Appendices

A. Air Quality and Greenhouse Gas Emissions Background and Modeling Data

Appendices

This page intentionally left blank.

Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

Climate/Meteorology

SOUTH COAST AIR BASIN

The project site lies in the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of 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 (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, 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. The climatological station nearest to the project site that best represents the climatological conditions of the project area is the Los Angeles Downtown USC Campus Monitoring Station (ID 045115). The average low is reported at 48.3°F in January, and the average high is 83.1°F in August (WRCC 2018).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through 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. The historical rainfall average for the project area is 14.77 inches per year (WRCC 2018).

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. 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 2005).

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 somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in 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 months, 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 transport and diffusion of pollutants by inhibiting their eastward transport. 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 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (SCAQMD 2005).

Air Quality Regulations

The proposed project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The project site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (SCAQMD). However, SCAQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state

to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "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.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1 these pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.
Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
5 On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

CRITERIA AIR POLLUTANTS

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2018a). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2017a).

Volatile Organic Compounds (VOC) are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of ozone (O_3), SCAQMD has established a significance threshold for this pollutant (SCAQMD 2005).

Nitrogen Oxides (NO_x) are a byproduct of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm).

NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (SCAQMD 2005; USEPA 2018a). The SoCAB is designated as an attainment area for NO_2 under the National AAQS California AAQS (CARB 2017a).

Sulfur Dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2 (SCAQMD 2005; USEPA 2018a). When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS (CARB 2017a).

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (SCAQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (SCAQMD 2005). There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA or CARB have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3]

[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.
[2] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

(SCAQMD 2005; USEPA 2018a). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2017a).[4]

Ozone (O_3) is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2018a). The SoCAB is designated as extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2017a).

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAQMD 2005; USEPA 2018a). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[5] As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2017a). Because emissions of lead are found only in projects that are permitted by SCAQMD, lead is not a pollutant of concern for the project.

[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

[4] CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM_{10} standards during the period from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

[5] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

TOXIC AIR CONTAMINANTS

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below 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. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Community Risk

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

Multiple Airborne Toxics Exposure Study (MATES)

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update to the MATES study (MATES III). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the cancer risk (SCAQMD 2008a).

SCAQMD recently released the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources while 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period (SCAQMD 2015a).

The Office of Environmental Health Hazard Assessment (OEHHA) updated the guidelines for estimating cancer risks on March 6, 2015 (OEHHA 2015). The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the

assumptions on breathing rates and length of residential exposures. When combined together, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

Air Quality Management Planning

SCAQMD is the agency responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2016 AQMP

On March 3, 2017, SCAQMD adopted the 2016 AQMP as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031,
- 2012 National annual $PM_{2.5}$ standard by 2025[6],
- 2006 National 24-hour $PM_{2.5}$ standard by 2019,
- 1997 National 8-hour ozone standard by 2023, and the
- 1979 National 1-hour ozone standard by year 2022.

It is projected that total NO_X emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (SCAQMD 2017), which requires reducing NO_X emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard.

Reducing NO_X emissions would also reduce $PM_{2.5}$ concentrations in the SoCAB. However, as the goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, SCAQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard. A "moderate" non-attainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (SCAQMD 2017).

LEAD STATE IMPLEMENTATION PLAN

In 2008 EPA designated the Los Angeles County portion of the SoCAB nonattainment under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation.

[6] The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National $PM_{2.5}$ standard.

This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard. The rest of the SoCAB, outside the Los Angeles County nonattainment area remains in attainment of the new standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to EPA for approval.

AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

- **Attainment:** a pollutant is in attainment if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.

- **Nonattainment:** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.

- **Nonattainment/Transitional:** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 2. The SoCAB is designated in attainment of the California AAQS for sulfates. The SoCAB is designated as nonattainment for lead (Los Angeles County only) under the National AAQS.

Table 2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM_{10}	Serious Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment[1]
CO	Attainment	Attainment
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[2]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2017a.
[1] SCAQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under federal $PM_{2.5}$ standard.
[2] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

Existing Ambient Air Quality

Existing ambient air quality, historical trends, and projections in the vicinity of the project site are best documented by measurements made by SCAQMD. The project site is in Source Receptor Area (SRA) 1 – Central Los Angeles County. The air quality monitoring station closest to the project site is the Los Angeles – North Main Street Monitoring Station. This station monitors O_3, NO_2, PM_{10} and $PM_{2.5}$. Data for SO_2 and CO, was not available for any monitoring station within Los Angeles and Ventura Counties. The most current five years of data monitored at these stations are included in Table 3. The data show recurring violations of the federal $PM_{2.5}$ and standard. The federal and state 8-hr O_3 standard, the state PM_{10} standard, and the federal $PM_{2.5}$ standard were frequently exceeded in the last five years. The CO, NO_2, and SO_2 standards have not been violated in the last five years in the project vicinity.

Table 3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations				
	2013	2014	2015	2016	2017
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	3	2	2	6
State 8-hour ≥ 0.07 ppm (days exceed threshold)	1	6	3	2	0
Federal 8-Hour > 0.070 ppm (days exceed threshold)	0	6	6	4	14
Max. 1-Hour Conc. (ppm)	0.081	0.113	0.104	0.103	0.116
Max. 8-Hour Conc. (ppm)	0.069	0.094	0.074	0.078	0.086
Carbon Monoxide (CO) [1]					
State 8-Hour > 9.0 ppm (days exceed threshold)	*	*	*	*	*
Federal 8-Hour ≥ 9.0 ppm (days exceed threshold)	*	*	*	*	*
Max. 8-Hour Conc. (ppm)	*	*	*	*	*
Nitrogen Dioxide (NO_2) [1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	90.3	82.1	79.1	64.7	80.6
Sulfur Dioxide (SO_2)					
State 24-Hour ≥ 0.04 ppm (days exceed threshold)	*	*	*	*	*
Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)	*	*	*	*	*
Max 24-Hour Conc. (ppm)	*	*	*	*	*
Coarse Particulates (PM_{10}) [1]					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	20	38	30	21	40
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m^3)	57.0	66.0	73.0	64.0	64.6
Fine Particulates ($PM_{2.5}$) [2]					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	1	6	7	2	6
Max. 24-Hour Conc. (µg/m^3)	43.1	59.9	56.4	44.3	54.9

Source: CARB 2018a.
Notes: ppm = parts per million; ppb = parts per billion, µg/m^3 = micrograms per cubic meter
* Data not available.
[1] Data from the Los Angeles – North Main Street Monitoring Station

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the

enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. The nearest offsite receptors proximate to the edge of the construction zone are the single-family residences to the east and south at approximately 82 feet

Methodology

Projected construction-related air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. The calculated emissions of the project are compared to thresholds of significance for individual projects using the SCAQMD's CEQA Air Quality Analysis Guidance Handbook.

Thresholds of Significance

The analysis of the proposed project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD's website (SCAQMD 1993).[7] CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 4 lists SCAQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, SCAQMD has not developed thresholds for them.

[7] SCAQMD's Air Quality Significance Thresholds are current as of March 2015 and can be found here: http://www.aqmd.gov/ceqa/hdbk.html.

Table 4 SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day
Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Source: SCAQMD 2015b.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Linked to lower birth weight in newborns ($PM_{2.5}$) (SCAQMD 2015c)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (SCAQMD 2015d).

Mass emissions in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD prepares an AQMP that details regional programs to attain the AAQS.

CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hot spot analysis conducted for the attainment by SCAQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards. [8] As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a 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 (BAAQMD 2017).

LOCALIZED SIGNIFICANCE THRESHOLDS

SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 5.

Table 5 SCAQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO_2 Standard (CAAQS)	0.18 ppm
Annual NO_2 Standard (CAAQS)	0.03 ppm
24-Hour PM_{10} Standard – Construction (SCAQMD)[1]	10.4 µg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (SCAQMD)[1]	10.4 µg/m^3
24-Hour PM_{10} Standard – Operation (SCAQMD)[1]	2.5 µg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (SCAQMD)[1]	2.5 µg/m^3

Source: SCAQMD 2015b.
ppm – parts per million; µg/m^3 – micrograms per cubic meter
[1] Threshold is based on SCAQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

[8] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour (SCAQMD 2003).

To assist lead agencies, SCAQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These "screening-level" LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

LST analysis for construction is applicable to all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. In accordance with SCAQMD's LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use. The screening-level construction LSTs for the project site in SRA 1 are shown in Table 6 for receptors within 82 feet (25 meters).

Table 6 SCAQMD Screening-Level Construction Localized Significance Thresholds

	Threshold (lbs/day)[1]			
Acreage Disturbed	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
≤1.00 Acre Disturbed Per Day	74	680	5	3
1.00 Acres Disturbed Per Day	74	680	5	3
1.15 Acres Disturbed Per Day	79	735	5	3

Source: SCAQMD 2008b; SCAQMD 2011, Based on receptors in SRA 1.
[1] LSTs are based on receptors within 82 feet (25 meters).

The screening-level operational LSTs in SRA 1 are shown in Table 7.

Table 7 SCAQMD Screening-Level Operational Localized Significance Thresholds

Air Pollutant	Threshold (lbs/day) 1.15-Acre Operational LSTs
Nitrogen Oxides (NO_X)[1]	79
Carbon Monoxide (CO)[1]	735
Coarse Particulates (PM_{10})[2]	2
Fine Particulates ($PM_{2.5}$)[2]	1

Source: SCAQMD 2008b; SCAQMD 2011, Based on receptors in SRA 1.
[1] LSTs are based on sensitive receptors within 82 feet (25 meters).

HEALTH RISK THRESHOLDS

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions

Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 8 lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (Case No. S213478)*). CEQA does not require an analysis of the environmental effects of attracting development and people to an area. However, the environmental document must analyze the impacts of environmental hazards on future users, when a proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

Table 8 SCAQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Hazard Index (project increment)	≥ 1.0
Cancer Burden in areas ≥ 1 in 1 million	> 0.5 excess cancer cases

Source: SCAQMD 2015b.

GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,[9] carbon (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[10] The major GHG are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

    - *Chlorofluorocarbons (CFCs*) are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are also ozone-depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

[9] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop o rather than a primary cause of change.

[10] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017b). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

- ***Perfluorocarbons (PFCs)*** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with HFCs, to the ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high global warming potential.

- ***Sulfur Hexafluoride (SF6)*** is a colorless gas soluble in alcohol and ether, slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

- ***Hydrochlorofluorocarbons (HCFCs)*** contain hydrogen, fluorine, chlorine, and carbon atoms. Although ozone-depleting substances, they are less potent at destroying stratospheric ozone than CFCs. They have been introduced as temporary replacements for CFCs and are also GHGs.

- ***Hydrofluorocarbons (HFCs)*** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs (IPCC 2001; USEPA 2018b).

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 9. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Second Assessment Report GWP values for CH_4, a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 210 MT of CO_2.[11]

[11] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

Table 9 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298
Hydrofluorocarbons:				
HFC-23	264	270	11,700	14,800
HFC-32	5.6	4.9	650	675
HFC-125	32.6	29	2,800	3,500
HFC-134a	14.6	14	1,300	1,430
HFC-143a	48.3	52	3,800	4,470
HFC-152a	1.5	1.4	140	124
HFC-227ea	36.5	34.2	2,900	3,220
HFC-236fa	209	240	6,300	9,810
HFC-4310mee	17.1	15.9	1,300	1,030
Perfluoromethane: CF_4	50,000	50,000	6,500	7,390
Perfluoroethane: C_2F_6	10,000	10,000	9,200	12,200
Perfluorobutane: C_4F_{10}	2,600	NA	7,000	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	NA	7,400	9,300
Sulfur Hexafluoride (SF_6)	3,200	NA	23,900	22,800

Source: IPCC 1995; IPCC 2007.

Notes: The GWP values in the IPCC's Fifth Assessment Report (2013) reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, SCAQMD uses the AR4 GWP values to maintain consistency in statewide GHG emissions modeling. In addition, the 2014 Scoping Plan Update was based on the AR4 GWP values.

