting phase, 1.0 acres daily during Phase 3 site preparation, 0.5 acre daily during Phase 3 site grading, and 0.5 acre daily during the combined Phase 3 construction/paving/painting phase. The LST threshold value for a 2-acre site was used for Phase 1 & 2 site preparation and Phase 1 & 2 site grading. The LST threshold value for a 1-acre site was used for Phase 1 & 2 building construction, paving and architectural coating, Phase 3 site preparation, Phase 3 site grading, and Phase 3 building construction, paving and architectural coating.

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

Table 2-8. Construction-Related Emissions (Localized Significance Analysis)

Activity	Onsite Pollutant (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Phase 1 & 2 Site Preparation				
Phase 1 & 2 Site Preparation	39.7	35.5	6.92	3.29
SCAQMD Localized Significance Threshold (2 acre of disturbance at 25 meters)	*170*	*883*	*7*	*4*
Phase 1 & 2 Site Grading				
Phase 1 & 2 Site Grading	20.0	19.7	2.78	1.76
SCAQMD Localized Significance Threshold (2 acre of disturbance at 25 meters)	*170*	*883*	*7*	*4*
Phase 1 & 2 Building Construction, Paving and Architectural Coating				
Phase 1 & 2 Building Construction, Paving & Painting	20.76	24.35	1.0	0.92
SCAQMD Localized Significance Threshold (1 acre of disturbance at 25 meters)	*118*	*602*	*4*	*3*
Phase 3 Site Preparation				
Phase 3 Site Preparation	11.6	10.3	22.2	1.35
SCAQMD Localized Significance Threshold (1 acre of disturbance at 25 meters)	*118*	*602*	*4*	*3*
Phase 3 Site Grading				
Phase 3 Site Grading	3.40	3.64	0.33	0.18
SCAQMD Localized Significance Threshold (1 acre of disturbance at 25 meters)	*118*	*602*	*4*	*3*
Phase 3 Building Construction, Paving and Architectural Coating				
Phase 3 Building Construction, Paving & Painting	19.19	24.25	0.92	0.85
SCAQMD Localized Significance Threshold (1 acre of disturbance at 25 meters)	*118*	*602*	*4*	*3*
Exceed SCAQMD Localized Threshold?	**No**	**No**	**No**	**No**

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

Notes: Emissions taken of the season, summer or winter, with the highest outputs. 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.

Table 2-8 shows that the emissions of these pollutants during construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. Therefore, significant impacts would not occur concerning LSTs during construction activities.

2.3.3.2 Project Operations Criteria Air Quality Emissions

Regional Operational Significance Analysis

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROGs and NO_X. Project-generated increases in emissions would be predominantly associated with motor vehicle use. As previously described, operational air pollutant emissions were based on the Project Site plans and traffic trip generation rates from K2 Traffic Engineering, Inc. (2020). Long-terms operational emissions attributable to the Project are identified in Table 2-9 and compared to the 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}**	**$PM_{2.5}$**
Summer Emissions						
Area	6.99	0.03	3.90	0.00	0.01	0.01
Energy	0.05	0.84	0.70	0.01	0.06	0.06
Mobile	23.80	19.8	179.00	0.42	14.20	2.77
Total:	**30.84**	**20.67**	**183.6**	**0.43**	**14.27**	**2.84**
SCAQMD Regional Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area	6.35	0.00	0.00	0.00	0.00	0.00
Energy	0.05	0.84	0.70	0.01	0.06	0.06
Mobile	22.10	21.30	152.00	0.39	14.20	2.77
Total:	**28.50**	**22.14**	**152.70**	**0.40**	**14.26**	**2.83**
SCAQMD Regional Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed SCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

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

Notes: Emission projections predominately based on CalEEMod model defaults for Riverside County and Project Site plans. Average daily vehicle trips provided K2 Traffic Engineering, Inc. (2020). Area source emissions for the gasoline station include ROG released gasoline vapor during dispensing activities. Gasoline vapor emissions are calculated based on an emission factor of 1.27 pounds per 1,000 gallons of gasoline dispensed (CAPCOA 1997) and the prediction of 3,287.6 gallons of gasoline dispensed per day (3,287.6 x 365 = 1,200,000 gallons annually) as provided by the Project applicant [(1,200,000/1,000) x 1.27 = 1,524 pounds annually. 1,524/365 = 4.17 pounds daily].

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

As identified in Table 2-3, the Riverside County portion of the SoCAB is listed as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$ and PM_{10} (CARB 2022b). O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. PM can adversely affect the human respiratory system. As shown in Table 2-9, the Proposed Project would result in increased emissions of the O_3 precursor pollutants ROG and NOx, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SCAQMD is contained in the SCAQMD 2016 AQMP. The AQMP provides control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SCAQMD are designed to meet the objectives of the AQMP and in doing so achieve attainment status with state and federal standards. As noted above, the Project would increase the emission of these pollutants, but would not exceed the thresholds of significance established by the SCAQMD for purposes of reducing air pollution and its deleterious health effects.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project only if the project includes stationary sources (e.g., smokestacks) or attracts heavy-duty trucks that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Project does not include such uses. While the Project does propose gasoline dispensers, a source of the TAC such as benzene, the SCAQMD LST protocol does not address this pollutant. Instead, the emission of gasoline vapor and other components from Project operations (DPM from delivery trucks) is addressed in the health risk assessment prepared for the Project and described in detail below. Therefore, in the case of the Proposed Project, the operational phase LST protocol does not need to be applied.

2.3.3.3 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 (it is noted that the SCAQMD has recently adopted the 2022 AQMP, which is awaiting final approval by the USEPA). 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 latest RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Project is subject to the SCAQMD's AQMP.

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

Criterion 1:

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

a) Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?

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

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

As shown in Table 2-6 and 2-9 above, the Proposed Project would be below the SCAQMD regional thresholds for construction and operations. Because the Project would result in less than significant regional emission impacts, it would not delay the timely attainment of air quality standards or AQMP emissions reductions.

Criterion 2:

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

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

The Proposed Project Site has a General Plan land use designation of Downtown Center (DC). The DC land use designation allows for a mix of businesses, restaurant, hotel, civic, cultural, and entertainment uses that integrate existing uses. The Project is proposing a commercial/retail development consisting of three mixed use medical/ office buildings, two drive-thru food service buildings, one retail/ restaurant building, and one convenience store building associated with a gasoline station with 12 fueling positions. The Project is not proposing to amend the City General Plan and is consistent with all land use designations applied to the site. Additionally, the Project is considered 'infill development' as it proposes to develop a property in a rapidly urbanizing area surrounded by predominately urban residential uses. As a result of proposing a mix of commercial land uses in an area devoid of such uses and surrounded heavily by residences, the Project can be identified for its "location efficiency". Location efficiency describes the location of the Project relative to the type of urban landscape its proposed to fit within. In general, compared to the statewide average, a project with location efficiency can realize automotive vehicle mile trip (VMT) reductions between 10 and 65 percent. The Project would locate complementary commercial land uses in close proximity to existing offsite residential uses, thereby providing commercial and work options to the existing, nearby residents currently living near the site. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT compared to the statewide average and would result in corresponding reductions in transportation-related emissions, a primary goal of the 2016 AQMP. Thus, the Project is consistent with the City of Moreno Valley General Plan and is therefore consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the 2016 RTP/SCS and RCPG. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by SCAQMD to develop the 2016 AQMP. The City'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 City; 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 would be consistent 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 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, and 1113. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule

403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{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 . . .", such as gasoline dispensers. Rule 461 prohibits the transfer or allowance of the transfer of gasoline into stationary tanks at a gasoline dispensing facility unless a CARB-certified Phase I vapor recovery system is used, and further prohibits the transfer or allowance of the transfer of gasoline from stationary tanks into motor vehicle fuel tanks at a gasoline dispensing facility unless a CARB-certified Phase II vapor recovery system is used during each transfer. Vapor recovery systems collect gasoline vapors that would otherwise escape into the air during bulk fuel delivery (Phase I) or fuel storage and vehicle refueling (Phase II). Phase I vapor recovery system components include the couplers that connect tanker trucks to the underground tanks, spill containment drain valves, overfill prevention devices, and vent pressure/vacuum valves. Phase II vapor recovery system components include gasoline dispensers, nozzles, piping, break away hoses, face plates, vapor processors, and system monitors. Rule 461 also requires fuel storage tanks to be equipped with a permanent submerged fill pipe tank that prevents the escape of gasoline vapors. In addition, all gasoline must be stored underground with valves installed on the tank vent pipes to further control gasoline emissions. Rule 1401 requires new source review of any new, relocated, or modified permit units that emit TACs, such as gasoline dispensers. As such, the Proposed Project meets this consistency criterion.

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

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project is consistent with the land use designation and development density presented in the City's General Plan and therefore, would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a Project on air quality. The Proposed Project would not result in a long-term impact on the region's ability to meet state and federal air quality standards. The Proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2016 AQMP.

2.3.3.4 Exposure of Sensitive Receptors to Toxic Air Contaminants

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

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the SoCAB which encompasses the Project Area is designated as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, $PM_{2.5}$ and PM_{10} (CARB 2022b). Thus, existing O_3, PM_{10}, and $PM_{2.5}$ levels in the SoCAB are at unhealthy levels during certain periods. However, as shown in Table 2-6 and Table 2-8, the Project would not exceed the SCAQMD regional or localized significance thresholds for emissions.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the SCAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

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

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O_3 and NOx, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SCAQMD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Furthermore, the Project has been evaluated against the SCAQMD's LSTs for construction. As previously stated, LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative and can be used to assist lead agencies in analyzing localized impacts associated with Project-specific level of proposed projects. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the

LST protocol promulgated under Category I: *Further-Reduced Health Risk*. As shown in Table 2-8, the emissions of pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO_x, CO, PM_{10}, and $PM_{2.5}$ demonstrates that the Project would not adversely impact vicinity sensitive receptors.

Operational Air Contaminants

Operation of the Project would result in the development of sources of air toxins. Specifically, the Project would be a source of gasoline vapors such as benzene, methyl tertiary-butyl ether, toluene, and xylene. CARB identifies benzene as a TAC and is the primary TAC of concern associated with gas stations. Benzene is highly carcinogenic and occurs throughout California. According to CAPCOA, benzene is the most important substance driving cancer risk, while xylene, another air pollutant associated with gasoline stations, is the only substance which is associated with acute adverse health effects (CAPCOA 1997). According to CAPCOA, not until the benzene emissions are three orders of magnitude above the rate of an increase of 10 per million cancer risk, do the emissions of xylene begin to cause acute adverse health effects. According to SCAQMD's 2015 Risk Assessment Procedures for Rules 1401, 1401.1, & 212, benzene is the TAC which drives potential health risk, accounting for 87 percent of cancer risk from gasoline vapors. Benzene also has non-cancer health effects. Furthermore, a review of SCAQMD's 2015 Risk Assessment Procedures for Rules 1401, 1401.1, & 212 shows that benzene constitutes more than three to four times the weight of gasoline than ethylbenzene and naphthalene, respectively. The majority of benzene emitted in California comes from motor vehicles, including evaporative leakage and unburned fuel exhaust.

Project Health Risk Assessment

Project related onsite sources were modeled into AERMOD to account for the fueling, spillage and hose permeation occurring at the fueling canopy, loading and breathing from the underground storage tanks, and heavy-duty truck movement on area roadways carrying fuel to the Project Site. The fueling, spillage and hose permeation were modeled as two volume sources placed at the location of the proposed canopy with source dimensions and parameters set forth by CARB (CARB 2022c). Loading and breathing from the underground storage tanks were modeled as two point sources at the location of the proposed tanks with parameters set forth by CARB (CARB 2022c). Heavy-duty movement on area roadways carrying fuel to the Project Site were modeled as line volume sources exiting the Project Site onto Cactus Avenue and traversing west towards Interstate 215 totaling 1.8 miles. A conservative estimate of two fuel trucks per day was assumed in the modeling.

Fueling Station Emission Calculations

Fueling station throughput for the Project Site was modeled using the estimated gasoline throughput of 1,200,000 gallons per year provided by the applicant. Maximum hourly throughput was calculated using the annual throughput and 2022 CARB & CAPCOA Gasoline Services Station Industrywide Risk Assessment Look-up Tool Version 1.0 (CARB & CAPCOA 2022b). Gasoline vapor emissions were calculated for tank loading and breathing; vehicle fueling and spillage and hose permeation for each station using emission factors found in the Gasoline Service Station Industrywide Risk Assessment Technical Guidance (CARB & CAPCOA 2022a). The calculated gasoline vapor emissions were speciated in the TACs contained in total gasoline vapor using a summer/winter gasoline profile from the 2022 Gasoline Service Station Industrywide Risk Assessment Technical Guidance (CARB & CAPCOA 2022a). Emission calculations for fueling can be found in Attachment B of this document.

Dispersion Modeling

The air dispersion modeling for the HRA was performed using the USEPA AERMOD Version 22112 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 (22118).

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 Perris Airport were selected as being the most representative meteorology based on proximity. The location of the meteorological monitoring site is shown in Attachment B of this document.

The unit emission rate of one gram per second was utilized in AERMOD to create plot files containing the dispersion factor (X/Q) for each source group. A uniform grid was placed over the Project Area with a spacing of no more than 50 meters by 50 meters encompassing 0.62 mile and including 441 receptors. The grid was placed evenly over the area surrounding the Project. No onsite receptors were modeled for this analysis. Emissions for each source group as described above were input into HARP2 to calculate the ground level concentrations (GLC) at the modeled receptors. Source and receptor locations can be found in Attachment B of this document.

Risk during operations was also modeled utilizing worker factors and residential factors to find the Maximumly Exposed Individual Resident (MEIR), Maximumly Exposed Individual Resident (MEIW) and Point of Maximum Impact (PMI). The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the California Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (2015) as implemented in CARB's HARP2 program (CARB 2022c).

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average TAC concentrations is 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 (μg/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):

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

Where:

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

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

CPF = inhalation cancer potency factor (mg/kg-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)

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 $\mu g/m^3$)
RELi	=	Chronic noncancer Reference Exposure Level for substance i ($\mu g/m^3$)

Cancer Risk

Operational cancer risk calculations for existing residential receptors are based on 70-, 30-, and 9-year exposure periods and worker receptors are based on a 25-year exposure period to for operations. The calculated cancer risk accounts for 350 days per year of exposure to 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 2-10.

Table 2-10. Maximum Cancer Risk Summary	
Maximum Exposure Scenario	**Total Maximum Risk**
Project Operations	
70-Year Exposure Resident	0.84
30-Year Exposure Resident	0.74
9-Year Exposure Resident	1.84
25-Year Exposure Worker	0.02
Significance Threshold	*10*
Exceed Threshold?	**No**

Source: ECORP Consulting 2023. See Attachment B.

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

The MEIR for operational emissions is located south of the Project Site across Cactus Avenue. The MEIW for Project operations is the Riverside County Occupational Health & Wellness Center located west of the Project Site across Nason Street. In addition, the PMI is located on the roadway south of the Project Site on Cactus Avenue. All of the above listed points are presented on a map in Attachment B of this document.

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. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or 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 and workers due to Project fueling operations are presented in Table 2-11.

Table 2-11. Maximum Non-Carcinogenic Health Risk Summary		
Maximum Exposure Scenario	**Health Hazard Index**	
	Chronic	**Acute**
Resident (70 Year for Chronic)	0.0028	0.0588
Worker (25 Year for Chronic)	0.0010	0.0588
Significance Threshold	*1*	*1*
Exceed Threshold?	**No**	**No**

Source: ECORP Consulting 2022. See Attachment B.

As shown in Table 2-11, impacts related to non-cancer risk (chronic and acute hazard index) as a result of the Project Site would not surpass significance thresholds.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SoCAB is designated as in attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

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

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

The Proposed Project is anticipated to result in 5,752 daily trips (K2 Traffic Engineering, Inc. 2020). Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and there is no likelihood of the Project traffic exceeding CO values.

2.3.3.5 Odors

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

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

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

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

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project includes an expansion of equestrian uses at an existing equestrian use on the Project Site. There would not be any introduction of other uses identified by the SCAQMD as being associated with odors.

However, as previously described, the ability to detect odors varies considerably among the population and is inherently subjective in nature. For instance, the Project proposes high turnover, fast-food restaurants, which are a potential source of odors that may affect certain people. Cooking odors (molecules) generated by the combustion of animal and vegetable matter result in a complex mixture of reactive odorous gases. A small percentage of these odors may be absorbed by the grease particles, but the vast majority exist separately in the airstream.

The two common methods of abating odor from cooking are (1) the use of an odor oxidant (potassium permanganate) that oxidizes the molecules to solids and then retains them; and (2) a spray odor neutralizer system. Either of the above-mentioned types of odor control can remove 85 to 90 percent of the molecules, depending on the type of cooking. However, determining the efficiency of odor control is subjective, as testing is usually conducted by people rather than machines.

The restaurant uses would be required to comply with all state regulations associated with cooking equipment and controls, such as grease filtration and removal systems, exhaust hood systems, and blowers to move air into the hood systems, through air cleaning equipment, and then outdoors. The proposed restaurant uses would be equipped with kitchen exhaust systems and pollution/odor control systems. Pollution/odor control systems typically include smoke control, odor control, and exhaust fan sections. Such equipment would ensure that pollutants associated with smoke and exhaust from cooking surfaces would be captured and filtered, allowing only filtered air to be released into the atmosphere.

The Project Site could be considered a source of unpleasant odors by some given its proposed use as a gasoline dispensing station; however, as previously stated, the SCAQMD has stringent requirements for the control of gasoline vapor emissions from gasoline-dispensing facilities as articulated in SCAQMD Rule 461. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Rule 402 prohibits the discharge from any source that causes nuisance, annoyance, or discomfort to a considerable number of persons. Adherence to these rules would result in a less than significant impact related to operational odor emissions.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

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

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and 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 (CO_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]USEPA 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 2022, CARB released the 2022 edition of the California GHG inventory covering calendar year 2020 emissions. In 2020, California emitted 369.2 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2020, accounting for approximately 38 percent of total GHG emissions in the state. Continuing the downward trend from previous years, transportation emissions decreased 27 million metric tons of CO_2e in 2020, though the intensity of this decrease was most likely from light duty vehicles after shelter-in-place orders were enacted in response to the COVID-19 pandemic. Emissions from the electricity sector account for 16 percent of the inventory and have remained at a similar level as in 2019 despite a 44 percent decrease in in-state hydropower generation (due to below average precipitation levels), which was more than compensated for by a 10 percent growth in in-state solar generation and cleaner imported electricity incentivized by California's clean energy policies. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2020, accounting for 23 percent (CARB 2022d).

3.2 Regulatory Framework

3.2.1 State

3.2.1.1 Executive Order S-3-05

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

3.2.1.2 Assembly Bill 32 Climate Change Scoping Plan and Updates

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

The Scoping Plan is required by AB 32 to be updated at least every five years. The latest update, the 2017 Scoping Plan Update, addresses the 2030 target established by Senate Bill (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.

3.2.1.3 Senate Bill 32 and Assembly Bill 197 of 2016

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

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

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

3.2.1.5 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

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

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

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

3.2.2 Local

3.2.2.1 South Coast Air Quality Management District

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

On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including an interim screening level numeric "bright-line" threshold of 3,000 metric tons of CO_2e annually and an efficiency-based threshold of 4.8 metric tons of CO_2e per service population (defined as the people that work and/or congregate on the Project Site) per year in 2020 and 3.0 metric tons of CO_2e per service population per year in 2035. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the governing board.

3.2.2.2 City of Moreno Valley Climate Action Plan

The City's Climate Action Plan (CAP) was adopted in June 2021. The proposed CAP is designed to reinforce the City's commitment to GHG emissions, and demonstrate how the City will comply with the state of California's GHG emission reduction standards. The CAP addresses the SB 32 target of reducing GHG emissions 40 percent below 1990 levels by 2030 and EO S-3-05 target of reducing GHG emissions 80 percent below 1990 levels by 2050. The GHG emission targets established in the CAP are based on the goals established by EO S-3-05 and SB 32, consistent with the CAP guidelines established in the 2017 Scoping Plan. The horizon year for analysis in the CAP is 2040. Thus, the CAP includes targets of 6 metric tons CO_2e per capita per year by 2030 and 4 metric tons CO_2E per capita per year by 2040 (derived from the Scoping Plan target of 2 metric tons CO_2e per capita per year in 2050). The proposed 2040 target of 4 metric tons CO_2e per capita per year is determined using a linear trajectory in emissions reduction between 2030 and 2050. Pursuant with CEQA Guidelines Section 15183.5(b), the CAP is considered a qualified GHG reduction strategy that will allow developments to tier off and streamline the GHG analyses under CEQA. In addition, the CAP includes a Project Review Checklist for a streamlined review of GHG emissions for projects that demonstrate consistency with the CAP.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

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

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

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

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

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

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

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans

[and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

As previously described, the 2020 City CAP is the most recent document demonstrating how the City will comply with the state of California's GHG emission reduction standards. The CAP addresses the SB 32 target of reducing GHG emissions 40 percent below 1990 levels by 2030 and EO S-3-05 target of reducing GHG emissions 80 percent below 1990 levels by 2050. The GHG emission targets established in the CAP are based on the goals established by EO S-3-05 and SB 32, consistent with the CAP guidelines established in the 2017 Scoping Plan. The CAP is considered a qualified GHG reduction strategy that will allow developments to tier off and streamline the GHG analyses under CEQA. In addition, the CAP includes a Project Review Checklist for a streamlined review of GHG emissions for projects that demonstrate consistency with the CAP. Therefore, Project compliance with the CAP adequately establishes Project compliance with statewide GHG reduction goals for the year 2030 associated with SB 32, and with statewide GHG reduction goals for the years beyond 2030.

3.3.2 Methodology

Where GHG emission quantification was required, emissions were modeled using CalEEMod, version 2020.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction generated GHG emissions were calculated using CalEEMod model defaults for Riverside County and information provided by the Project proponent. Operational GHG emissions were based on the Project Site plans and traffic trip generation rates from K2 Traffic Engineering, Inc. (2020).

3.3.3 Impact Analysis

In view of the above considerations, this assessment quantifies the Project's total annual GHG emissions.

Project Construction

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

Table 3-2. Construction-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Construction Year One	411
Construction Year two	403
Total Construction Emissions	**814**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Project construction generated GHG emissions were calculated using CalEEMod model defaults for Riverside County and information provided by the Project proponent.

As shown in Table 3-2, Project construction would result in the generation of approximately 814 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 recommendations, Project construction GHG emissions have been amortized of the expected life of the Project, which is considered to be 30 years per the SCAQMD. The amortized construction emissions are added to the annual average operational emissions (see Table 3-3).

Project Operations

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

Table 3-3. Operational-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Construction Emissions (amortized over the 30-year life of the Project)	27
Area Source	2
Energy	559
Mobile	4,019
Waste	287
Water	35
Total	**4,929**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.
Notes: Emission projections predominately based on CalEEMod model defaults for Riverside County and Project Site plans. Average daily vehicle trips provided K2 Traffic Engineering, Inc. (2020).

As shown in Table 3-3, operations of the Project would result in 4,929 metric tons of CO_2e annually. A large majority of these emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the City. Additionally, GHG emissions are global pollutants. They can be carried miles away from the original source and have long atmospheric lifetimes compared to local pollutants. GHG Emissions do not directly pose a threat to human health but can have numerous indirect effects. As previously stated, GHG emissions have been directly correlated to climate change. This can lead to events such as droughts, heat waves, increased intensity in storm events and rising sea levels. These can result in decreased precipitation, increased wildfires, saltwater infiltration of groundwater tables and decreased crop yields. A reduction of vehicle trips to and from the Proposed Project Site would reduce the amounts of mobile emissions. Methods of reducing vehicle trips include carpooling, transit, cycling, and pedestrian connections. However, this Project is proposing a commercial/retail development consisting of three mixed use medical/ office buildings, two drive-thru food service buildings, one retail/ restaurant building, and one convenience store building associated with a gasoline station with 12 fueling positions. The reduction of vehicle trips is only feasible for the employees working in the facilities, though the majority of traffic trips instigated by the Project would be related to long-distance traveler and hauling trips.

The State of California has implemented numerous strategies pertaining to automobiles and 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 and Mobile Source Strategy.

3.3.3.1 Generation of Greenhouse Gas Emissions Resulting in Conflicts with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

The City of Moreno Valley's CAP is the most recent document demonstrating how the City will comply with the state of California's GHG emission reduction standards. The CAP addresses the SB 32 target of reducing GHG emissions 40 percent below 1990 levels by 2030 and EO S-3-05 target of reducing GHG emissions 80 percent below 1990 levels by 2050. The GHG emission targets established in the CAP are based on the goals established by EO S-3-05 and SB 32, consistent with the CAP guidelines established in the 2017 Scoping Plan. The CAP includes GHG reduction measures intended to close the emissions gap designed to reduce emissions in the transportation, industrial, residential, commercial, off-road equipment, public services and public lighting, and natural resources sectors.