1 Based on 100-year time horizon of the GWP of the air pollutant relative to CO_2.

2 The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

California's Greenhouse Gas Sources and Relative Contribution

In 2018, the statewide GHG emissions inventory was updated for 2000 to 2016 emissions using the GWPs in IPCC's AR4.[12] Based on these GWPs, California produced 429.4 $MMTCO_2e$ GHG emissions in 2016. California's transportation sector was the single largest generator of GHG emissions, producing 40.5 percent of the state's total emissions. Industrial sector emissions made up 23.4 percent, and electric power generation made up 16.1 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (12.0 percent), agriculture and forestry (7.9 percent) and other (solvents and chemicals at 0.2 percent), (CARB 2018b).

California's GHG emissions have followed a declining trend since 2007. In 2016, emissions from routine GHG emitting activities statewide were 429 $MMTCO_2e$, 12 $MMTCO_2e$ lower than 2015 levels or 12 $MMTCO_2e$ lower than 2015 levels. This represents an overall decrease of 13 percent since peak levels in 2004

[12] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

and 2 $MMTCO_2e$ below the 1990 level and the state's 2020 GHG target. During the 2000 to 2016 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 $MTCO_2e$ per capita to 10.8 $MTCO_2e$ per capita in 2016, a 23 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 38 percent decline since the 2001 peak, while the state's GDP has grown 41 percent during this period (CARB 2018c).

Regulatory Settings

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements, but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast Air Quality Management District guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2 per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017–2025 that will require a fleet average of 54.5 miles per gallon in 2025. However, the EPA is reexamining the 2017-2025 emissions standards.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources also. However, the EPA is reviewing the Clean Power Plan under President Trump's Energy Independence Executive Order.

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-3-05, Executive Order B-30-15, Assembly Bill 32, and Senate Bill 375.

Executive Order S-3-05

Executive Order S-3-05, signed June 1, 2005. Executive Order S-3-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. The *2008 Scoping Plan* identified that GHG emissions in California are anticipated to be approximately 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan was adopted at the May 22, 2014, board hearing. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and

the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan Update

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017c).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and

other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydroflurocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the State's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population)—consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the business-as-usual (BAU) yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit, as shown in Table 10. It includes the existing renewables requirements, advanced clean cars, the "10 percent" Low Carbon Fuel Standard (LCFS), and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 10 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	**260**
Gap to 2030 Target	**60**

Source: CARB 2017c.

Table 11 provides estimated GHG emissions by sector, compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

Table 11 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	**431**	**260**	**-40%**

Source: CARB 2017c.
Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH_4. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030, as specified. The bill also establishes targets for reducing organic waste in landfill. On March 14, 2017, CARB adopted the "Final Proposed Short-Lived Climate Pollutant Reduction Strategy," which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s despite the tripling of diesel fuel use (CARB 2017b). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. SCAQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these char broilers by over 80 percent (CARB 2017b). Additionally, SCAQMD Rule 445 limits installation of new fireplaces in the SoCAB.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 $MMTCO_2e$ of reductions by 2020 and 15 $MMTCO_2e$ of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035, translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs. As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 $MMTCO_2e$ in 2035 compared to the current targets. For the next round of SCS updates, CARB's updated targets for the SCAG region are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018b). CARB anticipates adoption of the updated targets and methodology in 2018 and subsequent SCSs adopted afterwards would be subject to these new targets.

SCAG's 2016-2040 RTP/SCS

SB 375 requires each MPO to prepare an SCS in their regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016, and is an update to the 2012 RTP/SCS (SCAG 2016). In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

The 2016-2040 RTP/SCS projects that the SCAG region will meet or exceed the passenger per capita targets set in 2010 by CARB. It is projected that VMT per capita in the region for year 2040 would be reduced by 7.4 percent with implementation of the 2016-2040 RTP/SCS compared to a no-plan year 2040 scenario. Under the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions 8 percent below 2005 levels by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent increase in reduction compared to the 2012 RTP/SCS projection. Overall, the SCS is meant to provide growth strategies that will achieve the aforementioned regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016). However, the SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and was anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the RPS established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar,

geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects, because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon), was signed into law in September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Executive Order B-55-18 and SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25 percent of retail sales are required to be from renewable sources by December 31, 2016, 33 percent by December 31, 2020, 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030. SB 100 raises California's RPS requirement to 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030.

In addition to targets under AB 32 and SB32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency, CalEPA, the Department of Food ang Agriculture, and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, go into effect starting January 1, 2020.

The 2016 Standards continues to improve upon the previous 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015a). Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the prior 2008

standards as a result of better windows, insulation, lighting, ventilation systems, and other features. While the 2016 standards do not achieve zero net energy, they do get very close to the state's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve zero net energy for newly constructed residential buildings throughout California (CEC 2015b).

The 2019 standards move towards cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multi-family buildings of 3 stories and less. Four key areas the 2019 standards will focus on include 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards while single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[13] The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2016. The 2016 CALGreen became effective on January 1, 2017. The CEC adopted the 2019 CALGreen on May 9, 2018. The 2019 CALGreen standards become effective January 1, 2020.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California's Integrated Waste Management Act of 1989 (AB 939; Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

[13] The green building standards became mandatory in the 2010 edition of the code.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

The California Solid Waste Reuse and Recycling Access Act (AB 1327; Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2016 CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

In October of 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the 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 an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[14]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD has convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) held in September 2010, SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010):

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD is proposing a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types or the following land-use-specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, or 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

  The SCAQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses

[14] The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

and 6.6 $MTCO_2e$/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.[15] The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[16] If a proposed project's horizon year is beyond year 2020, the efficiency target would need to be adjusted based on the mid-term GHG reduction target of SB 32, which establishes a target of 40 percent below 1990 levels by 2030, and the long-term reduction goal of Executive Order S-03-05, which sets a goal of 80 percent below 1990 levels by 2050.

POST-2020 EFFICIENCY THRESHOLDS

For projects that would be implemented beyond year 2020, the efficiency targets have been adjusted based on the GHG reduction targets of SB 32. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 as established under SB 32. While the State has identified additional GHG reduction goal for year 2050 (Executive Order S-03-05), because buildout of the proposed project would occur by 2030, the applicable threshold is based on the GHG reduction target for the buildout year of the proposed project (2022) and the legislative target under SB 32. As shown in Table 12 using the latest land use emissions inventory developed for the 2017 Scoping Plan, the estimated 2030 GHG project-level efficiency target would be 3.2 $MTCO_2e$ per service population per year ($MTCO_2e$/SP/yr). The estimated 2022 (project opening year) GHG project-level efficiency target would be 4.7 $MTCO_2e$/SP/yr).

Table 12 Post-2020 Project-Level GHG Reduction Targets

GHG Sector[1]	Scoping Plan Scenario GHG Emissions $MMTCO_2e$
Emissions Inventory	
Year 2020 Emissions Inventory[2]	287
Year 2030 Emissions Inventory	191
Forecasted Year 2022 Emissions Inventory[3]	268
2022 Project-Level Efficiency Target	
2022 Population[4]	41,321,565
2022 Employment[5]	15,308,902
2022 Service Population	56,630,467
2022 Efficiency Target	**4.7 $MTCO_2e$/SP**
2030 Project-Level Efficiency Target	
2030 Population[4]	43,939,250
2030 Employment[5]	16,454,761
2030 Service Population	60,394,011

[15] It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.
[16] SCAQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

Table 12 Post-2020 Project-Level GHG Reduction Targets

2030 Efficiency Target	3.2 $MTCO_2e$/SP

Sources:
[1] CARB 2017c.
[2] CARB 2007.
[3] Forecast based on year 2020 and year 2030 project-level emissions inventories.
[4] CDOF 2018.
[5] Caltrans 2017.

The proposed project has an anticipated buildout year beyond 2020. SCAQMD's bright-line threshold of 3,000 $MTCO_2e$ per year is used as screening criteria to determine if additional analysis of project-related emissions exceed the year 2022 efficiency metric of 4.7 $MTCO_2e$/SP/yr. If the project operation-phase emissions exceed the bright-line and efficiency targets, GHG emissions would be considered potentially significant in the absence of mitigation measures.

BIBLIOGRAPHY

Bay Area Air Quality Management District (BAAQMD). 2017, May. California Environmental Quality Act Air Quality Guidelines.

California Air Pollution Control Officers Association (CAPCOA). 2017. California Emissions Estimator Model (CalEEMod). Version 2016.3.2. Prepared by: BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts.

California Air Resources Board (CARB). 1998, April 22. The Report on Diesel Exhaust. http://www.arb.ca.gov/toxics/dieseltac/de-fnds.htm.

———. 1999. California Air Resources Board (CARB). Final Staff Report: Update to the Toxic Air Contaminant List.

———. 2005, April. Air Quality and Land Use Handbook: A Community Health Perspective. https://www.arb.ca.gov/ch/handbook.pdf

———. 2007, November. California Air Resources Board 1990 Inventory. California Greenhouse Gas Inventory (millions of metric tonnes of CO_2 equivalent) — Summary by Economic Sector. https://www.arb.ca.gov/cc/inventory/1990level/1990data.htm.

———. 2008, October. Climate Change Proposed Scoping Plan, a Framework for Change.

———. 2010, August. Staff Report Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375.

———. 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

———. 2016, October 1. Ambient Air Quality Standards. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

———. 2017a, May 5. Area Designations Maps/State and National. Accessed May 15, 2018. http://www.arb.ca.gov/desig/desig.htm.

———. 2017b, March 14. Final Proposed Short-Lived Climate Pollutant Reduction Strategy. https://www.arb.ca.gov/cc/shortlived/shortlived.htm.

———. 2017c, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

———. 2018a. Air Pollution Data Monitoring Cards (2013, 2014, 2015, 2016, 2017). Accessed September 14, 2018. http://www.arb.ca.gov/adam/topfour/topfour1.php.

———. 2018b, February. Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. https://www.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf.

———.2018c, July 11. 2018 Edition California Greenhouse Gas Inventory for 2000-2016: By Category as Defined in the 2008 Scoping Plan. https://www.arb.ca.gov/cc/inventory/data/data.htm.

California Department of Finance (CDOF). 2018, March 8. Report P-1 (County): State and County Total Population Projections, 2010-2060 (1 -year increments). http://www.dof.ca.gov/Forecasting/Demographics/Projections/.

California Department of Transportation (Caltrans). 2017. Long-Term Socio-Economic Forecasts by County. http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic.html.

California Energy Commission (CEC). 2015a, June 10. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents.

———.2015b. 2016 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

———.2018a. News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. http://www.energy.ca.gov/releases/2018_releases/2018-05-09_building_standards_adopted_nr.html.

———.2018b. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf.

Intergovernmental Panel on Climate Change (IPCC). 1995. Second Assessment Report: Climate Change 1995.

———. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press.

———. 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press.

———. 2013. Fifth Assessment Report: Climate Change 2013. New York: Cambridge University Press.

Office of Environmental Health Hazard Assessment (OEHHA). 2015, February. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

South Coast Air Quality Management District (SCAQMD). 1992. Federal Attainment Plan for Carbon Monoxide.

———. 1993. California Environmental Quality Act Air Quality Handbook.

———. 2003 Air Quality Management Plan. Appendix V, available at https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp.

———. 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. http://www.aqmd.gov/home/library/documents-support-material/planning-guidance/guidance-document.

———. 2008a, September. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III). http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iii.

———. 2008b, July. Final Localized Significance Threshold Methodology. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

———. 2010, September 28. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 15. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf.

———. 2011. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

———. 2012, May 4. Final 2012 Lead State Implementation Plan: Los Angeles County. http://www3.aqmd.gov/hb/attachments/2011-2015/2012May/2012-May4-030.pdf.

———. 2013, February. Final 2012 Air Quality Management Plan. http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

———. 2015a, October 3. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV). http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv.

———. 2015b, March (revised). SCAQMD Air Quality Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.

———. 2015c. Health Effects of Air Pollution. http://www.aqmd.gov/home/library/public-information/publications.

———. 2015d, October. "Blueprint for Clean Air: 2016 AQMP White Paper." 2016 AQMP White Papers Web Page. http://www.aqmd.gov/home/about/groups-committees/aqmp-advisory-group/2016-aqmp-white-papers.