As previously described, the Project is proposing the construction of a commercial/retail development consisting of three mixed use medical/ office buildings, two drive-thru food service buildings, one retail/ restaurant building, and one convenience store building associated with a gasoline station with 12 fueling positions. The Project Site has a General Plan land use designation of CC which is designed to provide general shopping needs of area residents and workers with a variety of business, retail, personal and related or similar services. As the Project Site is consistent with the General Plan the Project is consistent with the GHG inventory set forth by the City. Additionally, the Project would be required to show consistency with the CAP Project Review Checklist which is intended to streamline the review of GHG emissions and demonstrate consistency with the CAP. All development in the City, including the Project, is required to adhere to all City-adopted policy provisions, including those contained in the adopted CAP and CAP Project

Review Checklist. The Project applicant must complete a checklist to confirm consistency with the CAP to the satisfaction of City staff. The City ensures all provisions of the CAP are incorporated into projects and their permits through development review and applications of conditions of approval as applicable. As such, the Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

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LIST OF ATTACHMENTS

ATTACHMENT A

CalEEMod Output File for Air Quality Emissions and Greenhouse Gas Emissions

Cactus & Nason Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Cactus & Nason
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	24.0
Location	33.910969415465004, -117.19092842086013
County	Riverside-South Coast
City	Moreno Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5586
EDFZ	11
Electric Utility	Moreno Valley Utility
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Fast Food Restaurant with Drive Thru	6.00	1000sqft	0.14	5,600	50.0	—	—	—
High Turnover (Sit Down Restaurant)	4.00	1000sqft	0.09	3,500	50.0	—	—	—

Free-Standing Discount store	5.00	1000sqft	0.11	4,500	50.0	—	—	—
Convenience Market with Gas Pumps	12.0	Pump	0.04	3,995	50.0	—	—	—
Medical Office Building	72.0	1000sqft	1.65	72,000	50.0	—	—	—
Parking Lot	448	Space	4.03	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	1.00	Acre	1.00	0.00	0.00	—	—	Offsite improvements

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Transportation	T-31-A*	Locate Project in Area with High Destination Accessibility
Transportation	T-33*	Locate Project near Bike Path/Bike Lane
Transportation	T-34*	Provide Bike Parking
Transportation	T-35*	Provide Tra c Calming Measures

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

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

Unmit.	4.80	5.52	39.9	37.1	0.05	1.81	19.9	21.7	1.66	10.2	11.8	—	5,637	5,637	0.23	0.13	5.21	5,663
Mit.	4.80	5.52	39.9	37.1	0.05	1.81	5.36	7.17	1.66	2.69	4.35	—	5,637	5,637	0.23	0.13	5.21	5,663
% Reduced	—	—	—	—	—	—	73%	67%	—	74%	63%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.10	5.50	21.8	28.8	0.04	1.01	0.94	1.95	0.93	0.23	1.15	—	5,345	5,345	0.21	0.13	0.13	5,390
Mit.	3.10	5.50	21.8	28.8	0.04	1.01	0.94	1.95	0.93	0.23	1.15	—	5,345	5,345	0.21	0.13	0.13	5,390
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.59	2.65	11.9	14.1	0.02	0.55	2.46	3.00	0.50	1.16	1.66	—	2,464	2,464	0.10	0.06	0.85	2,483
Mit.	1.59	2.65	11.9	14.1	0.02	0.55	0.89	1.44	0.50	0.36	0.87	—	2,464	2,464	0.10	0.06	0.85	2,483
% Reduced	—	—	—	—	—	—	64%	52%	—	69%	48%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.29	0.48	2.17	2.57	< 0.005	0.10	0.45	0.55	0.09	0.21	0.30	—	408	408	0.02	0.01	0.14	411
Mit.	0.29	0.48	2.17	2.57	< 0.005	0.10	0.16	0.26	0.09	0.07	0.16	—	408	408	0.02	0.01	0.14	411
% Reduced	—	—	—	—	—	—	64%	52%	—	69%	48%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

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

2023	4.80	5.52	39.9	37.1	0.05	1.81	19.9	21.7	1.66	10.2	11.8	—	5,637	5,637	0.23	0.13	5.21	5,663
2024	2.89	5.22	20.7	28.2	0.04	0.93	6.62	7.13	0.85	3.38	3.86	—	5,140	5,140	0.20	0.12	3.83	5,186
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.10	5.50	21.8	28.8	0.04	1.01	0.94	1.95	0.93	0.23	1.15	—	5,345	5,345	0.21	0.13	0.13	5,390
2024	2.87	5.21	20.7	27.3	0.04	0.93	0.71	1.63	0.85	0.17	1.02	—	5,089	5,089	0.20	0.12	0.10	5,131
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.59	2.31	11.9	14.1	0.02	0.55	2.46	3.00	0.50	1.16	1.66	—	2,464	2,464	0.10	0.05	0.83	2,483
2024	1.36	2.65	9.78	12.6	0.02	0.43	0.75	1.18	0.39	0.27	0.67	—	2,410	2,410	0.10	0.06	0.85	2,432
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.29	0.42	2.17	2.57	< 0.005	0.10	0.45	0.55	0.09	0.21	0.30	—	408	408	0.02	0.01	0.14	411
2024	0.25	0.48	1.79	2.29	< 0.005	0.08	0.14	0.21	0.07	0.05	0.12	—	399	399	0.02	0.01	0.14	403

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	5.52	39.9	37.1	0.05	1.81	5.36	7.17	1.66	2.69	4.35	—	5,637	5,637	0.23	0.13	5.21	5,663
2024	2.89	5.22	20.7	28.2	0.04	0.93	1.77	2.28	0.85	0.89	1.37	—	5,140	5,140	0.20	0.12	3.83	5,186
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.10	5.50	21.8	28.8	0.04	1.01	0.94	1.95	0.93	0.23	1.15	—	5,345	5,345	0.21	0.13	0.13	5,390
2024	2.87	5.21	20.7	27.3	0.04	0.93	0.71	1.63	0.85	0.17	1.02	—	5,089	5,089	0.20	0.12	0.10	5,131
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2023	1.59	2.31	11.9	14.1	0.02	0.55	0.89	1.44	0.50	0.36	0.87	—	2,464	2,464	0.10	0.05	0.83	2,483
2024	1.36	2.65	9.78	12.6	0.02	0.43	0.46	0.89	0.39	0.14	0.53	—	2,410	2,410	0.10	0.06	0.85	2,432
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.29	0.42	2.17	2.57	< 0.005	0.10	0.16	0.26	0.09	0.07	0.16	—	408	408	0.02	0.01	0.14	411
2024	0.25	0.48	1.79	2.29	< 0.005	0.08	0.08	0.16	0.07	0.02	0.10	—	399	399	0.02	0.01	0.14	403

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.4	26.7	20.7	183	0.42	0.39	13.9	14.3	0.37	2.47	2.84	520	46,242	46,763	54.2	2.04	1,005	49,731
Mit.	26.4	26.7	20.7	183	0.42	0.39	13.9	14.3	0.37	2.47	2.84	520	46,242	46,763	54.2	2.04	1,005	49,731
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.0	24.3	22.1	153	0.40	0.38	13.9	14.3	0.36	2.47	2.83	520	43,642	44,162	54.3	2.11	848	46,996
Mit.	24.0	24.3	22.1	153	0.40	0.38	13.9	14.3	0.36	2.47	2.83	520	43,642	44,162	54.3	2.11	848	46,996
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.9	22.7	15.5	111	0.24	0.26	7.99	8.26	0.25	1.42	1.67	520	27,270	27,790	53.9	1.44	884	30,450
Mit.	21.9	22.7	15.5	111	0.24	0.26	7.99	8.26	0.25	1.42	1.67	520	27,270	27,790	53.9	1.44	884	30,450
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.00	4.15	2.83	20.2	0.04	0.05	1.46	1.51	0.05	0.26	0.30	86.2	4,515	4,601	8.92	0.24	146	5,041
Mit.	4.00	4.15	2.83	20.2	0.04	0.05	1.46	1.51	0.05	0.26	0.30	86.2	4,515	4,601	8.92	0.24	146	5,041
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	25.6	23.8	19.8	179	0.42	0.32	13.9	14.2	0.30	2.47	2.77	—	42,760	42,760	1.86	1.96	161	43,551
Area	0.69	2.82	0.03	3.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.0	16.0	< 0.005	< 0.005	—	16.1
Energy	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	3,360	3,360	0.26	0.02	—	3,373
Water	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Waste	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Total	26.4	26.7	20.7	183	0.42	0.39	13.9	14.3	0.37	2.47	2.84	520	46,242	46,763	54.2	2.04	1,005	49,731
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.0	22.1	21.3	152	0.39	0.32	13.9	14.2	0.30	2.47	2.77	—	40,175	40,175	1.95	2.03	4.17	40,832
Area	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	3,360	3,360	0.26	0.02	—	3,373
Water	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Waste	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844

Total	24.0	24.3	22.1	153	0.40	0.38	13.9	14.3	0.36	2.47	2.83	520	43,642	44,162	54.3	2.11	848	46,996
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	21.3	20.1	14.7	107	0.23	0.19	7.99	8.19	0.18	1.42	1.60	—	23,792	23,792	1.52	1.36	39.9	24,275
Area	0.47	2.62	0.02	2.67	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Energy	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	3,360	3,360	0.26	0.02	—	3,373
Water	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Waste	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Total	21.9	22.7	15.5	111	0.24	0.26	7.99	8.26	0.25	1.42	1.67	520	27,270	27,790	53.9	1.44	884	30,450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.90	3.66	2.67	19.6	0.04	0.04	1.46	1.49	0.03	0.26	0.29	—	3,939	3,939	0.25	0.22	6.61	4,019
Area	0.09	0.48	< 0.005	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82
Energy	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	556	556	0.04	< 0.005	—	559
Water	—	—	—	—	—	—	—	—	—	—	—	3.99	17.6	21.6	0.41	0.01	—	34.8
Waste	—	—	—	—	—	—	—	—	—	—	—	82.2	0.00	82.2	8.21	0.00	—	287
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	140
Total	4.00	4.15	2.83	20.2	0.04	0.05	1.46	1.51	0.05	0.26	0.30	86.2	4,515	4,601	8.92	0.24	146	5,041

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	25.6	23.8	19.8	179	0.42	0.32	13.9	14.2	0.30	2.47	2.77	—	42,760	42,760	1.86	1.96	161	43,551
Area	0.69	2.82	0.03	3.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.0	16.0	< 0.005	< 0.005	—	16.1
Energy	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	3,360	3,360	0.26	0.02	—	3,373

Water	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Waste	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Total	26.4	26.7	20.7	183	0.42	0.39	13.9	14.3	0.37	2.47	2.84	520	46,242	46,763	54.2	2.04	1,005	49,731
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.0	22.1	21.3	152	0.39	0.32	13.9	14.2	0.30	2.47	2.77	—	40,175	40,175	1.95	2.03	4.17	40,832
Area	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	3,360	3,360	0.26	0.02	—	3,373
Water	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Waste	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Total	24.0	24.3	22.1	153	0.40	0.38	13.9	14.3	0.36	2.47	2.83	520	43,642	44,162	54.3	2.11	848	46,996
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	21.3	20.1	14.7	107	0.23	0.19	7.99	8.19	0.18	1.42	1.60	—	23,792	23,792	1.52	1.36	39.9	24,275
Area	0.47	2.62	0.02	2.67	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Energy	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	3,360	3,360	0.26	0.02	—	3,373
Water	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Waste	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Total	21.9	22.7	15.5	111	0.24	0.26	7.99	8.26	0.25	1.42	1.67	520	27,270	27,790	53.9	1.44	884	30,450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.90	3.66	2.67	19.6	0.04	0.04	1.46	1.49	0.03	0.26	0.29	—	3,939	3,939	0.25	0.22	6.61	4,019
Area	0.09	0.48	< 0.005	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82
Energy	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	556	556	0.04	< 0.005	—	559
Water	—	—	—	—	—	—	—	—	—	—	—	3.99	17.6	21.6	0.41	0.01	—	34.8
Waste	—	—	—	—	—	—	—	—	—	—	—	82.2	0.00	82.2	8.21	0.00	—	287

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	140
Total	4.00	4.15	2.83	20.2	0.04	0.05	1.46	1.51	0.05	0.26	0.30	86.2	4,515	4,601	8.92	0.24	146	5,041

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.35	3.48	3.11	< 0.005	0.16	—	0.16	0.15	—	0.15	—	464	464	0.02	< 0.005	—	466
Dust From Material Movement	—	—	—	—	—	—	1.72	1.72	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.64	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	76.9	76.9	< 0.005	< 0.005	—	77.1
Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.59	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	257	257	0.01	0.01	1.10	261
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	84.3	84.3	< 0.005	0.01	0.18	88.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.04	21.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.39	7.39	< 0.005	< 0.005	0.01	7.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	0.01	3.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.2. Site Preparation (2023) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.35	3.48	3.11	< 0.005	0.16	—	0.16	0.15	—	0.15	—	464	464	0.02	< 0.005	—	466
Dust From Material Movement	—	—	—	—	—	—	0.45	0.45	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.64	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	76.9	76.9	< 0.005	< 0.005	—	77.1
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.59	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	257	257	0.01	0.01	1.10	261
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	84.3	84.3	< 0.005	0.01	0.18	88.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.0	21.0	< 0.005	< 0.005	0.04	21.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.39	7.39	< 0.005	< 0.005	0.01	7.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.47	3.47	< 0.005	< 0.005	0.01	3.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.40	1.18	11.6	10.3	0.02	0.52	—	0.52	0.47	—	0.47	—	1,668	1,668	0.07	0.01	—	1,674

Dust From Material Movement	—	—	—	—	—	—	6.55	6.55	—	3.37	3.37	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.63	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	91.4	91.4	< 0.005	< 0.005	—	91.7
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.42	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.0	72.0	< 0.005	< 0.005	0.29	73.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.67	3.67	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.40	1.18	11.6	10.3	0.02	0.52	—	0.52	0.47	—	0.47	—	1,668	1,668	0.07	0.01	—	1,674
Dust From Material Movement	—	—	—	—	—	—	1.70	1.70	—	0.88	0.88	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.63	0.57	< 0.005	0.03	—	0.03	0.03	—	0.03	—	91.4	91.4	< 0.005	< 0.005	—	91.7
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.10	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.42	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.0	72.0	< 0.005	< 0.005	0.29	73.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.67	3.67	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.09	1.08	< 0.005	0.05	—	0.05	0.05	—	0.05	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	220	220	0.01	0.01	0.94	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.15	0.04	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	135	135	< 0.005	0.02	0.28	142
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.39	7.39	< 0.005	< 0.005	0.01	7.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.6. Grading (2023) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	—	1.84	1.84	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.09	1.08	< 0.005	0.05	—	0.05	0.05	—	0.05	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	220	220	0.01	0.01	0.94	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.15	0.04	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	135	135	< 0.005	0.02	0.28	142
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.39	7.39	< 0.005	< 0.005	0.01	7.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.7. Grading (2024) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.39	3.40	3.64	0.01	0.19	—	0.19	0.17	—	0.17	—	567	567	0.02	< 0.005	—	569
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.8	35.8	< 0.005	< 0.005	—	35.9
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.92	5.92	< 0.005	< 0.005	—	5.94
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.21	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.14	36.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.11	2.11	< 0.005	< 0.005	< 0.005	2.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Grading (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.39	3.40	3.64	0.01	0.19	—	0.19	0.17	—	0.17	—	567	567	0.02	< 0.005	—	569

Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.8	35.8	< 0.005	< 0.005	—	35.9
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.92	5.92	< 0.005	< 0.005	—	5.94
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.21	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.14	36.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.11	2.11	< 0.005	< 0.005	< 0.005	2.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.42	3.95	4.40	0.01	0.18	—	0.18	0.17	—	0.17	—	801	801	0.03	0.01	—	804
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	0.80	< 0.005	0.03	—	0.03	0.03	—	0.03	—	133	133	0.01	< 0.005	—	133
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.16	0.16	2.68	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	435	435	0.02	0.01	1.86	441
Vendor	0.02	0.01	0.54	0.17	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	461	461	0.01	0.07	1.28	483
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.18	2.03	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	399	399	0.02	0.01	0.05	404
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	462	462	0.01	0.07	0.03	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.06	0.71	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.27	137
Vendor	0.01	< 0.005	0.19	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	154	154	< 0.005	0.02	0.19	161
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.4	22.4	< 0.005	< 0.005	0.04	22.7

Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.5	25.5	< 0.005	< 0.005	0.03	26.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2023) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.42	3.95	4.40	0.01	0.18	—	0.18	0.17	—	0.17	—	801	801	0.03	0.01	—	804
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	0.80	< 0.005	0.03	—	0.03	0.03	—	0.03	—	133	133	0.01	< 0.005	—	133
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.16	0.16	2.68	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	435	435	0.02	0.01	1.86	441
Vendor	0.02	0.01	0.54	0.17	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	461	461	0.01	0.07	1.28	483
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.18	2.03	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	399	399	0.02	0.01	0.05	404
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	462	462	0.01	0.07	0.03	482
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.06	0.71	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.27	137
Vendor	0.01	< 0.005	0.19	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	154	154	< 0.005	0.02	0.19	161
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.4	22.4	< 0.005	< 0.005	0.04	22.7
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.5	25.5	< 0.005	< 0.005	0.03	26.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2024) - Unmitigated

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

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

Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.35	3.92	0.01	0.15	—	0.15	0.14	—	0.14	—	716	716	0.03	0.01	—	718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.71	< 0.005	0.03	—	0.03	0.02	—	0.02	—	119	119	< 0.005	< 0.005	—	119
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.14	2.47	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	426	426	0.02	0.01	1.69	432
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	1.28	478
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	391	391	0.02	0.01	0.04	396

Vendor	0.02	0.01	0.54	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	0.03	477
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	118	118	0.01	< 0.005	0.22	120
Vendor	0.01	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	< 0.005	0.02	0.16	143
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.6	19.6	< 0.005	< 0.005	0.04	19.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.5	22.5	< 0.005	< 0.005	0.03	23.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2024) - Mitigated

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

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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.35	3.92	0.01	0.15	—	0.15	0.14	—	0.14	—	716	716	0.03	0.01	—	718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.61	0.71	< 0.005	0.03	—	0.03	0.02	—	0.02	—	119	119	< 0.005	< 0.005	—	119
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.14	2.47	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	426	426	0.02	0.01	1.69	432
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	1.28	478
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	391	391	0.02	0.01	0.04	396
Vendor	0.02	0.01	0.54	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	0.03	477
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	118	118	0.01	< 0.005	0.22	120
Vendor	0.01	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	< 0.005	0.02	0.16	143
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.6	19.6	< 0.005	< 0.005	0.04	19.9

Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.5	22.5	< 0.005	< 0.005	0.03	23.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.93	6.10	0.01	0.24	—	0.24	0.22	—	0.22	—	1,328	1,328	0.05	0.01	—	1,333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.93	6.10	0.01	0.24	—	0.24	0.22	—	0.22	—	1,328	1,328	0.05	0.01	—	1,333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.41	1.45	< 0.005	0.06	—	0.06	0.05	—	0.05	—	317	317	0.01	< 0.005	—	318
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.26	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.4	52.4	< 0.005	< 0.005	—	52.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.14	2.47	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	426	426	0.02	0.01	1.69	432
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	1.28	478
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	391	391	0.02	0.01	0.04	396
Vendor	0.02	0.01	0.54	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	0.03	477
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	94.5	94.5	< 0.005	< 0.005	0.17	95.8
Vendor	< 0.005	< 0.005	0.13	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	109	109	< 0.005	0.02	0.13	114
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.02	18.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2024) - Mitigated

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

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

Off-Road Equipment	0.77	0.64	5.93	6.10	0.01	0.24	—	0.24	0.22	—	0.22	—	1,328	1,328	0.05	0.01	—	1,333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.93	6.10	0.01	0.24	—	0.24	0.22	—	0.22	—	1,328	1,328	0.05	0.01	—	1,333
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.41	1.45	< 0.005	0.06	—	0.06	0.05	—	0.05	—	317	317	0.01	< 0.005	—	318
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.26	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.4	52.4	< 0.005	< 0.005	—	52.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.14	2.47	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	426	426	0.02	0.01	1.69	432
Vendor	0.02	0.01	0.52	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	1.28	478
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.17	1.87	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	391	391	0.02	0.01	0.04	396

Vendor	0.02	0.01	0.54	0.16	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04	—	456	456	0.01	0.07	0.03	477
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	94.5	94.5	< 0.005	< 0.005	0.17	95.8
Vendor	< 0.005	< 0.005	0.13	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	109	109	< 0.005	0.02	0.13	114
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.02	18.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.69	3.35	< 0.005	0.14	—	0.14	0.13	—	0.13	—	505	505	0.02	< 0.005	—	507
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.61	< 0.005	0.03	—	0.03	0.02	—	0.02	—	83.7	83.7	< 0.005	< 0.005	—	83.9
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	220	220	0.01	0.01	0.94	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.03	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	202	202	0.01	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	68.5	68.5	< 0.005	< 0.005	0.14	69.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2023) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.69	3.35	< 0.005	0.14	—	0.14	0.13	—	0.13	—	505	505	0.02	< 0.005	—	507
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.61	< 0.005	0.03	—	0.03	0.02	—	0.02	—	83.7	83.7	< 0.005	< 0.005	—	83.9
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.36	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	220	220	0.01	0.01	0.94	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.03	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	202	202	0.01	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	68.5	68.5	< 0.005	< 0.005	0.14	69.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.33	2.99	< 0.005	0.12	—	0.12	0.11	—	0.11	—	451	451	0.02	< 0.005	—	453
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.43	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	74.7	74.7	< 0.005	< 0.005	—	75.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.95	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	0.01	0.01	0.02	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.0	60.0	< 0.005	< 0.005	0.11	60.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.94	9.94	< 0.005	< 0.005	0.02	10.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Paving (2024) - Mitigated

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

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

Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.33	2.99	< 0.005	0.12	—	0.12	0.11	—	0.11	—	451	451	0.02	< 0.005	—	453
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.43	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	74.7	74.7	< 0.005	< 0.005	—	75.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.95	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	0.01	0.01	0.02	201

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.0	60.0	< 0.005	< 0.005	0.11	60.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.94	9.94	< 0.005	< 0.005	0.02	10.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Paving (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.91	5.01	0.01	0.19	—	0.19	0.18	—	0.18	—	756	756	0.03	0.01	—	758
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.91	5.01	0.01	0.19	—	0.19	0.18	—	0.18	—	756	756	0.03	0.01	—	758
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.20	< 0.005	0.05	—	0.05	0.04	—	0.04	—	180	180	0.01	< 0.005	—	181
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.8	29.8	< 0.005	< 0.005	—	29.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.43	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.2	99.2	< 0.005	< 0.005	0.01	100
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.04	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	0.01	4.02

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Paving (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.91	5.01	0.01	0.19	—	0.19	0.18	—	0.18	—	756	756	0.03	0.01	—	758
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.91	5.01	0.01	0.19	—	0.19	0.18	—	0.18	—	756	756	0.03	0.01	—	758
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.20	< 0.005	0.05	—	0.05	0.04	—	0.04	—	180	180	0.01	< 0.005	—	181
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.8	29.8	< 0.005	< 0.005	—	29.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.43	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	99.2	99.2	< 0.005	< 0.005	0.01	100
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.04	24.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	0.01	4.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Architectural Coating (2023) - Unmitigated

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

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

Off-Road Equipment	0.18	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.31	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.6	44.6	< 0.005	< 0.005	—	44.8
Architectural Coatings	—	0.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.39	7.39	< 0.005	< 0.005	—	7.41
Architectural Coatings	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.61	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.12	265
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	240	240	0.01	0.01	0.03	243
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.43	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.1	81.1	< 0.005	< 0.005	0.16	82.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.03	13.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Architectural Coating (2023) - Mitigated

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

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

Off-Road Equipment	0.18	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	0.93	1.15	< 0.005	0.04	—	0.04	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.31	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.6	44.6	< 0.005	< 0.005	—	44.8
Architectural Coatings	—	0.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.39	7.39	< 0.005	< 0.005	—	7.41
Architectural Coatings	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.61	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.12	265
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.22	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	240	240	0.01	0.01	0.03	243
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.43	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.1	81.1	< 0.005	< 0.005	0.16	82.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.03	13.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Architectural Coating (2024) - Unmitigated

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

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

Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.27	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.9	39.9	< 0.005	< 0.005	—	40.0
Architectural Coatings	—	0.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.60	6.60	< 0.005	< 0.005	—	6.62
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.24. Architectural Coating (2024) - Mitigated

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

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

Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.27	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.9	39.9	< 0.005	< 0.005	—	40.0
Architectural Coatings	—	0.83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.60	6.60	< 0.005	< 0.005	—	6.62
Architectural Coatings	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Architectural Coating (2024) - Unmitigated

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

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

Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.22	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.8	31.8	< 0.005	< 0.005	—	31.9
Architectural Coatings	—	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.27	5.27	< 0.005	< 0.005	—	5.29
Architectural Coatings	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.26. Architectural Coating (2024) - Mitigated

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

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

Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	2.82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.22	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.8	31.8	< 0.005	< 0.005	—	31.9
Architectural Coatings	—	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.27	5.27	< 0.005	< 0.005	—	5.29
Architectural Coatings	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	10.7	9.89	8.34	75.2	0.18	0.13	5.87	6.00	0.13	1.04	1.17	—	18,045	18,045	0.78	0.82	67.8	18,378
High Turnover (Sit Down Restaurant)	2.35	2.18	1.84	16.6	0.04	0.03	1.29	1.32	0.03	0.23	0.26	—	3,976	3,976	0.17	0.18	14.9	4,049
Free-Standing Discount store	1.08	1.02	0.65	5.62	0.01	0.01	0.39	0.40	0.01	0.07	0.08	—	1,220	1,220	0.07	0.06	4.51	1,245
Convenience Market with Gas Pumps	7.94	7.37	6.21	56.0	0.13	0.10	4.37	4.47	0.09	0.78	0.87	—	13,434	13,434	0.58	0.61	50.5	13,681
Medical Office Building	3.60	3.34	2.81	25.3	0.06	0.05	1.98	2.02	0.04	0.35	0.39	—	6,085	6,085	0.26	0.28	22.9	6,197
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	25.6	23.8	19.8	179	0.42	0.32	13.9	14.2	0.30	2.47	2.77	—	42,760	42,760	1.86	1.96	161	43,551
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	9.97	9.18	8.93	63.9	0.17	0.13	5.87	6.00	0.13	1.04	1.17	—	16,954	16,954	0.82	0.85	1.76	17,230