———. 2017, March 4. Final 2016 Air Quality Management Plan. http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp

Southern California Association of Governments (SCAG). 2016, April. The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): A Plan for Mobility, Accessibility, Sustainability, and a High Quality of Life. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.

US Environmental Protection Agency (USEPA). 2009, December. EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity. http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252.

———. 2018a. Criteria Air Pollutants. Accessed May 15, 2018. https://www.epa.gov/criteria-air-pollutants.

———. 2018b. Overview of Greenhouse Gases. Accessed May 15, 2018. http://www3.epa.gov/climatechange/ghgemissions/gases.html.

Western Regional Climate Center (WRCC). 2018. Western U.S. Climate Historical Summaries. Glendale Stapenhorst Monitoring Station (ID No. 045115). Accessed October 25, 2018. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5115

CalEEMod Inputs (Construction Run)

Name:	Bright Star Rise Kohyang High School
Project Number:	BSS-09
Project Location:	3464, 3470, 3478, and 3500 W. 1st St; 115 and 119 S. Madison Avenue Los Angeles
County/Air Basin:	Los Angeles
Climate Zone:	11
Land Use Setting:	Urban
Operational Year:	2022
Utility Company:	LA Dept Water and Power
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	1

Proiect Site Acreage	1.15
Disturbed Site Acreage	1.15

Land Use	SQFT
Building 1st Floor	30,317
Building 2nd Floor	18,008
Parking Garage	28,061
Turf Area	12,000
	88,386

CalEEMod Land Use Inputs -- Construction

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
High School	Educational	High School	48.3	1000sqft	0.51	48,325
Parking	Parking	Enclosed Parking Garage with Elevator	28.06	1000sqft	0.64	28,061
Turf Area	Parking	Other Non-Asphalt Surfaces	12.0	1000sqft	0.00	0
					1.15	

Demolition Data*

Component	Amount to be Demolished (Tons)*	Haul Truck Capacity (tons)	Haul Distance (miles)	Total Trip Ends	Trip Ends/ day	Duration (days)
Asphalt Demo*	316	20	20	32	2	24
Building Demo**	862	20	20	86	3	24
Total	1,178			**118**		

**Based on aerial image of existing project site.*
***Based on square footage provided by the applicant*

Soil Haul

	Total Volume (CY)*	Haul Truck Capacity (CY)**	Haul Distance (miles)**	Total Trip Ends	Total Days	Trip Ends/Day
Import	900	16	20	**113**	38	3
Export	8,700	16	20	**1,088**	38	29
				1,200		

**Provided by the Applicant.*
***CalEEMod Default*

Architectural Coating

SCAQMD Rule 1113

Interior Paint VOC content:	100
Exterior Paint VOC content:	100

Non-Residential Architectural Coating

Percentage of Buildings' Interior Painted:	100%
Percentage of Buildings' Exterior Painted:	100%

Non-Residential Structures	Land Use Square Feet	CalEEMod Application Factor	Total Paintable Surface Area[2]	Paintable Interior Area[1]	Paintable Exterior Area[1]
High School	48,325	2.0	96,650	72,488	24,163
Parking Striping	28,061	0.06	1684	0	1,684

Notes:

1 *CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a stadium (i.e., striping), in which 6% of surface area is painted.

2 ** Applied CalEEMod Methodology in calculating total

Construction - Unmitigated Run

SCAQMD Rule 403

Replace Ground Cover	PM10:	5	% Reduction
	PM25:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph

SCAQMD Rule 1186

Clean Paved Road		9	% PM Reduction

CalEEMod Construction Phase Inputs*

5-Day Work Week/8 hours per day

CalEEMod Default

Phase Name	Phase Type	Start Date	End Date	CalEEMod Total Days	Portion of Construction Schedule	Portion of Construction Schedule for 24 month phase	Check
Demolition	Demolition	8/1/2019	8/28/2019	20	5%	24	5%
Asphalt & Concrete Demolit	Demolition	8/29/2019	9/25/2019	20	5%	24	5%
Rough Grading	Grading	9/26/2019	11/6/2019	30	7%	36	7%
Excavation	*Grading*	9/26/2019	11/6/2019	31	7%	38	7%
Utility Trenching	Trenching	11/9/2019	1/1/2020	40	9%	48	9%
Fine Grading	Grading	1/2/2020	2/12/2020	30	7%	36	7%
Building Construction	Building Construction	2/13/2020	11/18/2020	200	46%	242	46%
Paving	Paving	11/19/2020	12/2/2020	10	2%	12	2%
Architectural Coating	Architectural Coating	12/3/2020	12/16/2020	10	2%	12	2%
Finishing/Landscaping	Site Preparation	12/17/2020	2/10/2021	40	9%	48	9%
				431	100%	522	100%

Adjusted Phasing for 24 month phasing

Phase Name	Phase Type	Start Date	End Date	CalEEMod Total Days	Check
Demolition	Demolition	7/1/2020	8/3/2020	24	4%
Asphalt & Concrete Demolit	Demolition	8/4/2020	9/6/2020	24	4%
Rough Grading	Grading	9/7/2020	10/28/2020	38	7%
Excavation	*Grading*	*9/7/2020*	*10/28/2020*	*38*	*7%*
Utility Trenching	Trenching	10/29/2020	1/8/2021	52	9%
Fine Grading	Grading	1/11/2021	3/4/2021	39	7%
Building Construction	Building Construction	3/5/2021	3/4/2022	261	47%
Paving	Paving	3/7/2022	3/23/2022	13	2%
Architectural Coating	Architectural Coating	3/24/2022	4/11/2022	13	2%
Finishing/Landscaping	Site Preparation	4/12/2022	6/22/2022	52	9%
				554	100%

*Based on overall construction schedule of 24 months provided by the Applicant, CalEEMod default phase lengths were normalized to meet 24 month period

CalEEMod Construction Off-Road Equipment Inputs*

*Client verified equipment list on data request. Similar CalEEMod equipment types were selected based on data request.

Applicant Equipment Type	CalEEMod Equipment Type	Unit Amount	Hours /Day	Tier Rating
Building Demolition				
Loader (CAT)	Tractors/Loaders/Backhoes	1	8	4
Dump Truck		0	8	4
Skip Loader	Tractors/Loaders/Backhoes	1	8	4
Worker Trips		5		
Vendors Trips[3,4]		6		
Hauling Trips		85		
Asphalt and Concrete Demolition				
Loader (CAT)	Tractors/Loaders/Backhoes	1	8	4
Dump Truck		0	8	4
Skip Loader	Tractors/Loaders/Backhoes	1	8	4
Worker Trips		5		
Vendors Trips[4]		4		
Hauling Trips		31		
Rough Grading				
Skip Loader	Tractors/Loaders/Backhoes	2	8	4
Loader (CAT)	Tractors/Loaders/Backhoes	1	8	4
Dump Truck		0	8	4
Worker Trips		8		
Vendors Trips[3,4]		6		
Hauling Trips		0		
Excavation				
Pile Driver/Drill	Bore/Drill Rigs	1	8	4
Worker Trips		3		
Vendors Trips		0		
Hauling Trips		1,200		
Utility Trenching				
Backhoe	Tractors/Loaders/Backhoes	1	8	4
Worker Trips		3		
Vendors Trips		0		
Hauling Trips		0		
Fine Grading				
Skip Loader	Tractors/Loaders/Backhoes	2	8	4
Worker Trips		5		
Vendor Trips[3]		2		
Hauling Trips		0		

Building Construction				
Concrete Trucks[2]		2	8	4
Mixer/Reach All	Cement and Mortar Mixers	1	8	4
Pump (concrete masonry)	Pumps	1	8	3
Crane (steel)	Crane	1	8	3
Reachall (Roof)	Aerial Lift	1	8	4
Worker Trips		32		
Vendor Trips[2]		15		
Hauling Trips		0		
Paving				
Dump Truck		2	8	4
Paving Machine	Paving Equipment	1	8	3
Skid Steer	Tractors/Loaders/Backhoes	1	8	4
Worker Trips		5		
Vendor Trips[2,4]		6		
Hauling Trips		0		
Architectural Coating				
Air Compressors	Air Compressors	1		
Worker Trips		6		
Vendor Trips		0		
Hauling Trips		0		
Finishing/Landscaping				
Skip Loader	Tractors/Loaders/Backhoes	2	8	4
Skid Steer	Tractors/Loaders/Backhoes	1	8	4
Worker Trips		8		
Vendor Trips		0		
Hauling Trips		0		

[1]CalEEMod default approved by Applicant.
[2]Assume 2 vendor trips for concrete trucks.
[3]Assume 2 vendor trips for water trucks.
[4]Assume 4 vendor trips for dump trucks.

Pavement Volume to Weight Conversion

Component	Total SF of Area[1]	Assumed Thickness (foot)[2]	Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf)[3]	AC Mass (lbs)	AC Mass (tons)
Asphalt	21,330	0.333	7,110	89	632,000	316.00

[1] Based on aerial image of existing project site.

[2] Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Conneticut Cooperative Extension System, 1999.

[3] https://www.calrecycle.ca.gov/swfacilities/cdi/Tools/Calculations

Demo Haul Trip Calculation

*Conversion factors**

0.046	ton/SF
1.2641662	tons/cy
20	tons
15.820705	CY
0.7910352	CY/ton

Building Demoltion Haul Trips (BSF and Haul Truck (CY) given)

BSF Demo	Tons/SF	Tons	Haul Truck (CY)	Haul Truck (Ton)	Round Trips	Total Trip Ends
18,740	0.046	862.04	16	20.00	43	86

*CalEEMod User's Guide Version 2016.3.2, Appendix A

CalEEMod Inputs (Operation Run)

Name:	Bright Star Rise Kohyang High School
Project Number:	BSS-09
Project Location:	3464, 3470, 3478, and 3500 W. 1st St; 115 and 119 S. Madison Avenue Los Angeles
County/Air Basin:	Los Angeles
Climate Zone:	11
Land Use Setting:	Urban
Operational Year:	2020
Utility Company:	LA Dept Water and Power
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	1

Project Site Acreage	1.15	**Students**	600
Disturbed Site Acreage	1.15	**Staff**	75

Land Use	SQFT
Building 1st Floor	30,317
Building 2nd Floor	18,008
Parking Garage	28,061
Turf Area	12,000
	88,386

CalEEMod Land Use Inputs -- Operation

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
High School	Educational	High School	48.3	1000sqft	0.23	48,325
Parking	Parking	Enclosed Parking Garage with Elevator	28.06	1000sqft	0.64	28,061
Turf Area	Parking	Other Non-Asphalt Surfaces	12.0	1000sqft	0.28	0
					1.15	

Trip Generation

Residential	Weekday	
Trip Generation*	999	Average Daily Trips (ADT)

Land Use	Calculated Weekday Trip Rate	ITE Weekday Trip Rate**
Charter Elementary School	20.67	1.65

*Consistent with Transportation/Traffic Section. Transit stops located near project location resulting in a 10% reduction in trip generation. Existing church also results in a trip reduction.

**ITE Trip Generation Manul 10th Edition. No trip generation rate for a charter high school provided in ITE Trip Generation Manual 10th Edition for Land Use 537, charter elementary school rates used instead.

	Weekday	
Daily Trips:	12,404	
Primary Trips	100	%
Diverted Trips	0	%
Pass-by Trips	0	%

Water Use

	Acreage	Wastewater Generation (gals/acre/yr)*	Wastewater Generation (gals/acre /yr)
Turf Area	0.28	1,191,481	328,232

Septic Tank	0%
Aerobic	100%
Facultative Lagoons	0%

** Source: California Air Pollution Control Officers Association, 2017, California Emissions Estimator Model Version 2016.3.2 User's Guide, Appendix D. Based on CalEEMod city park land use subtype*

Solid Waste

No new solid waste generation.

Water Mitigation

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

CalEEMod Inputs (Operation Run)

Name:	Bright Star Rise Kohyang High School
Project Number:	BSS-09
Project Location:	3464, 3470, 3478, and 3500 W. 1st St; 115 and 119 S. Madison Avenue Los Angeles
County/Air Basin:	Los Angeles
Climate Zone:	11
Land Use Setting:	Urban
Operational Year:	2018, 2022
Utility Company:	LA Dept Water and Power
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	2

Project Site Acreage	1.15
Disturbed Site Acreage	1.15

Land Use	SQFT
Church	18,740
Parking Lot[1]	21,330
	40,070

CalEEMod Land Use Inputs -- Operation

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
Church	Educational	Place of Worship	18.7	1000sqft	0.66	18,740
Parking Lot[1]	Parking	Parking Lot	21.33	1000sqft	0.49	21,330
					1.15	

[1] Based on aerial image of existing project site.