High Turnover (Sit Down Restaurant)	2.20	2.02	1.97	14.1	0.04	0.03	1.29	1.32	0.03	0.23	0.26	—	3,735	3,735	0.18	0.19	0.39	3,796
Free-Standing Discount store	1.01	0.94	0.69	4.97	0.01	0.01	0.39	0.40	0.01	0.07	0.08	—	1,148	1,148	0.07	0.06	0.12	1,169
Convenience Market with Gas Pumps	7.42	6.84	6.65	47.6	0.12	0.10	4.37	4.47	0.09	0.78	0.87	—	12,621	12,621	0.61	0.63	1.31	12,827
Medical Office Building	3.36	3.10	3.01	21.6	0.06	0.05	1.98	2.02	0.04	0.35	0.39	—	5,717	5,717	0.28	0.29	0.59	5,810
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	24.0	22.1	21.3	152	0.39	0.32	13.9	14.2	0.30	2.47	2.77	—	40,175	40,175	1.95	2.03	4.17	40,832
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	1.59	1.50	1.05	7.67	0.02	0.01	0.55	0.57	0.01	0.10	0.11	—	1,503	1,503	0.10	0.09	2.51	1,534
High Turnover (Sit Down Restaurant)	0.36	0.33	0.24	1.79	< 0.005	< 0.005	0.13	0.14	< 0.005	0.02	0.03	—	360	360	0.02	0.02	0.60	367
Free-Standing Discount store	0.18	0.17	0.13	0.93	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	—	188	188	0.01	0.01	0.32	192

Convenience	1.16	1.10	0.69	5.09	0.01	0.01	0.34	0.35	0.01	0.06	0.07	—	932	932	0.07	0.06	1.54	953
Medical Office Building	0.61	0.56	0.56	4.07	0.01	0.01	0.36	0.37	0.01	0.06	0.07	—	955	955	0.05	0.05	1.64	972
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.90	3.66	2.67	19.6	0.04	0.04	1.46	1.49	0.03	0.26	0.29	—	3,939	3,939	0.25	0.22	6.61	4,019

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	10.7	9.89	8.34	75.2	0.18	0.13	5.87	6.00	0.13	1.04	1.17	—	18,045	18,045	0.78	0.82	67.8	18,378
High Turnover (Sit Down Restaurant)	2.35	2.18	1.84	16.6	0.04	0.03	1.29	1.32	0.03	0.23	0.26	—	3,976	3,976	0.17	0.18	14.9	4,049
Free-Standing Discount store	1.08	1.02	0.65	5.62	0.01	0.01	0.39	0.40	0.01	0.07	0.08	—	1,220	1,220	0.07	0.06	4.51	1,245

Convenience Market with Gas Pumps	7.94	7.37	6.21	56.0	0.13	0.10	4.37	4.47	0.09	0.78	0.87	—	13,434	13,434	0.58	0.61	50.5	13,681
Medical Office Building	3.60	3.34	2.81	25.3	0.06	0.05	1.98	2.02	0.04	0.35	0.39	—	6,085	6,085	0.26	0.28	22.9	6,197
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	25.6	23.8	19.8	179	0.42	0.32	13.9	14.2	0.30	2.47	2.77	—	42,760	42,760	1.86	1.96	161	43,551
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	9.97	9.18	8.93	63.9	0.17	0.13	5.87	6.00	0.13	1.04	1.17	—	16,954	16,954	0.82	0.85	1.76	17,230
High Turnover (Sit Down Restaurant)	2.20	2.02	1.97	14.1	0.04	0.03	1.29	1.32	0.03	0.23	0.26	—	3,735	3,735	0.18	0.19	0.39	3,796
Free-Standing Discount store	1.01	0.94	0.69	4.97	0.01	0.01	0.39	0.40	0.01	0.07	0.08	—	1,148	1,148	0.07	0.06	0.12	1,169
Convenience Market with Gas Pumps	7.42	6.84	6.65	47.6	0.12	0.10	4.37	4.47	0.09	0.78	0.87	—	12,621	12,621	0.61	0.63	1.31	12,827
Medical Office Building	3.36	3.10	3.01	21.6	0.06	0.05	1.98	2.02	0.04	0.35	0.39	—	5,717	5,717	0.28	0.29	0.59	5,810

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	24.0	22.1	21.3	152	0.39	0.32	13.9	14.2	0.30	2.47	2.77	—	40,175	40,175	1.95	2.03	4.17	40,832
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	1.59	1.50	1.05	7.67	0.02	0.01	0.55	0.57	0.01	0.10	0.11	—	1,503	1,503	0.10	0.09	2.51	1,534
High Turnover (Sit Down Restaurant)	0.36	0.33	0.24	1.79	< 0.005	< 0.005	0.13	0.14	< 0.005	0.02	0.03	—	360	360	0.02	0.02	0.60	367
Free-Standing Discount store	0.18	0.17	0.13	0.93	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	—	188	188	0.01	0.01	0.32	192
Convenience Market with Gas Pumps	1.16	1.10	0.69	5.09	0.01	0.01	0.34	0.35	0.01	0.06	0.07	—	932	932	0.07	0.06	1.54	953
Medical Office Building	0.61	0.56	0.56	4.07	0.01	0.01	0.36	0.37	0.01	0.06	0.07	—	955	955	0.05	0.05	1.64	972
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.90	3.66	2.67	19.6	0.04	0.04	1.46	1.49	0.03	0.26	0.29	—	3,939	3,939	0.25	0.22	6.61	4,019

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	153	153	0.01	< 0.005	—	153
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	54.5	54.5	< 0.005	< 0.005	—	54.8
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	160
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,559	1,559	0.11	0.01	—	1,566
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	2,361	2,361	0.17	0.02	—	2,371
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	153	153	0.01	< 0.005	—	153
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	54.5	54.5	< 0.005	< 0.005	—	54.8
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	160
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,559	1,559	0.11	0.01	—	1,566
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,361	2,361	0.17	0.02	—	2,371
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	40.4	40.4	< 0.005	< 0.005	—	40.6

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	25.3	25.3	< 0.005	< 0.005	—	25.4
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	9.03	9.03	< 0.005	< 0.005	—	9.07
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	26.3	26.3	< 0.005	< 0.005	—	26.5
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	259
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	31.6	31.6	< 0.005	< 0.005	—	31.8
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	391	391	0.03	< 0.005	—	393

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	153	153	0.01	< 0.005	—	153
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	54.5	54.5	< 0.005	< 0.005	—	54.8
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	160
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,559	1,559	0.11	0.01	—	1,566
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,361	2,361	0.17	0.02	—	2,371
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	244	244	0.02	< 0.005	—	245
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	153	153	0.01	< 0.005	—	153
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	54.5	54.5	< 0.005	< 0.005	—	54.8

Convenie Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	159	159	0.01	< 0.005	—	160
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	1,559	1,559	0.11	0.01	—	1,566
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	191	191	0.01	< 0.005	—	192
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,361	2,361	0.17	0.02	—	2,371
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	40.4	40.4	< 0.005	< 0.005	—	40.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	25.3	25.3	< 0.005	< 0.005	—	25.4
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	9.03	9.03	< 0.005	< 0.005	—	9.07
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	26.3	26.3	< 0.005	< 0.005	—	26.5
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	258	258	0.02	< 0.005	—	259
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	31.6	31.6	< 0.005	< 0.005	—	31.8

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	391	391	0.03	< 0.005	—	393

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	0.02	0.01	0.17	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	205	205	0.02	< 0.005	—	205
High Turnover (Sit Down Restaurant)	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	128
Free-Standing Discount store	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.54	8.54	< 0.005	< 0.005	—	8.56
Convenience Market with Gas Pumps	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.5	21.5	< 0.005	< 0.005	—	21.5
Medical Office Building	0.06	0.03	0.53	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	637	637	0.06	< 0.005	—	638
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	999	999	0.09	< 0.005	—	1,002
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	0.02	0.01	0.17	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	205	205	0.02	< 0.005	—	205
High Turnover (Sit Down Restaurant)	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	128
Free-Standing Discount store	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.54	8.54	< 0.005	< 0.005	—	8.56
Convenience Market with Gas Pumps	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.5	21.5	< 0.005	< 0.005	—	21.5
Medical Office Building	0.06	0.03	0.53	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	637	637	0.06	< 0.005	—	638
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	999	999	0.09	< 0.005	—	1,002
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant with Drive Thru	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.9	33.9	< 0.005	< 0.005	—	34.0
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.2	21.2	< 0.005	< 0.005	—	21.2
Free-Standing Discount store	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.41	1.41	< 0.005	< 0.005	—	1.42
Convenience Market with Gas Pumps	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.56	3.56	< 0.005	< 0.005	—	3.57
Medical Office Building	0.01	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	105	105	0.01	< 0.005	—	106
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	165	165	0.01	< 0.005	—	166

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

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

Fast Food Restaurant with Drive Thru	0.02	0.01	0.17	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	205	205	0.02	< 0.005	—	205
High Turnover (Sit Down Restaurant)	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	128
Free-Standing Discount store	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.54	8.54	< 0.005	< 0.005	—	8.56
Convenience Market with Gas Pumps	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.5	21.5	< 0.005	< 0.005	—	21.5
Medical Office Building	0.06	0.03	0.53	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	637	637	0.06	< 0.005	—	638
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	999	999	0.09	< 0.005	—	1,002
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	0.02	0.01	0.17	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	205	205	0.02	< 0.005	—	205

High Turnover (Sit Down Restaurant)	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	128	128	0.01	< 0.005	—	128
Free-Standing Discount store	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.54	8.54	< 0.005	< 0.005	—	8.56
Convenience Market with Gas Pumps	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.5	21.5	< 0.005	< 0.005	—	21.5
Medical Office Building	0.06	0.03	0.53	0.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	637	637	0.06	< 0.005	—	638
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.09	0.05	0.84	0.70	0.01	0.06	—	0.06	0.06	—	0.06	—	999	999	0.09	< 0.005	—	1,002
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.9	33.9	< 0.005	< 0.005	—	34.0
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.2	21.2	< 0.005	< 0.005	—	21.2
Free-Standing Discount store	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.41	1.41	< 0.005	< 0.005	—	1.42

Convenience	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.56	3.56	< 0.005	< 0.005	—	3.57
Medical Office Building	0.01	0.01	0.10	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	105	105	0.01	< 0.005	—	106
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	165	165	0.01	< 0.005	—	166

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.69	0.64	0.03	3.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.0	16.0	< 0.005	< 0.005	—	16.1
Total	0.69	2.82	0.03	3.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.0	16.0	< 0.005	< 0.005	—	16.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	1.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	< 0.005	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82
Total	0.09	0.48	< 0.005	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82

4.3.1. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	0.69	0.64	0.03	3.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.0	16.0	< 0.005	< 0.005	—	16.1
Total	0.69	2.82	0.03	3.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	16.0	16.0	< 0.005	< 0.005	—	16.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	< 0.005	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82
Total	0.09	0.48	< 0.005	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.82

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	3.49	15.4	18.9	0.36	0.01	—	30.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.33	10.3	12.6	0.24	0.01	—	20.3
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	0.71	3.14	3.85	0.07	< 0.005	—	6.19
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.24	1.07	1.31	0.02	< 0.005	—	2.10
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	17.3	76.4	93.7	1.78	0.04	—	151
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	3.49	15.4	18.9	0.36	0.01	—	30.4

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.33	10.3	12.6	0.24	0.01	—	20.3
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	0.71	3.14	3.85	0.07	< 0.005	—	6.19
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.24	1.07	1.31	0.02	< 0.005	—	2.10
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	17.3	76.4	93.7	1.78	0.04	—	151
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	0.58	2.55	3.13	0.06	< 0.005	—	5.04
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.39	1.70	2.09	0.04	< 0.005	—	3.36
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	0.12	0.52	0.64	0.01	< 0.005	—	1.03

Convenience	—	—	—	—	—	—	—	—	—	—	—	0.04	0.18	0.22	< 0.005	< 0.005	—	0.35
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	2.87	12.6	15.5	0.29	0.01	—	25.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.99	17.6	21.6	0.41	0.01	—	34.8

4.4.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	3.49	15.4	18.9	0.36	0.01	—	30.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.33	10.3	12.6	0.24	0.01	—	20.3
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	0.71	3.14	3.85	0.07	< 0.005	—	6.19

Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.24	1.07	1.31	0.02	< 0.005	—	2.10
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	17.3	76.4	93.7	1.78	0.04	—	151
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	3.49	15.4	18.9	0.36	0.01	—	30.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.33	10.3	12.6	0.24	0.01	—	20.3
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	0.71	3.14	3.85	0.07	< 0.005	—	6.19
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.24	1.07	1.31	0.02	< 0.005	—	2.10
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	17.3	76.4	93.7	1.78	0.04	—	151

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	24.1	106	130	2.48	0.06	—	210
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	0.58	2.55	3.13	0.06	< 0.005	—	5.04
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.39	1.70	2.09	0.04	< 0.005	—	3.36
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	0.12	0.52	0.64	0.01	< 0.005	—	1.03
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.04	0.18	0.22	< 0.005	< 0.005	—	0.35
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	2.87	12.6	15.5	0.29	0.01	—	25.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.99	17.6	21.6	0.41	0.01	—	34.8