Trip Generation

Residential	Weekday	
Trip Generation*	130	Average Daily Trips (ADT)

Land Use	Calculated Weekday Trip Rate	ITE Weekday Trip Rate**	Adjusted Saturday Trip Rate	ITE Saturday Trip Rate[2]	Adjusted Sunday Trip Rate	ITE Sunday Trip Rate[2]
Church	6.94	6.95	5.379	5.99	27.575	27.63

[1] *Consistent with Transportation/Traffic Section.*

[2] *ITE Trip Generation Manul 10th Edition.*

	Weekday	Saturday	Sunday
Daily Trips:	130	112	517
	Weekday	**Saturday**	**Sunday**
Trip rate	6.94	5.98	27.58

Primary Trips	100	%
Diverted Trips	0	%
Pass-by Trips	0	%

Water Use

CalEEMod Defaults Used

Septic Tank	0%
Aerobic	100%
Facultative Lagoons	0%

** Source: California Air Pollution Control Officers Association, 2017, California Emissions Estimator Model Version 2016.3.2 User's Guide, Appendix D. Based on CalEEMod city park land use subtype*

Solid Waste

CalEEMod Defaults Used

Water Mitigation

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

Changes to the CalEEMod Defaults - Fleet Mix 2022

Trips 12,404

Default	LDA		LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.5465	0.04496	0.20402	0.12036	0.01574	0.0062	0.02013	0.03068	0.00252	0.0022	0.00514	0.00069	0.00088	100%
Trips	6,779	558	2,531	1,493	195	77	250	381	31	27	64	9	11	12404
Percent	80%			12%	8%									100%
without buses/MH	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0	0	0.005142	0.000687	0	99%
Percent	80%			12%	7%									99%
Adjusted without buses/MH	0.546501	0.044961	0.204016	0.120355	0.016939	0.006668	0.021664	0.033014	0.000000	0.000000	0.005534	0.000739	0.000000	
Percent check	80%			12%	8%									100%
Assumed Mix	97.0%			2.00%	1.00%									100%
adjusted with Assumed	**0.661796**	**0.054446**	**0.247057**	**0.020000**	**0.002143**	**0.000844**	**0.002741**	**0.004178**	**0.000000**	**0.000000**	**0.006701**	**0.000094**	**0.000000**	**100%**
Trips	8,209	675	3,064	248	27	10	34	52	0	0	83	1	0	12404
Percent check	97%			2%	1%									
Check	*12,032*			*248*	*124*									

Fleet mix for the project is modified to reflect a higher proportion of passenger vehicles than the regional VMT.

Changes to the CalEEMod Defaults - Fleet Mix 2018

Trips 130

Default	LDA		LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.54797	0.04613	0.19933	0.1256	0.0177	0.00595	0.01836	0.02762	0.00234	0.00258	0.0048	0.00067	0.00094	100%
Trips	71	6	26	16	2	1	2	4	0	0	1	0	0	130
Percent	80%			13%	8%									100%
without buses/MH	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0	0	0.004804	0.000667	0	99%
Percent	80%			13%	7%									99%
Adjusted without buses/MH	0.547972	0.046127	0.199330	0.125604	0.019174	0.006450	0.019893	0.029923	0.000000	0.000000	0.005205	0.000723	0.000000	
Percent check	80%			13%	8%									100%
Assumed Mix	97.0%			2.00%	1.00%									100%
adjusted with Assumed	**0.665552**	**0.056025**	**0.242101**	**0.020000**	**0.002518**	**0.000847**	**0.002612**	**0.003929**	**0.000000**	**0.000000**	**0.006322**	**0.000095**	**0.000000**	**100%**
Trips	87	7	31	3	0	0	0	1	0	0	1	0	0	130
Percent check	97%			2%	1%									
Check	*126*			*3*	*1*									

Fleet mix for the project is modified to reflect a higher proportion of passenger vehicles than the regional VMT.

BSS-09 Existing Operation 2018

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	18.70	1000sqft	0.43	18,700.00	0
Parking Lot	21.33	1000sqft	0.49	21,330.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Refer to CalEEMod inputs.

Energy Use - Using historical energy data.

Water And Wastewater - Refer to CalEEMod inputs.

Water Mitigation -

Fleet Mix - Refert to CalEEMod inputs FleetMix 2018.

Table Name	Column Name	Default Value	New Value

tblFleetMix	HHD	0.03	3.9290e-003
tblFleetMix	LDA	0.55	0.67
tblFleetMix	LDT1	0.05	0.06
tblFleetMix	LDT2	0.20	0.24
tblFleetMix	LHD1	0.02	2.5180e-003
tblFleetMix	LHD2	5.9530e-003	8.4700e-004
tblFleetMix	MCY	4.8040e-003	6.3220e-003
tblFleetMix	MDV	0.13	0.02
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MHD	0.02	2.6120e-003
tblFleetMix	OBUS	2.3410e-003	0.00
tblFleetMix	SBUS	6.6700e-004	9.5000e-005
tblFleetMix	UBUS	2.5830e-003	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	ST_TR	10.37	5.98
tblVehicleTrips	SU_TR	36.63	27.58
tblVehicleTrips	WD_TR	9.11	6.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.2 Overall Operational

Unmitigated Operational

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

Area	0.0780	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Energy	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	160.8192	160.8192	3.7100e-003	1.0500e-003	161.2254
Mobile	0.0666	0.1151	0.9109	2.2800e-003	0.2061	1.8900e-003	0.2080	0.0548	1.7500e-003	0.0565	0.0000	206.6696	206.6696	8.6200e-003	0.0000	206.8852
Waste						0.0000	0.0000		0.0000	0.0000	21.6368	0.0000	21.6368	1.2787	0.0000	53.6043
Water						0.0000	0.0000		0.0000	0.0000	0.2070	9.9062	10.1132	9.5000e-004	5.0000e-004	10.2854
Total	**0.1466**	**0.1333**	**0.9267**	**2.3900e-003**	**0.2061**	**3.2700e-003**	**0.2094**	**0.0548**	**3.1300e-003**	**0.0579**	**21.8438**	**377.3960**	**399.2398**	**1.2920**	**1.5500e-003**	**432.0013**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0780	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Energy	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	160.8192	160.8192	3.7100e-003	1.0500e-003	161.2254
Mobile	0.0666	0.1151	0.9109	2.2800e-003	0.2061	1.8900e-003	0.2080	0.0548	1.7500e-003	0.0565	0.0000	206.6696	206.6696	8.6200e-003	0.0000	206.8852
Waste						0.0000	0.0000		0.0000	0.0000	21.6368	0.0000	21.6368	1.2787	0.0000	53.6043
Water						0.0000	0.0000		0.0000	0.0000	0.2070	9.9062	10.1132	9.5000e-004	5.0000e-004	10.2854
Total	**0.1466**	**0.1333**	**0.9267**	**2.3900e-003**	**0.2061**	**3.2700e-003**	**0.2094**	**0.0548**	**3.1300e-003**	**0.0579**	**21.8438**	**377.3960**	**399.2398**	**1.2920**	**1.5500e-003**	**432.0013**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0666	0.1151	0.9109	2.2800e-003	0.2061	1.8900e-003	0.2080	0.0548	1.7500e-003	0.0565	0.0000	206.6696	206.6696	8.6200e-003	0.0000	206.8852
Unmitigated	0.0666	0.1151	0.9109	2.2800e-003	0.2061	1.8900e-003	0.2080	0.0548	1.7500e-003	0.0565	0.0000	206.6696	206.6696	8.6200e-003	0.0000	206.8852

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	129.78	111.83	515.75	552,580	552,580
Total	129.78	111.83	515.75	552,580	552,580

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Place of Worship	0.665552	0.056025	0.242101	0.020000	0.002518	0.000847	0.002612	0.003929	0.000000	0.000000	0.006322	0.000095	0.000000

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.0608	141.0608	3.3300e-003	6.9000e-004	141.3495
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.0608	141.0608	3.3300e-003	6.9000e-004	141.3495
NaturalGas Mitigated	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759
NaturalGas Unmitigated	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	370260	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759
Total		**2.0000e-003**	**0.0182**	**0.0153**	**1.1000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**19.7585**	**19.7585**	**3.8000e-004**	**3.6000e-004**	**19.8759**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	370260	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759
Total		**2.0000e-003**	**0.0182**	**0.0153**	**1.1000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**19.7585**	**19.7585**	**3.8000e-004**	**3.6000e-004**	**19.8759**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	18770.4	10.4544	2.5000e-004	5.0000e-005	10.4758
Place of Worship	234498	130.6064	3.0800e-003	6.4000e-004	130.8737
Total		**141.0608**	**3.3300e-003**	**6.9000e-004**	**141.3495**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	18770.4	10.4544	2.5000e-004	5.0000e-005	10.4758
Place of Worship	234498	130.6064	3.0800e-003	6.4000e-004	130.8737
Total		**141.0608**	**3.3300e-003**	**6.9000e-004**	**141.3495**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0780	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Unmitigated	0.0780	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Total	**0.0780**	**0.0000**	**5.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.9000e-004**	**9.9000e-004**	**0.0000**	**0.0000**	**1.0600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Total	**0.0780**	**0.0000**	**5.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.9000e-004**	**9.9000e-004**	**0.0000**	**0.0000**	**1.0600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.1132	9.5000e-004	5.0000e-004	10.2854
Unmitigated	10.1132	9.5000e-004	5.0000e-004	10.2854

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.585103 / 0.91516	10.1132	9.5000e-004	5.0000e-004	10.2854
Total		**10.1132**	**9.5000e-004**	**5.0000e-004**	**10.2854**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.585103 / 0.91516	10.1132	9.5000e-004	5.0000e-004	10.2854
Total		**10.1132**	**9.5000e-004**	**5.0000e-004**	**10.2854**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.6368	1.2787	0.0000	53.6043
Unmitigated	21.6368	1.2787	0.0000	53.6043

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	106.59	21.6368	1.2787	0.0000	53.6043
Total		**21.6368**	**1.2787**	**0.0000**	**53.6043**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	106.59	21.6368	1.2787	0.0000	53.6043
Total		**21.6368**	**1.2787**	**0.0000**	**53.6043**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BSS-09 Existing Operation 2018

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	18.70	1000sqft	0.43	18,700.00	0
Parking Lot	21.33	1000sqft	0.49	21,330.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Refer to CalEEMod inputs.

Energy Use - Using historical energy data.

Water And Wastewater - Refer to CalEEMod inputs.

Water Mitigation -

Fleet Mix - Refert to CalEEMod inputs FleetMix 2018.