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	25.7	0.00	25.7	2.56	0.00	—	89.8
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	11.6	0.00	11.6	1.16	0.00	—	40.5
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	2.74	0.00	2.74	0.27	0.00	—	9.59
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	419	0.00	419	41.9	0.00	—	1,466
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	25.7	0.00	25.7	2.56	0.00	—	89.8
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	11.6	0.00	11.6	1.16	0.00	—	40.5
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	2.74	0.00	2.74	0.27	0.00	—	9.59
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	419	0.00	419	41.9	0.00	—	1,466
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	4.25	0.00	4.25	0.42	0.00	—	14.9
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	1.92	0.00	1.92	0.19	0.00	—	6.71
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.45	0.00	0.45	0.05	0.00	—	1.59
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	69.4	0.00	69.4	6.93	0.00	—	243
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	82.2	0.00	82.2	8.21	0.00	—	287

4.5.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	25.7	0.00	25.7	2.56	0.00	—	89.8
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	11.6	0.00	11.6	1.16	0.00	—	40.5
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	2.74	0.00	2.74	0.27	0.00	—	9.59
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	419	0.00	419	41.9	0.00	—	1,466
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	25.7	0.00	25.7	2.56	0.00	—	89.8
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	11.6	0.00	11.6	1.16	0.00	—	40.5

Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	2.74	0.00	2.74	0.27	0.00	—	9.59
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	419	0.00	419	41.9	0.00	—	1,466
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	496	0.00	496	49.6	0.00	—	1,736
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	4.25	0.00	4.25	0.42	0.00	—	14.9
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	1.92	0.00	1.92	0.19	0.00	—	6.71
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	0.45	0.00	0.45	0.05	0.00	—	1.59
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	69.4	0.00	69.4	6.93	0.00	—	243
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	82.2	0.00	82.2	8.21	0.00	—	287

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.75	8.75
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.47	5.47
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	828	828
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.84	1.84

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.75	8.75
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.47	5.47
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	828	828
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.84	1.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.45	1.45
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91

Free-Standing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	137	137
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.30	0.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	140

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.75	8.75
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.47	5.47
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	828	828
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.84	1.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.75	8.75
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.47	5.47
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	828	828
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.84	1.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	844	844
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.45	1.45
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91	0.91
Free-Standing Discount store	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Convenience Market with Gas Pumps	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	137	137
Medical Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.30	0.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	140

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.9.2. Mitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Phase 1 & 2 Site Preparation	Site Preparation	5/1/2023	6/13/2023	5.00	32.0	—
Phase 3 Site Preparation	Site Preparation	6/1/2024	6/30/2024	5.00	20.0	—
Phase 1& 2 Grading	Grading	6/14/2023	7/12/2023	5.00	20.0	—
Phase 3 Grading	Grading	7/1/2024	7/31/2024	5.00	23.0	—
Phase 1 Building Construction	Building Construction	7/13/2023	12/30/2023	5.00	122	—
Phase 2 Building Construction	Building Construction	1/1/2024	5/30/2024	5.00	109	—

Phase 3 Building Construction	Building Construction	8/1/2024	11/30/2024	5.00	87.0	—
Phase 1 Paving	Paving	7/13/2023	12/29/2023	5.00	122	—
Phase 2 Paving	Paving	1/1/2024	5/30/2024	5.00	109	—
Phase 3 Paving	Paving	8/1/2024	11/30/2024	5.00	87.0	—
Phase 1 Architectural Coating	Architectural Coating	7/13/2023	12/29/2023	5.00	122	—
Phase 2 Architectural Coating	Architectural Coating	1/1/2024	5/30/2024	5.00	109	—
Phase 3 Architectural Coating	Architectural Coating	8/1/2024	11/30/2024	5.00	87.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Phase 1 & 2 Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Phase 1 & 2 Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Phase 1& 2 Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Phase 1& 2 Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 1& 2 Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 1& 2 Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Phase 1 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 1 Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 1 Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Phase 1 Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Phase 1 Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 1 Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Phase 1 Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Phase 1 Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Phase 1 Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Phase 3 Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 3 Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Phase 3 Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 2 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 2 Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 2 Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 2 Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 2 Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 3 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 3 Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Phase 3 Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 2 Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Phase 2 Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

Phase 2 Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Phase 3 Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Phase 3 Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Phase 3 Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Phase 2 Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Phase 3 Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Phase 1 & 2 Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Phase 1 & 2 Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Phase 1& 2 Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Phase 1& 2 Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 1& 2 Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 1& 2 Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Phase 1 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 1 Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 1 Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 1 Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 1 Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 1 Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Phase 1 Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Phase 1 Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Phase 1 Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Phase 3 Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 3 Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Phase 3 Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 2 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 2 Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 2 Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 2 Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 2 Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 3 Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 3 Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Phase 3 Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 2 Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Phase 2 Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Phase 2 Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Phase 3 Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Phase 3 Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Phase 3 Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38

Phase 2 Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Phase 3 Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase 1 & 2 Site Preparation	—	—	—	—
Phase 1 & 2 Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Phase 1 & 2 Site Preparation	Vendor	—	10.2	HHDT,MHDT
Phase 1 & 2 Site Preparation	Hauling	1.19	20.0	HHDT
Phase 1 & 2 Site Preparation	Onsite truck	—	—	HHDT
Phase 1& 2 Grading	—	—	—	—
Phase 1& 2 Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1& 2 Grading	Vendor	—	10.2	HHDT,MHDT
Phase 1& 2 Grading	Hauling	1.90	20.0	HHDT
Phase 1& 2 Grading	Onsite truck	—	—	HHDT
Phase 1 Building Construction	—	—	—	—
Phase 1 Building Construction	Worker	29.6	18.5	LDA,LDT1,LDT2
Phase 1 Building Construction	Vendor	14.7	10.2	HHDT,MHDT
Phase 1 Building Construction	Hauling	0.00	20.0	HHDT
Phase 1 Building Construction	Onsite truck	—	—	HHDT
Phase 1 Paving	—	—	—	—
Phase 1 Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 1 Paving	Hauling	0.00	20.0	HHDT

Phase 1 Paving	Onsite truck	—	—	HHDT
Phase 1 Architectural Coating	—	—	—	—
Phase 1 Architectural Coating	Worker	17.7	18.5	LDA,LDT1,LDT2
Phase 1 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 1 Architectural Coating	Hauling	0.00	20.0	HHDT
Phase 1 Architectural Coating	Onsite truck	—	—	HHDT
Phase 3 Site Preparation	—	—	—	—
Phase 3 Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Phase 3 Site Preparation	Vendor	—	10.2	HHDT,MHDT
Phase 3 Site Preparation	Hauling	0.00	20.0	HHDT
Phase 3 Site Preparation	Onsite truck	—	—	HHDT
Phase 3 Grading	—	—	—	—
Phase 3 Grading	Worker	2.50	18.5	LDA,LDT1,LDT2
Phase 3 Grading	Vendor	—	10.2	HHDT,MHDT
Phase 3 Grading	Hauling	0.00	20.0	HHDT
Phase 3 Grading	Onsite truck	—	—	HHDT
Phase 2 Building Construction	—	—	—	—
Phase 2 Building Construction	Worker	29.6	18.5	LDA,LDT1,LDT2
Phase 2 Building Construction	Vendor	14.7	10.2	HHDT,MHDT
Phase 2 Building Construction	Hauling	0.00	20.0	HHDT
Phase 2 Building Construction	Onsite truck	—	—	HHDT
Phase 3 Building Construction	—	—	—	—
Phase 3 Building Construction	Worker	29.6	18.5	LDA,LDT1,LDT2
Phase 3 Building Construction	Vendor	14.7	10.2	HHDT,MHDT
Phase 3 Building Construction	Hauling	0.00	20.0	HHDT
Phase 3 Building Construction	Onsite truck	—	—	HHDT
Phase 2 Paving	—	—	—	—

Phase 2 Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 2 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 2 Paving	Hauling	0.00	20.0	HHDT
Phase 2 Paving	Onsite truck	—	—	HHDT
Phase 3 Paving	—	—	—	—
Phase 3 Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Phase 3 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 3 Paving	Hauling	0.00	20.0	HHDT
Phase 3 Paving	Onsite truck	—	—	HHDT
Phase 2 Architectural Coating	—	—	—	—
Phase 2 Architectural Coating	Worker	—	18.5	LDA,LDT1,LDT2
Phase 2 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 2 Architectural Coating	Hauling	0.00	20.0	HHDT
Phase 2 Architectural Coating	Onsite truck	—	—	HHDT
Phase 3 Architectural Coating	—	—	—	—
Phase 3 Architectural Coating	Worker	—	18.5	LDA,LDT1,LDT2
Phase 3 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 3 Architectural Coating	Hauling	0.00	20.0	HHDT
Phase 3 Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase 1 & 2 Site Preparation	—	—	—	—
Phase 1 & 2 Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Phase 1 & 2 Site Preparation	Vendor	—	10.2	HHDT,MHDT
Phase 1 & 2 Site Preparation	Hauling	1.19	20.0	HHDT
Phase 1 & 2 Site Preparation	Onsite truck	—	—	HHDT

Phase 1& 2 Grading	—	—	—	—
Phase 1& 2 Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1& 2 Grading	Vendor	—	10.2	HHDT,MHDT
Phase 1& 2 Grading	Hauling	1.90	20.0	HHDT
Phase 1& 2 Grading	Onsite truck	—	—	HHDT
Phase 1 Building Construction	—	—	—	—
Phase 1 Building Construction	Worker	29.6	18.5	LDA,LDT1,LDT2
Phase 1 Building Construction	Vendor	14.7	10.2	HHDT,MHDT
Phase 1 Building Construction	Hauling	0.00	20.0	HHDT
Phase 1 Building Construction	Onsite truck	—	—	HHDT
Phase 1 Paving	—	—	—	—
Phase 1 Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 1 Paving	Hauling	0.00	20.0	HHDT
Phase 1 Paving	Onsite truck	—	—	HHDT
Phase 1 Architectural Coating	—	—	—	—
Phase 1 Architectural Coating	Worker	17.7	18.5	LDA,LDT1,LDT2
Phase 1 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 1 Architectural Coating	Hauling	0.00	20.0	HHDT
Phase 1 Architectural Coating	Onsite truck	—	—	HHDT
Phase 3 Site Preparation	—	—	—	—
Phase 3 Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Phase 3 Site Preparation	Vendor	—	10.2	HHDT,MHDT
Phase 3 Site Preparation	Hauling	0.00	20.0	HHDT
Phase 3 Site Preparation	Onsite truck	—	—	HHDT
Phase 3 Grading	—	—	—	—
Phase 3 Grading	Worker	2.50	18.5	LDA,LDT1,LDT2

Phase 3 Grading	Vendor	—	10.2	HHDT,MHDT
Phase 3 Grading	Hauling	0.00	20.0	HHDT
Phase 3 Grading	Onsite truck	—	—	HHDT
Phase 2 Building Construction	—	—	—	—
Phase 2 Building Construction	Worker	29.6	18.5	LDA,LDT1,LDT2
Phase 2 Building Construction	Vendor	14.7	10.2	HHDT,MHDT
Phase 2 Building Construction	Hauling	0.00	20.0	HHDT
Phase 2 Building Construction	Onsite truck	—	—	HHDT
Phase 3 Building Construction	—	—	—	—
Phase 3 Building Construction	Worker	29.6	18.5	LDA,LDT1,LDT2
Phase 3 Building Construction	Vendor	14.7	10.2	HHDT,MHDT
Phase 3 Building Construction	Hauling	0.00	20.0	HHDT
Phase 3 Building Construction	Onsite truck	—	—	HHDT
Phase 2 Paving	—	—	—	—
Phase 2 Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 2 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 2 Paving	Hauling	0.00	20.0	HHDT
Phase 2 Paving	Onsite truck	—	—	HHDT
Phase 3 Paving	—	—	—	—
Phase 3 Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Phase 3 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 3 Paving	Hauling	0.00	20.0	HHDT
Phase 3 Paving	Onsite truck	—	—	HHDT
Phase 2 Architectural Coating	—	—	—	—
Phase 2 Architectural Coating	Worker	—	18.5	LDA,LDT1,LDT2
Phase 2 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 2 Architectural Coating	Hauling	0.00	20.0	HHDT

Phase 2 Architectural Coating	Onsite truck	—	—	HHDT
Phase 3 Architectural Coating	—	—	—	—
Phase 3 Architectural Coating	Worker	—	18.5	LDA,LDT1,LDT2
Phase 3 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 3 Architectural Coating	Hauling	0.00	20.0	HHDT
Phase 3 Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Phase 1 Architectural Coating	0.00	0.00	51,619	17,206	5,051
Phase 2 Architectural Coating	0.00	0.00	45,816	15,272	4,484
Phase 3 Architectural Coating	0.00	0.00	36,958	12,319	3,617

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Phase 1 & 2 Site Preparation	300	—	48.0	0.00	—
Phase 3 Site Preparation	—	—	10.0	0.00	—
Phase 1& 2 Grading	300	—	20.0	0.00	—
Phase 3 Grading	—	—	11.5	0.00	—
Phase 1 Paving	0.00	0.00	0.00	0.00	5.03