Table Name	Column Name	Default Value	New Value

tblFleetMix	HHD	0.03	3.9290e-003
tblFleetMix	LDA	0.55	0.67
tblFleetMix	LDT1	0.05	0.06
tblFleetMix	LDT2	0.20	0.24
tblFleetMix	LHD1	0.02	2.5180e-003
tblFleetMix	LHD2	5.9530e-003	8.4700e-004
tblFleetMix	MCY	4.8040e-003	6.3220e-003
tblFleetMix	MDV	0.13	0.02
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MHD	0.02	2.6120e-003
tblFleetMix	OBUS	2.3410e-003	0.00
tblFleetMix	SBUS	6.6700e-004	9.5000e-005
tblFleetMix	UBUS	2.5830e-003	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	ST_TR	10.37	5.98
tblVehicleTrips	SU_TR	36.63	27.58
tblVehicleTrips	WD_TR	9.11	6.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.2767	0.4110	3.6997	9.3300e-003	0.8220	7.4100e-003	0.8294	0.2180	6.8600e-003	0.2249		930.4205	930.4205	0.0379		931.3686
Total	**0.7150**	**0.5105**	**3.7873**	**9.9300e-003**	**0.8220**	**0.0150**	**0.8369**	**0.2180**	**0.0144**	**0.2325**		**1,049.7717**	**1,049.7717**	**0.0402**	**2.1900e-003**	**1,051.4296**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.2767	0.4110	3.6997	9.3300e-003	0.8220	7.4100e-003	0.8294	0.2180	6.8600e-003	0.2249		930.4205	930.4205	0.0379		931.3686
Total	**0.7150**	**0.5105**	**3.7873**	**9.9300e-003**	**0.8220**	**0.0150**	**0.8369**	**0.2180**	**0.0144**	**0.2325**		**1,049.7717**	**1,049.7717**	**0.0402**	**2.1900e-003**	**1,051.4296**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2767	0.4110	3.6997	9.3300e-003	0.8220	7.4100e-003	0.8294	0.2180	6.8600e-003	0.2249		930.4205	930.4205	0.0379		931.3686
Unmitigated	0.2767	0.4110	3.6997	9.3300e-003	0.8220	7.4100e-003	0.8294	0.2180	6.8600e-003	0.2249		930.4205	930.4205	0.0379		931.3686

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	129.78	111.83	515.75	552,580	552,580
Total	129.78	111.83	515.75	552,580	552,580

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Place of Worship	0.665552	0.056025	0.242101	0.020000	0.002518	0.000847	0.002612	0.003929	0.000000	0.000000	0.006322	0.000095	0.000000

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
NaturalGas Unmitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1014.41	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.01441	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Unmitigated	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-004	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Total	**0.4273**	**4.0000e-005**	**4.1400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-004	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Total	**0.4273**	**4.0000e-005**	**4.1400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BSS-09 Existing Operation 2018

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	18.70	1000sqft	0.43	18,700.00	0
Parking Lot	21.33	1000sqft	0.49	21,330.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Refer to CalEEMod inputs.

Energy Use - Using historical energy data.

Water And Wastewater - Refer to CalEEMod inputs.

Water Mitigation -

Fleet Mix - Refert to CalEEMod inputs FleetMix 2018.

Table Name	Column Name	Default Value	New Value

tblFleetMix	HHD	0.03	3.9290e-003
tblFleetMix	LDA	0.55	0.67
tblFleetMix	LDT1	0.05	0.06
tblFleetMix	LDT2	0.20	0.24
tblFleetMix	LHD1	0.02	2.5180e-003
tblFleetMix	LHD2	5.9530e-003	8.4700e-004
tblFleetMix	MCY	4.8040e-003	6.3220e-003
tblFleetMix	MDV	0.13	0.02
tblFleetMix	MH	9.4400e-004	0.00
tblFleetMix	MHD	0.02	2.6120e-003
tblFleetMix	OBUS	2.3410e-003	0.00
tblFleetMix	SBUS	6.6700e-004	9.5000e-005
tblFleetMix	UBUS	2.5830e-003	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	ST_TR	10.37	5.98
tblVehicleTrips	SU_TR	36.63	27.58
tblVehicleTrips	WD_TR	9.11	6.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.2680	0.4406	3.5014	8.8000e-003	0.8220	7.4200e-003	0.8294	0.2180	6.8800e-003	0.2249		877.4605	877.4605	0.0369		878.3840
Total	**0.7063**	**0.5401**	**3.5890**	**9.4000e-003**	**0.8220**	**0.0150**	**0.8370**	**0.2180**	**0.0145**	**0.2325**		**996.8118**	**996.8118**	**0.0393**	**2.1900e-003**	**998.4450**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.2680	0.4406	3.5014	8.8000e-003	0.8220	7.4200e-003	0.8294	0.2180	6.8800e-003	0.2249		877.4605	877.4605	0.0369		878.3840
Total	**0.7063**	**0.5401**	**3.5890**	**9.4000e-003**	**0.8220**	**0.0150**	**0.8370**	**0.2180**	**0.0145**	**0.2325**		**996.8118**	**996.8118**	**0.0393**	**2.1900e-003**	**998.4450**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2680	0.4406	3.5014	8.8000e-003	0.8220	7.4200e-003	0.8294	0.2180	6.8800e-003	0.2249		877.4605	877.4605	0.0369		878.3840
Unmitigated	0.2680	0.4406	3.5014	8.8000e-003	0.8220	7.4200e-003	0.8294	0.2180	6.8800e-003	0.2249		877.4605	877.4605	0.0369		878.3840

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	129.78	111.83	515.75	552,580	552,580
Total	129.78	111.83	515.75	552,580	552,580

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.547972	0.046127	0.199330	0.125604	0.017697	0.005953	0.018360	0.027618	0.002341	0.002583	0.004804	0.000667	0.000944
Place of Worship	0.665552	0.056025	0.242101	0.020000	0.002518	0.000847	0.002612	0.003929	0.000000	0.000000	0.006322	0.000095	0.000000

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
NaturalGas Unmitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1014.41	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.01441	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Unmitigated	0.4273	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-004	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Total	**0.4273**	**4.0000e-005**	**4.1400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0000e-004	4.0000e-005	4.1400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3600e-003
Total	**0.4273**	**4.0000e-005**	**4.1400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BSS-09 Existing Operation 2022

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	18.70	1000sqft	0.43	18,700.00	0
Parking Lot	21.33	1000sqft	0.49	21,330.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Refer to CalEEMod inputs.

Energy Use - Using historical energy use data.

Water And Wastewater - Refer to CalEEMod inputs.

Water Mitigation -

Fleet Mix - Refert to CalEEMod inputs FleetMix 2018.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	4.1780e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.20	0.25
tblFleetMix	LHD1	0.02	2.1430e-003
tblFleetMix	LHD2	6.1960e-003	8.4400e-004
tblFleetMix	MCY	5.1420e-003	6.7010e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	2.7410e-003
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	9.4000e-005
tblFleetMix	UBUS	2.2010e-003	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	ST_TR	10.37	5.98
tblVehicleTrips	SU_TR	36.63	27.58
tblVehicleTrips	WD_TR	9.11	6.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0780	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Energy	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	160.8192	160.8192	3.7100e-003	1.0500e-003	161.2254
Mobile	0.0484	0.0795	0.6485	2.0000e-003	0.2061	1.5900e-003	0.2077	0.0548	1.4700e-003	0.0562	0.0000	181.0065	181.0065	6.4800e-003	0.0000	181.1684
Waste						0.0000	0.0000		0.0000	0.0000	21.6368	0.0000	21.6368	1.2787	0.0000	53.6043
Water						0.0000	0.0000		0.0000	0.0000	0.2070	9.9062	10.1132	9.5000e-004	5.0000e-004	10.2854
Total	**0.1283**	**0.0976**	**0.6642**	**2.1100e-003**	**0.2061**	**2.9700e-003**	**0.2091**	**0.0548**	**2.8500e-003**	**0.0576**	**21.8438**	**351.7328**	**373.5767**	**1.2898**	**1.5500e-003**	**406.2844**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0780	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Energy	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	160.8192	160.8192	3.7100e-003	1.0500e-003	161.2254
Mobile	0.0484	0.0795	0.6485	2.0000e-003	0.2061	1.5900e-003	0.2077	0.0548	1.4700e-003	0.0562	0.0000	181.0065	181.0065	6.4800e-003	0.0000	181.1684
Waste						0.0000	0.0000		0.0000	0.0000	21.6368	0.0000	21.6368	1.2787	0.0000	53.6043
Water						0.0000	0.0000		0.0000	0.0000	0.2070	9.9062	10.1132	9.5000e-004	5.0000e-004	10.2854
Total	**0.1283**	**0.0976**	**0.6642**	**2.1100e-003**	**0.2061**	**2.9700e-003**	**0.2091**	**0.0548**	**2.8500e-003**	**0.0576**	**21.8438**	**351.7328**	**373.5767**	**1.2898**	**1.5500e-003**	**406.2844**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0484	0.0795	0.6485	2.0000e-003	0.2061	1.5900e-003	0.2077	0.0548	1.4700e-003	0.0562	0.0000	181.0065	181.0065	6.4800e-003	0.0000	181.1684
Unmitigated	0.0484	0.0795	0.6485	2.0000e-003	0.2061	1.5900e-003	0.2077	0.0548	1.4700e-003	0.0562	0.0000	181.0065	181.0065	6.4800e-003	0.0000	181.1684

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	129.78	111.83	515.75	552,580	552,580
Total	129.78	111.83	515.75	552,580	552,580

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Place of Worship	0.661796	0.054446	0.247057	0.020000	0.002143	0.000844	0.002741	0.004178	0.000000	0.000000	0.006701	0.000094	0.000000

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.0608	141.0608	3.3300e-003	6.9000e-004	141.3495
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.0608	141.0608	3.3300e-003	6.9000e-004	141.3495
NaturalGas Mitigated	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759
NaturalGas Unmitigated	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	370260	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759
Total		**2.0000e-003**	**0.0182**	**0.0153**	**1.1000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**19.7585**	**19.7585**	**3.8000e-004**	**3.6000e-004**	**19.8759**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	370260	2.0000e-003	0.0182	0.0153	1.1000e-004		1.3800e-003	1.3800e-003		1.3800e-003	1.3800e-003	0.0000	19.7585	19.7585	3.8000e-004	3.6000e-004	19.8759
Total		**2.0000e-003**	**0.0182**	**0.0153**	**1.1000e-004**		**1.3800e-003**	**1.3800e-003**		**1.3800e-003**	**1.3800e-003**	**0.0000**	**19.7585**	**19.7585**	**3.8000e-004**	**3.6000e-004**	**19.8759**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	18770.4	10.4544	2.5000e-004	5.0000e-005	10.4758
Place of Worship	234498	130.6064	3.0800e-003	6.4000e-004	130.8737
Total		**141.0608**	**3.3300e-003**	**6.9000e-004**	**141.3495**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	18770.4	10.4544	2.5000e-004	5.0000e-005	10.4758
Place of Worship	234498	130.6064	3.0800e-003	6.4000e-004	130.8737
Total		**141.0608**	**3.3300e-003**	**6.9000e-004**	**141.3495**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0780	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Unmitigated	0.0780	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Total	**0.0780**	**0.0000**	**5.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.9000e-004**	**9.9000e-004**	**0.0000**	**0.0000**	**1.0600e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0690					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.9000e-004	9.9000e-004	0.0000	0.0000	1.0600e-003
Total	**0.0780**	**0.0000**	**5.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.9000e-004**	**9.9000e-004**	**0.0000**	**0.0000**	**1.0600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.1132	9.5000e-004	5.0000e-004	10.2854
Unmitigated	10.1132	9.5000e-004	5.0000e-004	10.2854

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.585103 / 0.91516	10.1132	9.5000e-004	5.0000e-004	10.2854
Total		**10.1132**	**9.5000e-004**	**5.0000e-004**	**10.2854**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	0.585103 / 0.91516	10.1132	9.5000e-004	5.0000e-004	10.2854
Total		**10.1132**	**9.5000e-004**	**5.0000e-004**	**10.2854**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.6368	1.2787	0.0000	53.6043
Unmitigated	21.6368	1.2787	0.0000	53.6043

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	106.59	21.6368	1.2787	0.0000	53.6043
Total		**21.6368**	**1.2787**	**0.0000**	**53.6043**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	106.59	21.6368	1.2787	0.0000	53.6043
Total		**21.6368**	**1.2787**	**0.0000**	**53.6043**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BSS-09 Existing Operation 2022

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	18.70	1000sqft	0.43	18,700.00	0
Parking Lot	21.33	1000sqft	0.49	21,330.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Refer to CalEEMod inputs.

Energy Use - Using historical energy use data.

Water And Wastewater - Refer to CalEEMod inputs.

Water Mitigation -

Fleet Mix - Refert to CalEEMod inputs FleetMix 2018.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	4.1780e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.20	0.25
tblFleetMix	LHD1	0.02	2.1430e-003
tblFleetMix	LHD2	6.1960e-003	8.4400e-004
tblFleetMix	MCY	5.1420e-003	6.7010e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	2.7410e-003
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	9.4000e-005
tblFleetMix	UBUS	2.2010e-003	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	ST_TR	10.37	5.98
tblVehicleTrips	SU_TR	36.63	27.58
tblVehicleTrips	WD_TR	9.11	6.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.2016	0.2854	2.6447	8.1500e-003	0.8220	6.2400e-003	0.8282	0.2180	5.7600e-003	0.2238		814.6962	814.6962	0.0284		815.4066
Total	**0.6399**	**0.3849**	**2.7323**	**8.7500e-003**	**0.8220**	**0.0138**	**0.8358**	**0.2180**	**0.0133**	**0.2314**		**934.0474**	**934.0474**	**0.0307**	**2.1900e-003**	**935.4676**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.2016	0.2854	2.6447	8.1500e-003	0.8220	6.2400e-003	0.8282	0.2180	5.7600e-003	0.2238		814.6962	814.6962	0.0284		815.4066
Total	**0.6399**	**0.3849**	**2.7323**	**8.7500e-003**	**0.8220**	**0.0138**	**0.8358**	**0.2180**	**0.0133**	**0.2314**		**934.0474**	**934.0474**	**0.0307**	**2.1900e-003**	**935.4676**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2016	0.2854	2.6447	8.1500e-003	0.8220	6.2400e-003	0.8282	0.2180	5.7600e-003	0.2238		814.6962	814.6962	0.0284		815.4066
Unmitigated	0.2016	0.2854	2.6447	8.1500e-003	0.8220	6.2400e-003	0.8282	0.2180	5.7600e-003	0.2238		814.6962	814.6962	0.0284		815.4066

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	129.78	111.83	515.75	552,580	552,580
Total	129.78	111.83	515.75	552,580	552,580

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Place of Worship	0.661796	0.054446	0.247057	0.020000	0.002143	0.000844	0.002741	0.004178	0.000000	0.000000	0.006701	0.000094	0.000000

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
NaturalGas Unmitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1014.41	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.01441	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Unmitigated	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Total	**0.4273**	**4.0000e-005**	**4.0900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Total	**0.4273**	**4.0000e-005**	**4.0900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

BSS-09 Existing Operation 2022

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	18.70	1000sqft	0.43	18,700.00	0
Parking Lot	21.33	1000sqft	0.49	21,330.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Refer to CalEEMod inputs.

Energy Use - Using historical energy use data.

Water And Wastewater - Refer to CalEEMod inputs.

Water Mitigation -

Fleet Mix - Refert to CalEEMod inputs FleetMix 2018.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	4.1780e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.20	0.25
tblFleetMix	LHD1	0.02	2.1430e-003
tblFleetMix	LHD2	6.1960e-003	8.4400e-004
tblFleetMix	MCY	5.1420e-003	6.7010e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	2.7410e-003
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	9.4000e-005
tblFleetMix	UBUS	2.2010e-003	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	ST_TR	10.37	5.98
tblVehicleTrips	SU_TR	36.63	27.58
tblVehicleTrips	WD_TR	9.11	6.94
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.1940	0.3042	2.4904	7.6900e-003	0.8220	6.2500e-003	0.8282	0.2180	5.7600e-003	0.2238		768.5157	768.5157	0.0278		769.2102
Total	**0.6323**	**0.4037**	**2.5780**	**8.2900e-003**	**0.8220**	**0.0138**	**0.8358**	**0.2180**	**0.0133**	**0.2314**		**887.8669**	**887.8669**	**0.0301**	**2.1900e-003**	**889.2712**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Energy	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Mobile	0.1940	0.3042	2.4904	7.6900e-003	0.8220	6.2500e-003	0.8282	0.2180	5.7600e-003	0.2238		768.5157	768.5157	0.0278		769.2102
Total	**0.6323**	**0.4037**	**2.5780**	**8.2900e-003**	**0.8220**	**0.0138**	**0.8358**	**0.2180**	**0.0133**	**0.2314**		**887.8669**	**887.8669**	**0.0301**	**2.1900e-003**	**889.2712**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1940	0.3042	2.4904	7.6900e-003	0.8220	6.2500e-003	0.8282	0.2180	5.7600e-003	0.2238		768.5157	768.5157	0.0278		769.2102
Unmitigated	0.1940	0.3042	2.4904	7.6900e-003	0.8220	6.2500e-003	0.8282	0.2180	5.7600e-003	0.2238		768.5157	768.5157	0.0278		769.2102

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Place of Worship	129.78	111.83	515.75	552,580	552,580
Total	129.78	111.83	515.75	552,580	552,580

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Place of Worship	0.661796	0.054446	0.247057	0.020000	0.002143	0.000844	0.002741	0.004178	0.000000	0.000000	0.006701	0.000094	0.000000

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
NaturalGas Unmitigated	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1014.41	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.01441	0.0109	0.0995	0.0835	6.0000e-004		7.5600e-003	7.5600e-003		7.5600e-003	7.5600e-003		119.3425	119.3425	2.2900e-003	2.1900e-003	120.0517
Total		**0.0109**	**0.0995**	**0.0835**	**6.0000e-004**		**7.5600e-003**	**7.5600e-003**		**7.5600e-003**	**7.5600e-003**		**119.3425**	**119.3425**	**2.2900e-003**	**2.1900e-003**	**120.0517**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Unmitigated	0.4273	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Total	**0.4273**	**4.0000e-005**	**4.0900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0491					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3778					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	4.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.7600e-003	8.7600e-003	2.0000e-005		9.3400e-003
Total	**0.4273**	**4.0000e-005**	**4.0900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.7600e-003**	**8.7600e-003**	**2.0000e-005**		**9.3400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bright Star Charter School - Construction & Operation

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	48.33	1000sqft	1.11	48,325.00	0
Enclosed Parking with Elevator	28.06	1000sqft	0.64	28,060.00	0
Other Non-Asphalt Surfaces	12.00	1000sqft	0.28	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Zero out building sqft for turf area.

Construction Phase - Refer to CalEEMod inputs of a 24 month construction schedule.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Trenching equipment based on past projects.

Trips and VMT - Added additional vendor trips for concrete or water trucks. Added hauling trips based on CalEEMod inputs.

Demolition -

Grading - Refer to CalEEMod inputs.

Architectural Coating - Refer to CalEEMod inputs.

Vehicle Trips - Refer to CalEEMod inputs.

Area Coating - Refer to CalEEMod inputs.

Water And Wastewater - No additional water usage by students and staff.

Solid Waste - No additional solid waste generated by students and staff.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186. LAUSD Standard Conditions applied.

Water Mitigation -

Fleet Mix - Refer to CalEEMod inputs Fleet Mix 2022.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	24,150.00	24,163.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	72,450.00	72,488.00
tblAreaCoating	Area_Nonresidential_Exterior	24150	24163
tblAreaCoating	Area_Nonresidential_Interior	72450	72488
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	220.00	261.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	6.00	38.00
tblConstructionPhase	NumDays	6.00	38.00

tblConstructionPhase	NumDays	6.00	39.00
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	3.00	52.00
tblFleetMix	HHD	0.03	4.1780e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.20	0.25
tblFleetMix	LHD1	0.02	2.1430e-003
tblFleetMix	LHD2	6.1960e-003	8.4400e-004
tblFleetMix	MCY	5.1420e-003	6.7010e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	2.7410e-003
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	9.4000e-005
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	8,700.00
tblGrading	MaterialImported	0.00	900.00
tblLandUse	LandUseSquareFeet	12,000.00	0.00
tblOffRoadEquipment	HorsePower	97.00	81.00
tblOffRoadEquipment	LoadFactor	0.37	0.73
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Excavation
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Utility Trenching
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	62.79	0.00

tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	13.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	4.37	0.00
tblVehicleTrips	SU_TR	1.79	0.00
tblVehicleTrips	WD_TR	12.89	20.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,603,784.11	0.00
tblWater	OutdoorWaterUseRate	4,124,016.29	0.00
tblWater	OutdoorWaterUseRate	0.00	328,232.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0438	0.5913	0.4331	1.2500e-003	0.0303	0.0218	0.0521	6.6800e-003	0.0201	0.0268	0.0000	115.4430	115.4430	0.0218	0.0000	115.9872
2021	0.1244	1.2303	1.0436	2.5300e-003	0.0495	0.0486	0.0981	0.0134	0.0464	0.0598	0.0000	224.2565	224.2565	0.0340	0.0000	225.1053
2022	0.2681	0.3837	0.4219	8.4000e-004	0.0133	0.0169	0.0302	3.5900e-003	0.0159	0.0195	0.0000	74.5645	74.5645	0.0147	0.0000	74.9315
Maximum	**0.2681**	**1.2303**	**1.0436**	**2.5300e-003**	**0.0495**	**0.0486**	**0.0981**	**0.0134**	**0.0464**	**0.0598**	**0.0000**	**224.2565**	**224.2565**	**0.0340**	**0.0000**	**225.1053**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0438	0.5913	0.4331	1.2500e-003	0.0216	0.0218	0.0434	5.2500e-003	0.0201	0.0253	0.0000	115.4429	115.4429	0.0218	0.0000	115.9872
2021	0.1244	1.2303	1.0436	2.5300e-003	0.0458	0.0486	0.0944	0.0125	0.0464	0.0588	0.0000	224.2563	224.2563	0.0340	0.0000	225.1052
2022	0.2681	0.3837	0.4219	8.4000e-004	0.0123	0.0169	0.0292	3.3500e-003	0.0159	0.0193	0.0000	74.5645	74.5645	0.0147	0.0000	74.9314
Maximum	**0.2681**	**1.2303**	**1.0436**	**2.5300e-003**	**0.0458**	**0.0486**	**0.0944**	**0.0125**	**0.0464**	**0.0588**	**0.0000**	**224.2563**	**224.2563**	**0.0340**	**0.0000**	**225.1052**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.44**	**0.00**	**7.46**	**10.91**	**0.00**	**2.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2020	9-30-2020	0.4220	0.4220
2	10-1-2020	12-31-2020	0.2633	0.2633
3	1-1-2021	3-31-2021	0.2020	0.2020
4	4-1-2021	6-30-2021	0.3787	0.3787
5	7-1-2021	9-30-2021	0.3828	0.3828
6	10-1-2021	12-31-2021	0.3836	0.3836
7	1-1-2022	3-31-2022	0.3699	0.3699
8	4-1-2022	6-30-2022	0.2886	0.2886
		Highest	0.4220	0.4220

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1993	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1900e-003	2.1900e-003	1.0000e-005	0.0000	2.3400e-003
Energy	2.7100e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	277.7394	277.7394	6.4400e-003	1.7200e-003	278.4124
Mobile	0.2521	0.4861	4.1724	0.0136	1.4242	0.0105	1.4347	0.3784	9.6800e-003	0.3880	0.0000	1,234.3210	1,234.3210	0.0427	0.0000	1,235.3879
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	2.0311	2.0311	5.0000e-005	1.0000e-005	2.0352
Total	**0.4542**	**0.5108**	**4.1943**	**0.0138**	**1.4242**	**0.0124**	**1.4365**	**0.3784**	**0.0116**	**0.3899**	**0.0000**	**1,514.0937**	**1,514.0937**	**0.0492**	**1.7300e-003**	**1,515.8378**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1993	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1900e-003	2.1900e-003	1.0000e-005	0.0000	2.3400e-003
Energy	2.7100e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	277.7394	277.7394	6.4400e-003	1.7200e-003	278.4124
Mobile	0.2521	0.4861	4.1724	0.0136	1.4242	0.0105	1.4347	0.3784	9.6800e-003	0.3880	0.0000	1,234.3210	1,234.3210	0.0427	0.0000	1,235.3879
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.9072	1.9072	5.0000e-005	1.0000e-005	1.9111
Total	**0.4542**	**0.5108**	**4.1943**	**0.0138**	**1.4242**	**0.0124**	**1.4365**	**0.3784**	**0.0116**	**0.3899**	**0.0000**	**1,513.9698**	**1,513.9698**	**0.0492**	**1.7300e-003**	**1,515.7137**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**	**0.01**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2020	8/3/2020	5	24	
2	Asphalt & Concrete Demolition	Demolition	8/4/2020	9/4/2020	5	24	
3	Rough Grading	Grading	9/7/2020	10/28/2020	5	38	
4	Excavation	Grading	9/7/2020	10/28/2020	5	38	
5	Utility Trenching	Trenching	10/29/2020	1/8/2021	5	52	
6	Fine Grading	Grading	1/11/2021	3/4/2021	5	39	
7	Building Construction	Building Construction	3/5/2021	3/4/2022	5	261	
8	Paving	Paving	3/7/2022	3/23/2022	5	13	
9	Architectural Coating	Architectural Coating	3/24/2022	4/11/2022	5	13	
10	Finishing/Landscaping	Site Preparation	4/12/2022	6/22/2022	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.92