Phase 2 Paving	0.00	0.00	0.00	0.00	5.03
Phase 3 Paving	0.00	0.00	0.00	0.00	5.03

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Fast Food Restaurant with Drive Thru	0.00	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Free-Standing Discount store	0.00	0%
Convenience Market with Gas Pumps	0.00	0%
Medical Office Building	0.00	0%
Parking Lot	4.03	100%
Other Non-Asphalt Surfaces	1.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	453	0.03	< 0.005
2024	0.00	453	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Fast Food Restaurant with Drive Thru	2,383	2,383	2,383	869,780	6,856	21,110	21,110	3,988,889
High Turnover (Sit Down Restaurant)	525	525	525	191,625	1,822	4,651	4,651	960,019
Free-Standing Discount store	266	266	266	97,090	1,404	1,313	1,313	502,999
Convenience Market with Gas Pumps	1,774	1,774	1,774	647,495	3,107	15,715	15,715	2,448,757
Medical Office Building	804	804	804	293,285	7,118	7,118	7,118	2,598,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Fast Food Restaurant with Drive Thru	2,383	2,383	2,383	869,780	6,856	21,110	21,110	3,988,889
High Turnover (Sit Down Restaurant)	525	525	525	191,625	1,822	4,651	4,651	960,019
Free-Standing Discount store	266	266	266	97,090	1,404	1,313	1,313	502,999
Convenience Market with Gas Pumps	1,774	1,774	1,774	647,495	3,107	15,715	15,715	2,448,757
Medical Office Building	804	804	804	293,285	7,118	7,118	7,118	2,598,116
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	134,393	44,798	13,152

5.10.3. Landscape Equipment

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

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

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

Fast Food Restaurant with Drive Thru	196,643	453	0.0330	0.0040	638,729
High Turnover (Sit Down Restaurant)	122,902	453	0.0330	0.0040	399,206
Free-Standing Discount store	43,913	453	0.0330	0.0040	26,650
Convenience Market with Gas Pumps	128,158	453	0.0330	0.0040	67,055
Medical Office Building	1,255,908	453	0.0330	0.0040	1,986,239
Parking Lot	153,855	453	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Fast Food Restaurant with Drive Thru	196,643	453	0.0330	0.0040	638,729
High Turnover (Sit Down Restaurant)	122,902	453	0.0330	0.0040	399,206
Free-Standing Discount store	43,913	453	0.0330	0.0040	26,650
Convenience Market with Gas Pumps	128,158	453	0.0330	0.0040	67,055
Medical Office Building	1,255,908	453	0.0330	0.0040	1,986,239
Parking Lot	153,855	453	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

Fast Food Restaurant with Drive Thru	1,821,202	793
High Turnover (Sit Down Restaurant)	1,214,135	793
Free-Standing Discount store	370,363	793
Convenience Market with Gas Pumps	125,486	793
Medical Office Building	9,034,599	793
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Fast Food Restaurant with Drive Thru	1,821,202	793
High Turnover (Sit Down Restaurant)	1,214,135	793
Free-Standing Discount store	370,363	793
Convenience Market with Gas Pumps	125,486	793
Medical Office Building	9,034,599	793
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Fast Food Restaurant with Drive Thru	69.1	0.00
High Turnover (Sit Down Restaurant)	47.6	0.00
Free-Standing Discount store	21.5	0.00
Convenience Market with Gas Pumps	5.08	0.00
Medical Office Building	778	0.00

Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Fast Food Restaurant with Drive Thru	69.1	0.00
High Turnover (Sit Down Restaurant)	47.6	0.00
Free-Standing Discount store	21.5	0.00
Convenience Market with Gas Pumps	5.08	0.00
Medical Office Building	778	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

Free-Standing Discount store	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Free-Standing Discount store	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Convenience Market with Gas Pumps	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market with Gas Pumps	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Free-Standing Discount store	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Free-Standing Discount store	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Convenience Market with Gas Pumps	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market with Gas Pumps	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Medical Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Medical Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	28.0	annual days of extreme heat
Extreme Precipitation	2.05	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	7.76	annual hectares burned

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

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A

Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	98.7
AQ-PM	56.4
AQ-DPM	26.3
Drinking Water	10.2
Lead Risk Housing	3.13
Pesticides	67.3
Toxic Releases	51.0
Traffic	16.8
Effect Indicators	—
CleanUp Sites	4.12
Groundwater	0.00
Haz Waste Facilities/Generators	61.6
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	60.1
Cardio-vascular	82.1
Low Birth Weights	93.1
Socioeconomic Factor Indicators	—
Education	62.4
Housing	1.14
Linguistic	22.2
Poverty	50.2

Unemployment	82.7

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	90.91492365
Employed	46.28512768
Median HI	77.82625433
Education	—
Bachelor's or higher	34.71063775
High school enrollment	100
Preschool enrollment	24.1498781
Transportation	—
Auto Access	23.89323752
Active commuting	11.68997819
Social	—
2-parent households	67.25266265
Voting	13.26831772
Neighborhood	—
Alcohol availability	74.01514179
Park access	34.15886052
Retail density	11.30501732
Supermarket access	42.19171051
Tree canopy	2.322597203
Housing	—
Homeownership	71.48723213

Housing habitability	28.8848967
Low-inc homeowner severe housing cost burden	79.93070704
Low-inc renter severe housing cost burden	67.07301424
Uncrowded housing	36.04516874
Health Outcomes	—
Insured adults	50.3143847
Arthritis	81.7
Asthma ER Admissions	36.5
High Blood Pressure	61.0
Cancer (excluding skin)	66.1
Asthma	51.9
Coronary Heart Disease	90.3
Chronic Obstructive Pulmonary Disease	89.8
Diagnosed Diabetes	76.6
Life Expectancy at Birth	40.5
Cognitively Disabled	3.4
Physically Disabled	12.7
Heart Attack ER Admissions	7.9
Mental Health Not Good	63.6
Chronic Kidney Disease	79.8
Obesity	39.2
Pedestrian Injuries	58.6
Physical Health Not Good	77.4
Stroke	84.7
Health Risk Behaviors	—
Binge Drinking	17.1
Current Smoker	62.2

No Leisure Time for Physical Activity	62.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	71.6
English Speaking	94.8
Foreign-born	47.4
Outdoor Workers	34.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	77.3
Traffic Density	22.9
Traffic Access	23.0
Other Indices	—
Hardship	41.7
Other Decision Support	—
2016 Voting	26.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	48.0
Healthy Places Index Score for Project Location (b)	48.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Information updated to match that of the project. Landscaped area estimated from project site plans.
Construction: Construction Phases	Construction phasing and timing updated to match information provided by the project applicant.
Construction: Off-Road Equipment	Equipment list updated for Phase 3. Phase 3 is the proposed offsite improvements and would require less equipment due to the relatively small area.
Operations: Vehicle Data	Trips updated to match traffic report.

ATTACHMENT B

Health Risk Analysis Output Files

AERMOD DATA FILES

Control Pathway

AERMOD

Dispersion Options

Titles

C:\Users\agne\Desktop\Cactus & Nason HEalth Risk\cactus and Nason\ca

Dispersion Options

- [x] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Urban

Population:
Name (Optional):
Roughness Length:

Output Type

- [x] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
[x]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[x]

- [ ] Month
- [ ] Period
- [x] Annual

Exponential Decay

Half Life of 4 hrs / Option not available will be used

Terrain Height Options

- [ ] Flat
- [x] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [ ] Yes
- [x] No

Default Height = 0.00 m

Control Pathway

Optional Files

☐ Re-Start File ☐ Init File ☐ Multi-Year Analyses ☐ Event Input File ☒ Error Listing File

Detailed Error Listing File

Filename: cactus and Nason.err

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: ..\PerrisADJU\PERI_V9_ADJU\PERI_v9.SFC

Format Type: Default AERMET format

Profile Met Data

Filename: ..\PerrisADJU\PERI_V9_ADJU\PERI_v9.PFL

Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 15.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2010			Perris Airport
Upper Air		2010			
On-Site		2010			

Data Period

Data Period to Process

Start Date: 1/1/2010 Start Hour: 1 End Date: 12/31/2016 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Source Pathway - Source Inputs

AERMOD

Point Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Gas Exit Temp. [K]	Gas Exit Velocity [m/s]	Stack Inside Diameter [m]
POINT	STCK1	482370.77 Tank 1	3752254.73	470.95	3.66	1.00000	291.00	0.00	0.05
POINT	STCK2	482371.10 Tank 2	3752235.89	470.77	3.66	1.00000	291.00	0.00	0.05

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	VOL1	482351.86 Fueling Station 1	3752254.12	470.92	1.50	1.00000	13.00		3.02	1.86
VOLUME	VOL2	482352.26 Fueling Station 2	3752235.56	470.77	1.50	1.00000	13.00		3.02	1.86

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE1 (Truck delivery towared 215)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.00000		482396.04	3752207.17	470.57	0.00
			479411.43	3752204.49	472.60	0.00

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000001	482384.96	3752207.16	470.47	0.00	0.01471	22.15		20.57	2.37
	L0000002	482340.75	3752207.12	470.51	0.00	0.01471	22.15		20.57	2.37
	L0000003	482296.53	3752207.08	470.85	0.00	0.01471	22.15		20.57	2.37
	L0000004	482252.32	3752207.04	470.42	0.00	0.01471	22.15		20.57	2.37
	L0000005	482208.10	3752207.00	470.20	0.00	0.01471	22.15		20.57	2.37
	L0000006	482163.88	3752206.96	470.39	0.00	0.01471	22.15		20.57	2.37
	L0000007	482119.67	3752206.92	470.60	0.00	0.01471	22.15		20.57	2.37
	L0000008	482075.45	3752206.88	470.82	0.00	0.01471	22.15		20.57	2.37
	L0000009	482031.24	3752206.84	471.04	0.00	0.01471	22.15		20.57	2.37
	L0000010	481987.02	3752206.80	471.25	0.00	0.01471	22.15		20.57	2.37
	L0000011	481942.80	3752206.76	471.23	0.00	0.01471	22.15		20.57	2.37
	L0000012	481898.59	3752206.72	470.97	0.00	0.01471	22.15		20.57	2.37
	L0000013	481854.37	3752206.68	470.73	0.00	0.01471	22.15		20.57	2.37
	L0000014	481810.16	3752206.64	470.48	0.00	0.01471	22.15		20.57	2.37
	L0000015	481765.94	3752206.60	470.21	0.00	0.01471	22.15		20.57	2.37
	L0000016	481721.73	3752206.56	469.95	0.00	0.01471	22.15		20.57	2.37
	L0000017	481677.51	3752206.52	469.77	0.00	0.01471	22.15		20.57	2.37
	L0000018	481633.29	3752206.48	469.89	0.00	0.01471	22.15		20.57	2.37
	L0000019	481589.08	3752206.44	470.08	0.00	0.01471	22.15		20.57	2.37
	L0000020	481544.86	3752206.40	470.21	0.00	0.01471	22.15		20.57	2.37
	L0000021	481500.65	3752206.36	470.02	0.00	0.01471	22.15		20.57	2.37
	L0000022	481456.43	3752206.32	469.72	0.00	0.01471	22.15		20.57	2.37
	L0000023	481412.22	3752206.28	469.47	0.00	0.01471	22.15		20.57	2.37
	L0000024	481368.00	3752206.24	469.27	0.00	0.01471	22.15		20.57	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000025	481323.78	3752206.20	469.35	0.00	0.01471	22.15		20.57	2.37
	L0000026	481279.57	3752206.16	469.65	0.00	0.01471	22.15		20.57	2.37
	L0000027	481235.35	3752206.12	469.91	0.00	0.01471	22.15		20.57	2.37
	L0000028	481191.14	3752206.08	470.16	0.00	0.01471	22.15		20.57	2.37
	L0000029	481146.92	3752206.04	470.28	0.00	0.01471	22.15		20.57	2.37
	L0000030	481102.71	3752206.01	470.07	0.00	0.01471	22.15		20.57	2.37
	L0000031	481058.49	3752205.97	469.80	0.00	0.01471	22.15		20.57	2.37
	L0000032	481014.27	3752205.93	469.73	0.00	0.01471	22.15		20.57	2.37
	L0000033	480970.06	3752205.89	470.01	0.00	0.01471	22.15		20.57	2.37
	L0000034	480925.84	3752205.85	470.26	0.00	0.01471	22.15		20.57	2.37
	L0000035	480881.63	3752205.81	470.23	0.00	0.01471	22.15		20.57	2.37
	L0000036	480837.41	3752205.77	469.94	0.00	0.01471	22.15		20.57	2.37
	L0000037	480793.19	3752205.73	469.63	0.00	0.01471	22.15		20.57	2.37
	L0000038	480748.98	3752205.69	469.34	0.00	0.01471	22.15		20.57	2.37
	L0000039	480704.76	3752205.65	469.26	0.00	0.01471	22.15		20.57	2.37
	L0000040	480660.55	3752205.61	469.47	0.00	0.01471	22.15		20.57	2.37
	L0000041	480616.33	3752205.57	469.71	0.00	0.01471	22.15		20.57	2.37
	L0000042	480572.12	3752205.53	469.94	0.00	0.01471	22.15		20.57	2.37
	L0000043	480527.90	3752205.49	470.08	0.00	0.01471	22.15		20.57	2.37
	L0000044	480483.68	3752205.45	470.32	0.00	0.01471	22.15		20.57	2.37
	L0000045	480439.47	3752205.41	470.52	0.00	0.01471	22.15		20.57	2.37
	L0000046	480395.25	3752205.37	470.71	0.00	0.01471	22.15		20.57	2.37
	L0000047	480351.04	3752205.33	470.87	0.00	0.01471	22.15		20.57	2.37
	L0000048	480306.82	3752205.29	471.05	0.00	0.01471	22.15		20.57	2.37
	L0000049	480262.61	3752205.25	471.25	0.00	0.01471	22.15		20.57	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE1	L0000050	480218.39	3752205.21	471.41	0.00	0.01471	22.15		20.57	2.37
	L0000051	480174.17	3752205.17	471.57	0.00	0.01471	22.15		20.57	2.37
	L0000052	480129.96	3752205.13	471.75	0.00	0.01471	22.15		20.57	2.37
	L0000053	480085.74	3752205.09	471.94	0.00	0.01471	22.15		20.57	2.37
	L0000054	480041.53	3752205.05	471.88	0.00	0.01471	22.15		20.57	2.37
	L0000055	479997.31	3752205.01	471.65	0.00	0.01471	22.15		20.57	2.37
	L0000056	479953.10	3752204.97	471.44	0.00	0.01471	22.15		20.57	2.37
	L0000057	479908.88	3752204.93	471.34	0.00	0.01471	22.15		20.57	2.37
	L0000058	479864.66	3752204.89	471.07	0.00	0.01471	22.15		20.57	2.37
	L0000059	479820.45	3752204.85	470.77	0.00	0.01471	22.15		20.57	2.37
	L0000060	479776.23	3752204.81	470.85	0.00	0.01471	22.15		20.57	2.37
	L0000061	479732.02	3752204.77	470.99	0.00	0.01471	22.15		20.57	2.37
	L0000062	479687.80	3752204.74	471.18	0.00	0.01471	22.15		20.57	2.37
	L0000063	479643.59	3752204.70	471.31	0.00	0.01471	22.15		20.57	2.37
	L0000064	479599.37	3752204.66	471.48	0.00	0.01471	22.15		20.57	2.37
	L0000065	479555.15	3752204.62	471.67	0.00	0.01471	22.15		20.57	2.37
	L0000066	479510.94	3752204.58	471.90	0.00	0.01471	22.15		20.57	2.37
	L0000067	479466.72	3752204.54	472.24	0.00	0.01471	22.15		20.57	2.37
	L0000068	479422.51	3752204.50	472.49	0.00	0.01471	22.15		20.57	2.37