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 72,488; Non-Residential Outdoor: 24,163; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	81	0.73
Asphalt & Concrete Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt & Concrete Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt & Concrete Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Rough Grading	Graders	0	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Excavation	Graders	0	8.00	187	0.41
Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Excavation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	8.00	63	0.31
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	0	7.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	8.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

Paving	Rollers	0	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	7.00	78	0.48
Finishing/Landscaping	Graders	0	8.00	187	0.41
Finishing/Landscaping	Scrapers	0	8.00	367	0.48
Finishing/Landscaping	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	2	5.00	6.00	85.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt & Concrete Demolition	2	5.00	4.00	31.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	8.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation	1	3.00	0.00	1,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	2	5.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	32.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.2200e-003	0.0000	9.2200e-003	1.4000e-003	0.0000	1.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2800e-003	0.0832	0.0901	1.2000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	10.7888	10.7888	3.4900e-003	0.0000	10.8761
Total	**8.2800e-003**	**0.0832**	**0.0901**	**1.2000e-004**	**9.2200e-003**	**5.2600e-003**	**0.0145**	**1.4000e-003**	**4.8400e-003**	**6.2400e-003**	**0.0000**	**10.7888**	**10.7888**	**3.4900e-003**	**0.0000**	**10.8761**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0126	2.7800e-003	3.0000e-005	7.3000e-004	4.0000e-005	7.7000e-004	2.0000e-004	4.0000e-005	2.4000e-004	0.0000	3.2758	3.2758	2.3000e-004	0.0000	3.2815
Vendor	2.6000e-004	7.8000e-003	2.1100e-003	2.0000e-005	4.5000e-004	4.0000e-005	4.9000e-004	1.3000e-004	3.0000e-005	1.7000e-004	0.0000	1.7887	1.7887	1.1000e-004	0.0000	1.7915
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	**9.2000e-004**	**0.0206**	**7.3600e-003**	**6.0000e-005**	**1.8400e-003**	**9.0000e-005**	**1.9200e-003**	**5.0000e-004**	**8.0000e-005**	**5.9000e-004**	**0.0000**	**5.6773**	**5.6773**	**3.6000e-004**	**0.0000**	**5.6863**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.9400e-003	0.0000	3.9400e-003	6.0000e-004	0.0000	6.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.2800e-003	0.0832	0.0901	1.2000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	10.7888	10.7888	3.4900e-003	0.0000	10.8760
Total	**8.2800e-003**	**0.0832**	**0.0901**	**1.2000e-004**	**3.9400e-003**	**5.2600e-003**	**9.2000e-003**	**6.0000e-004**	**4.8400e-003**	**5.4400e-003**	**0.0000**	**10.7888**	**10.7888**	**3.4900e-003**	**0.0000**	**10.8760**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0126	2.7800e-003	3.0000e-005	6.8000e-004	4.0000e-005	7.2000e-004	1.9000e-004	4.0000e-005	2.3000e-004	0.0000	3.2758	3.2758	2.3000e-004	0.0000	3.2815
Vendor	2.6000e-004	7.8000e-003	2.1100e-003	2.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.7887	1.7887	1.1000e-004	0.0000	1.7915
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	**9.2000e-004**	**0.0206**	**7.3600e-003**	**6.0000e-005**	**1.7100e-003**	**9.0000e-005**	**1.7900e-003**	**4.7000e-004**	**8.0000e-005**	**5.6000e-004**	**0.0000**	**5.6773**	**5.6773**	**3.6000e-004**	**0.0000**	**5.6863**

3.3 Asphalt & Concrete Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3800e-003	0.0000	3.3800e-003	5.1000e-004	0.0000	5.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0300e-003	0.0505	0.0547	7.0000e-005		3.1900e-003	3.1900e-003		2.9400e-003	2.9400e-003	0.0000	6.5485	6.5485	2.1200e-003	0.0000	6.6014
Total	**5.0300e-003**	**0.0505**	**0.0547**	**7.0000e-005**	**3.3800e-003**	**3.1900e-003**	**6.5700e-003**	**5.1000e-004**	**2.9400e-003**	**3.4500e-003**	**0.0000**	**6.5485**	**6.5485**	**2.1200e-003**	**0.0000**	**6.6014**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.6000e-003	1.0100e-003	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1947	1.1947	8.0000e-005	0.0000	1.1968
Vendor	1.7000e-004	5.2000e-003	1.4100e-003	1.0000e-005	3.0000e-004	2.0000e-005	3.3000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.1925	1.1925	8.0000e-005	0.0000	1.1943
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	**5.9000e-004**	**0.0100**	**4.8900e-003**	**3.0000e-005**	**1.2300e-003**	**4.0000e-005**	**1.2700e-003**	**3.3000e-004**	**4.0000e-005**	**3.8000e-004**	**0.0000**	**3.0000**	**3.0000**	**1.8000e-004**	**0.0000**	**3.0044**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4500e-003	0.0000	1.4500e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0300e-003	0.0505	0.0547	7.0000e-005		3.1900e-003	3.1900e-003		2.9400e-003	2.9400e-003	0.0000	6.5485	6.5485	2.1200e-003	0.0000	6.6014
Total	**5.0300e-003**	**0.0505**	**0.0547**	**7.0000e-005**	**1.4500e-003**	**3.1900e-003**	**4.6400e-003**	**2.2000e-004**	**2.9400e-003**	**3.1600e-003**	**0.0000**	**6.5485**	**6.5485**	**2.1200e-003**	**0.0000**	**6.6014**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.6000e-003	1.0100e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	1.1947	1.1947	8.0000e-005	0.0000	1.1968
Vendor	1.7000e-004	5.2000e-003	1.4100e-003	1.0000e-005	2.8000e-004	2.0000e-005	3.1000e-004	8.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.1925	1.1925	8.0000e-005	0.0000	1.1943
Worker	2.8000e-004	2.2000e-004	2.4700e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.6128	0.6128	2.0000e-005	0.0000	0.6133
Total	**5.9000e-004**	**0.0100**	**4.8900e-003**	**3.0000e-005**	**1.1400e-003**	**4.0000e-005**	**1.1800e-003**	**3.1000e-004**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**3.0000**	**3.0000**	**1.8000e-004**	**0.0000**	**3.0044**

3.4 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.1200	0.1299	1.8000e-004		7.5900e-003	7.5900e-003		6.9800e-003	6.9800e-003	0.0000	15.5526	15.5526	5.0300e-003	0.0000	15.6784
Total	**0.0119**	**0.1200**	**0.1299**	**1.8000e-004**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**0.0000**	**6.9800e-003**	**6.9800e-003**	**0.0000**	**15.5526**	**15.5526**	**5.0300e-003**	**0.0000**	**15.6784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0124	3.3400e-003	3.0000e-005	7.2000e-004	6.0000e-005	7.8000e-004	2.1000e-004	5.0000e-005	2.6000e-004	0.0000	2.8321	2.8321	1.8000e-004	0.0000	2.8366
Worker	7.0000e-004	5.7000e-004	6.2600e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.5525	1.5525	5.0000e-005	0.0000	1.5537
Total	**1.1100e-003**	**0.0129**	**9.6000e-003**	**5.0000e-005**	**2.3900e-003**	**7.0000e-005**	**2.4600e-003**	**6.5000e-004**	**6.0000e-005**	**7.2000e-004**	**0.0000**	**4.3845**	**4.3845**	**2.3000e-004**	**0.0000**	**4.3902**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.1200	0.1299	1.8000e-004		7.5900e-003	7.5900e-003		6.9800e-003	6.9800e-003	0.0000	15.5526	15.5526	5.0300e-003	0.0000	15.6783
Total	**0.0119**	**0.1200**	**0.1299**	**1.8000e-004**	**0.0000**	**7.5900e-003**	**7.5900e-003**	**0.0000**	**6.9800e-003**	**6.9800e-003**	**0.0000**	**15.5526**	**15.5526**	**5.0300e-003**	**0.0000**	**15.6783**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0124	3.3400e-003	3.0000e-005	6.7000e-004	6.0000e-005	7.3000e-004	2.0000e-004	5.0000e-005	2.5000e-004	0.0000	2.8321	2.8321	1.8000e-004	0.0000	2.8366
Worker	7.0000e-004	5.7000e-004	6.2600e-003	2.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.5525	1.5525	5.0000e-005	0.0000	1.5537
Total	**1.1100e-003**	**0.0129**	**9.6000e-003**	**5.0000e-005**	**2.2100e-003**	**7.0000e-005**	**2.2800e-003**	**6.1000e-004**	**6.0000e-005**	**6.7000e-004**	**0.0000**	**4.3845**	**4.3845**	**2.3000e-004**	**0.0000**	**4.3902**

3.5 Excavation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4000e-004	0.0000	5.4000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0669	0.0395	1.8000e-004		1.9300e-003	1.9300e-003		1.7700e-003	1.7700e-003	0.0000	15.6819	15.6819	5.0700e-003	0.0000	15.8087
Total	**5.2700e-003**	**0.0669**	**0.0395**	**1.8000e-004**	**5.4000e-004**	**1.9300e-003**	**2.4700e-003**	**8.0000e-005**	**1.7700e-003**	**1.8500e-003**	**0.0000**	**15.6819**	**15.6819**	**5.0700e-003**	**0.0000**	**15.8087**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.3000e-003	0.1782	0.0393	4.7000e-004	0.0103	5.5000e-004	0.0109	2.8300e-003	5.3000e-004	3.3600e-003	0.0000	46.2469	46.2469	3.2200e-003	0.0000	46.3275
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.3500e-003	1.0000e-005	6.2000e-004	1.0000e-005	6.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5822	0.5822	2.0000e-005	0.0000	0.5826
Total	**5.5600e-003**	**0.1784**	**0.0416**	**4.8000e-004**	**0.0109**	**5.6000e-004**	**0.0115**	**3.0000e-003**	**5.3000e-004**	**3.5300e-003**	**0.0000**	**46.8291**	**46.8291**	**3.2400e-003**	**0.0000**	**46.9101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3000e-004	0.0000	2.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0669	0.0395	1.8000e-004		1.9300e-003	1.9300e-003		1.7700e-003	1.7700e-003	0.0000	15.6819	15.6819	5.0700e-003	0.0000	15.8087
Total	**5.2700e-003**	**0.0669**	**0.0395**	**1.8000e-004**	**2.3000e-004**	**1.9300e-003**	**2.1600e-003**	**4.0000e-005**	**1.7700e-003**	**1.8100e-003**	**0.0000**	**15.6819**	**15.6819**	**5.0700e-003**	**0.0000**	**15.8087**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.3000e-003	0.1782	0.0393	4.7000e-004	9.6100e-003	5.5000e-004	0.0102	2.6600e-003	5.3000e-004	3.1900e-003	0.0000	46.2469	46.2469	3.2200e-003	0.0000	46.3275
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.3500e-003	1.0000e-005	5.8000e-004	1.0000e-005	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.5822	0.5822	2.0000e-005	0.0000	0.5826
Total	**5.5600e-003**	**0.1784**	**0.0416**	**4.8000e-004**	**0.0102**	**5.6000e-004**	**0.0108**	**2.8100e-003**	**5.3000e-004**	**3.3500e-003**	**0.0000**	**46.8291**	**46.8291**	**3.2400e-003**	**0.0000**	**46.9101**