Cactus Avenue and Nason Street Commercial Office and Retail Development Project
Gasoline Vapor Emission Calculations

Table B-1. Fueling Information

Fuel Tank[1]	**Gasoline Throughput (gallons)**
Annual Throughput	1,200,000
Peak Hourly Loading[1]	8,800
Peak Hourly Dispensing[2]	500

(1) Peak hourly filling conservatively estimated as 6,000 gallons per estimated tank volume.
(2) Peak hourly throughput = pumps * 20 gallons per fill * 12 fills an hour.
Notes: Evaporative emissions from diesel are considered negligible.

Table B-2. TOG Emission Factor by Category

	Total Organic Gas (TOG) Emission Factors (lb/1,000 gal)				
Scenario	**Loading**	**Breathing**	**Fueling**[1]	**Spillage**	**Hose Permeation**
EVR Phase 1 and II	0.15	0.092	0.089	0.24	0.009

Source: Emission Factors per Gas Station Scenario (CARB & CAPCOA, 2022)
(1) Assumes 88% of vehicles have ORVR in 2021 per CARB Revised Phase II Document.

Table B-3. Peak Hourly and Annual Emissions by Activity

Activity	**Peak Hourly**[1] **(lbs/hr)**	**Annual**[2] **(lbs/yr)**
Gasoline UST (Point Sources)	**ROG Station Total**	
Filling Storage Tanks	1.32	180
Storage Tanks Breathing	0.81	110
Station (Volume Sources)	**ROG Station Total**	
Consumer Filling	0.04	107
Spillage	0.12	288
Hose Permeation	0.00	11

(1) Peak Hourly Emissions = Peak Hourly Throughput (gal/hr) * TOG EF (lbs/1,000 gal) / 1,000 gal
(2) Annual Emissions = Annual Throughput (gal/yr) * TOG EF (lbs/1,000 gal) / 1,000 gal

Cactus Avenue and Nason Street Commercial Office and Retail Development Project
Gasoline Vapor Emission Calculations

Table B-4. Gasoline Speciation

Chemical	Weight Percentage
Benzene	0.457%
Ethyl Benzene	0.107%
n-Hexane	0.0182%
Naphthalene	0.0445%
Propylene (propene)2	0.0359%
Toluene	1.11%
Xylenes	0.4090%

Source: Content of Gasoline (Combined Winter/Summer) (CARB & CAPCOA, 2022)

Table B-5. Total VOC Emissions by HARP2 Source

HARP2 Source	Max Hourly VOC (lbs/hr)	Annual VOC (lbs/yr)
Tank Filling + Breathing	2.13	290
Station Volume Sources	0.08	203

Table B-5. Peak Hourly HARP2 Emissions Input

HARP2 Source	Max Hourly Emissions (lbs/hr)						
	Benzene	Ethyl Benzene	n-Hexane	Naphthalene	Propylene	Toluene	Xylenes
Tank Filling + Breathing	0.0097	0.0023	0.0004	0.0009	0.0008	0.0236	0.0087
Volume Sources	0.0004	0.0001	0.0000	0.0000	0.0000	0.0009	0.0003

Table B-6. Annual HARP2 Emissions Input

HARP2 Source	Annual Emissions (lbs/yr)						
	Benzene	Ethyl Benzene	n-Hexane	Naphthalene	Propylene	Toluene	Xylenes
Tank Filling + Breathing	1.33	0.31	0.05	0.13	0.10	3.2	1.2
Volume Sources	0.93	0.22	0.04	0.09	0.07	2.3	0.8

Table B-7. Modeled Roadway Dimensions

Roadway Link Description	AERMOD ID	Length (miles)	Width (m)	Area (m^2)
Offsite	SLINE1	0.78	3.7	4,644.56

Notes: All roadways modeled with standard 3.7 meter width per lane.

Table B-8. Total Haul and Vendor Trip Information

Trip Type	Trips/Day
Operational Heavy Duty Trucks	2

Note: A conservative estimate of 2 fuel delivery trucks per day was used in this analysis.

Table B-9. Modeled Roadway Trip Information

	Truck Trips		
Roadway Link	Percentage Total Trips	Hourly	Average Daily
Offsite	100%	0.3	2

Notes: Offsite truck emissions calculated for roadway traffic leaving the Project Site and traveling west on Cactus Avenue towards Interstate 215.

Table B-10. 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]
T7 Utility Class 8	0.010	0.005	0.004	0.006	0.004	0.006
Station Customer Composite[3]	0.002	0.001	0.001	0.001	0.001	0.001

(1) EMFAC2021 PM10 2025 exhaust emission factors for T7 Utility Class 8 trucks in Riverside County
(2) Idle emission rates in grams per minute.
(3) Vender diesel vehicle fleet mix estimated at 16% HHDT 84% 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-11. Modeled Roadway Emission Rates

Roadway Link	DPM Emissions[1,2]	
	Peak Hourly (lbs/hr)	Annual (lbs/yr)
Offsite	0.0000	0.0006

(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)

FIGURES

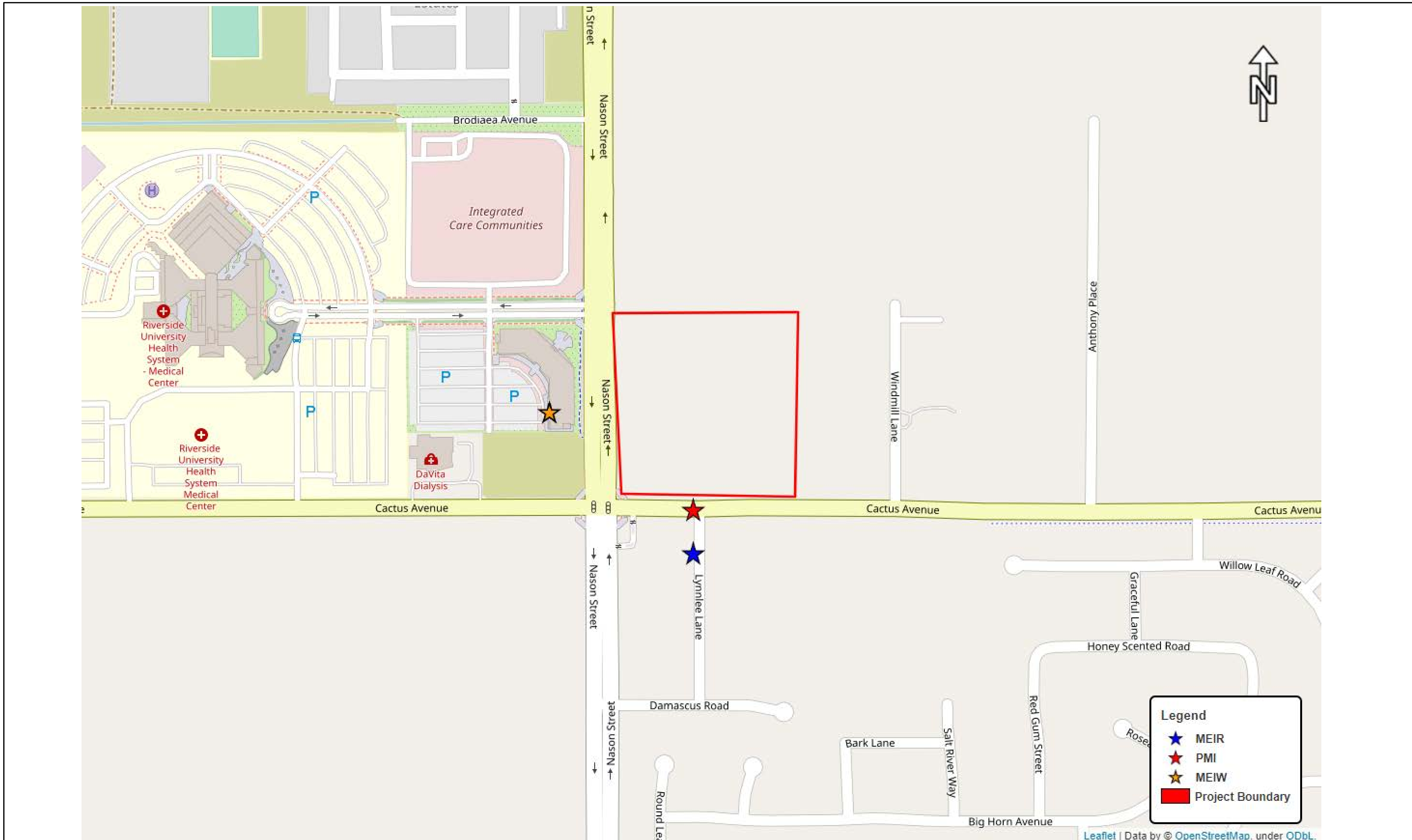

Figure B-1. Health Risk Categorical Maximum Locations

2019-146

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

APPENDIX A-1

Energy Consumption Modeling Results

Proposed Project
Total Construction-Related and Operational
Gasoline Usage

Construction

Table 1. Construction Year One			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	411	411,000	10.15
Total Gallons Consumed During First Calendar Year of Construction:			**40,493**

Table 2. Construction Year Two			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	403	403,000	10.15
Total Gallons Consumed During Second Calendar Year of Construction:			**39,704**

Sources:

[1]ECORP Consulting. 2023.Cactus Avenue and Nason Street Commercial Office and Retail Development Project Air Quality and Greenhouse Gas Emissions Assessment.

[2]Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1.* January 2016.
http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf

Proposed Project
Total Construction-Related and Operational
Gasoline Usage

Operations

Table 3. Average Miles per Gallon in Santa Clara County in 2025 [3]

Area	Sub-Area	Cal. Year	Season	Veh_tech	EMFAC 2021 Category	Total Onroad Vehicle Gallons Consumed in Riverside County in 2025	Total Onroad Vehicle Miles Traveled in Riverside County in 2025	Total Passenger Vehicle Miles per Gallon in Riverside County in 2025
Sub-Areas	Riverside	2025	Annual	All Vehicles	All Vehicles	966,829,241	20,482,184,528	21.18

Sources:
[3]California Air Resource Board. 2021. EMFAC2021 Mobile Emissions Model.

Table 4. Total Gallons During Project Operations

Project Onroad Vehicle Daily Trips[3]	Estimated Miles per Trip[4]	Project Onroad Vehicle Daily Miles Traveled	Project Onroad Vehicle Daily Fuel Consumption	Project Onroad Vehicle Annual Fuel Consumption
5,752	5	28,760.00	1,357.57	**495,513**

Sources:
[3]K2 Traffic Engineering, Inc. (2020); [4]CalEEMod 2020.4.0