3.6 Utility Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8200e-003	0.0484	0.0524	7.0000e-005		3.0600e-003	3.0600e-003		2.8200e-003	2.8200e-003	0.0000	6.2756	6.2756	2.0300e-003	0.0000	6.3264
Total	**4.8200e-003**	**0.0484**	**0.0524**	**7.0000e-005**		**3.0600e-003**	**3.0600e-003**		**2.8200e-003**	**2.8200e-003**	**0.0000**	**6.2756**	**6.2756**	**2.0300e-003**	**0.0000**	**6.3264**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.6000e-004	2.8400e-003	1.0000e-005	7.6000e-004	1.0000e-005	7.6000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7047	0.7047	2.0000e-005	0.0000	0.7053
Total	**3.2000e-004**	**2.6000e-004**	**2.8400e-003**	**1.0000e-005**	**7.6000e-004**	**1.0000e-005**	**7.6000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.7047**	**0.7047**	**2.0000e-005**	**0.0000**	**0.7053**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8200e-003	0.0484	0.0524	7.0000e-005		3.0600e-003	3.0600e-003		2.8200e-003	2.8200e-003	0.0000	6.2756	6.2756	2.0300e-003	0.0000	6.3263
Total	**4.8200e-003**	**0.0484**	**0.0524**	**7.0000e-005**		**3.0600e-003**	**3.0600e-003**		**2.8200e-003**	**2.8200e-003**	**0.0000**	**6.2756**	**6.2756**	**2.0300e-003**	**0.0000**	**6.3263**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.6000e-004	2.8400e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.0000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.7047	0.7047	2.0000e-005	0.0000	0.7053
Total	**3.2000e-004**	**2.6000e-004**	**2.8400e-003**	**1.0000e-005**	**7.0000e-004**	**1.0000e-005**	**7.0000e-004**	**1.9000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.7047**	**0.7047**	**2.0000e-005**	**0.0000**	**0.7053**

3.6 Utility Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	5.6900e-003	6.7800e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.1000e-004	3.1000e-004	0.0000	0.8189	0.8189	2.6000e-004	0.0000	0.8255
Total	**5.6000e-004**	**5.6900e-003**	**6.7800e-003**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**0.8189**	**0.8189**	**2.6000e-004**	**0.0000**	**0.8255**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0890	0.0890	0.0000	0.0000	0.0891
Total	**4.0000e-005**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0890**	**0.0890**	**0.0000**	**0.0000**	**0.0891**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-004	5.6900e-003	6.7800e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.1000e-004	3.1000e-004	0.0000	0.8189	0.8189	2.6000e-004	0.0000	0.8255
Total	**5.6000e-004**	**5.6900e-003**	**6.7800e-003**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**0.8189**	**0.8189**	**2.6000e-004**	**0.0000**	**0.8255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0890	0.0890	0.0000	0.0000	0.0891
Total	**4.0000e-005**	**3.0000e-005**	**3.4000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0890**	**0.0890**	**0.0000**	**0.0000**	**0.0891**

3.7 Fine Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-003	0.0739	0.0882	1.2000e-004		4.3600e-003	4.3600e-003		4.0100e-003	4.0100e-003	0.0000	10.6459	10.6459	3.4400e-003	0.0000	10.7320
Total	**7.3000e-003**	**0.0739**	**0.0882**	**1.2000e-004**	**0.0000**	**4.3600e-003**	**4.3600e-003**	**0.0000**	**4.0100e-003**	**4.0100e-003**	**0.0000**	**10.6459**	**10.6459**	**3.4400e-003**	**0.0000**	**10.7320**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	3.8500e-003	1.0400e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9613	0.9613	6.0000e-005	0.0000	0.9628
Worker	4.2000e-004	3.3000e-004	3.6900e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.9642	0.9642	3.0000e-005	0.0000	0.9649
Total	**5.4000e-004**	**4.1800e-003**	**4.7300e-003**	**2.0000e-005**	**1.3200e-003**	**2.0000e-005**	**1.3300e-003**	**3.5000e-004**	**2.0000e-005**	**3.7000e-004**	**0.0000**	**1.9255**	**1.9255**	**9.0000e-005**	**0.0000**	**1.9277**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-003	0.0739	0.0882	1.2000e-004		4.3600e-003	4.3600e-003		4.0100e-003	4.0100e-003	0.0000	10.6459	10.6459	3.4400e-003	0.0000	10.7320
Total	**7.3000e-003**	**0.0739**	**0.0882**	**1.2000e-004**	**0.0000**	**4.3600e-003**	**4.3600e-003**	**0.0000**	**4.0100e-003**	**4.0100e-003**	**0.0000**	**10.6459**	**10.6459**	**3.4400e-003**	**0.0000**	**10.7320**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-004	3.8500e-003	1.0400e-003	1.0000e-005	2.3000e-004	1.0000e-005	2.4000e-004	7.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.9613	0.9613	6.0000e-005	0.0000	0.9628
Worker	4.2000e-004	3.3000e-004	3.6900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9642	0.9642	3.0000e-005	0.0000	0.9649
Total	**5.4000e-004**	**4.1800e-003**	**4.7300e-003**	**2.0000e-005**	**1.2200e-003**	**2.0000e-005**	**1.2300e-003**	**3.3000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.9255**	**1.9255**	**9.0000e-005**	**0.0000**	**1.9277**

3.8 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0961	0.9750	0.7696	1.5900e-003		0.0432	0.0432		0.0414	0.0414	0.0000	136.6677	136.6677	0.0267	0.0000	137.3352
Total	**0.0961**	**0.9750**	**0.7696**	**1.5900e-003**		**0.0432**	**0.0432**		**0.0414**	**0.0414**	**0.0000**	**136.6677**	**136.6677**	**0.0267**	**0.0000**	**137.3352**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0300e-003	0.1599	0.0434	4.1000e-004	0.0102	3.3000e-004	0.0105	2.9500e-003	3.1000e-004	3.2600e-003	0.0000	39.9325	39.9325	2.4500e-003	0.0000	39.9937
Worker	0.0149	0.0116	0.1307	3.8000e-004	0.0379	3.1000e-004	0.0382	0.0101	2.9000e-004	0.0104	0.0000	34.1770	34.1770	1.0100e-003	0.0000	34.2021
Total	**0.0199**	**0.1715**	**0.1740**	**7.9000e-004**	**0.0481**	**6.4000e-004**	**0.0487**	**0.0130**	**6.0000e-004**	**0.0136**	**0.0000**	**74.1094**	**74.1094**	**3.4600e-003**	**0.0000**	**74.1958**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0961	0.9750	0.7696	1.5900e-003		0.0432	0.0432		0.0414	0.0414	0.0000	136.6675	136.6675	0.0267	0.0000	137.3351
Total	**0.0961**	**0.9750**	**0.7696**	**1.5900e-003**		**0.0432**	**0.0432**		**0.0414**	**0.0414**	**0.0000**	**136.6675**	**136.6675**	**0.0267**	**0.0000**	**137.3351**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0300e-003	0.1599	0.0434	4.1000e-004	9.5500e-003	3.3000e-004	9.8800e-003	2.7900e-003	3.1000e-004	3.1000e-003	0.0000	39.9325	39.9325	2.4500e-003	0.0000	39.9937
Worker	0.0149	0.0116	0.1307	3.8000e-004	0.0349	3.1000e-004	0.0352	9.3300e-003	2.9000e-004	9.6200e-003	0.0000	34.1770	34.1770	1.0100e-003	0.0000	34.2021
Total	**0.0199**	**0.1715**	**0.1740**	**7.9000e-004**	**0.0445**	**6.4000e-004**	**0.0451**	**0.0121**	**6.0000e-004**	**0.0127**	**0.0000**	**74.1094**	**74.1094**	**3.4600e-003**	**0.0000**	**74.1958**

3.8 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0184	0.1818	0.1581	3.3000e-004		7.9700e-003	7.9700e-003		7.6400e-003	7.6400e-003	0.0000	28.4743	28.4743	5.5200e-003	0.0000	28.6123
Total	**0.0184**	**0.1818**	**0.1581**	**3.3000e-004**		**7.9700e-003**	**7.9700e-003**		**7.6400e-003**	**7.6400e-003**	**0.0000**	**28.4743**	**28.4743**	**5.5200e-003**	**0.0000**	**28.6123**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	0.0316	8.5400e-003	8.0000e-005	2.1300e-003	6.0000e-005	2.1900e-003	6.1000e-004	6.0000e-005	6.7000e-004	0.0000	8.2462	8.2462	4.9000e-004	0.0000	8.2585
Worker	2.9100e-003	2.1800e-003	0.0251	8.0000e-005	7.8900e-003	6.0000e-005	7.9500e-003	2.1000e-003	6.0000e-005	2.1500e-003	0.0000	6.8699	6.8699	1.9000e-004	0.0000	6.8746
Total	**3.8900e-003**	**0.0338**	**0.0336**	**1.6000e-004**	**0.0100**	**1.2000e-004**	**0.0101**	**2.7100e-003**	**1.2000e-004**	**2.8200e-003**	**0.0000**	**15.1161**	**15.1161**	**6.8000e-004**	**0.0000**	**15.1331**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0184	0.1818	0.1581	3.3000e-004		7.9700e-003	7.9700e-003		7.6400e-003	7.6400e-003	0.0000	28.4743	28.4743	5.5200e-003	0.0000	28.6122
Total	**0.0184**	**0.1818**	**0.1581**	**3.3000e-004**		**7.9700e-003**	**7.9700e-003**		**7.6400e-003**	**7.6400e-003**	**0.0000**	**28.4743**	**28.4743**	**5.5200e-003**	**0.0000**	**28.6122**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8000e-004	0.0316	8.5400e-003	8.0000e-005	1.9900e-003	6.0000e-005	2.0500e-003	5.8000e-004	6.0000e-005	6.4000e-004	0.0000	8.2462	8.2462	4.9000e-004	0.0000	8.2585
Worker	2.9100e-003	2.1800e-003	0.0251	8.0000e-005	7.2700e-003	6.0000e-005	7.3400e-003	1.9400e-003	6.0000e-005	2.0000e-003	0.0000	6.8699	6.8699	1.9000e-004	0.0000	6.8746
Total	**3.8900e-003**	**0.0338**	**0.0336**	**1.6000e-004**	**9.2600e-003**	**1.2000e-004**	**9.3900e-003**	**2.5200e-003**	**1.2000e-004**	**2.6400e-003**	**0.0000**	**15.1161**	**15.1161**	**6.8000e-004**	**0.0000**	**15.1331**

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2300e-003	0.0222	0.0311	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1024	4.1024	1.3300e-003	0.0000	4.1356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2300e-003**	**0.0222**	**0.0311**	**5.0000e-005**		**1.1400e-003**	**1.1400e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**4.1024**	**4.1024**	**1.3300e-003**	**0.0000**	**4.1356**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.6600e-003	9.9000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9529	0.9529	6.0000e-005	0.0000	0.9543
Worker	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3101	0.3101	1.0000e-005	0.0000	0.3103
Total	**2.4000e-004**	**3.7600e-003**	**2.1200e-003**	**1.0000e-005**	**6.1000e-004**	**1.0000e-005**	**6.1000e-004**	**1.6000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**1.2630**	**1.2630**	**7.0000e-005**	**0.0000**	**1.2646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.2300e-003	0.0222	0.0311	5.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	4.1024	4.1024	1.3300e-003	0.0000	4.1355
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2300e-003**	**0.0222**	**0.0311**	**5.0000e-005**		**1.1400e-003**	**1.1400e-003**		**1.0500e-003**	**1.0500e-003**	**0.0000**	**4.1024**	**4.1024**	**1.3300e-003**	**0.0000**	**4.1355**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.6600e-003	9.9000e-004	1.0000e-005	2.3000e-004	1.0000e-005	2.4000e-004	7.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.9529	0.9529	6.0000e-005	0.0000	0.9543
Worker	1.3000e-004	1.0000e-004	1.1300e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3101	0.3101	1.0000e-005	0.0000	0.3103
Total	**2.4000e-004**	**3.7600e-003**	**2.1200e-003**	**1.0000e-005**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**1.6000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**1.2630**	**1.2630**	**7.0000e-005**	**0.0000**	**1.2646**

3.10 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2279					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	0.0107	0.0138	2.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	1.9362	1.9362	1.3000e-004	0.0000	1.9394
Total	**0.2294**	**0.0107**	**0.0138**	**2.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**1.9362**	**1.9362**	**1.3000e-004**	**0.0000**	**1.9394**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3721	0.3721	1.0000e-005	0.0000	0.3724
Total	**1.6000e-004**	**1.2000e-004**	**1.3600e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3721**	**0.3721**	**1.0000e-005**	**0.0000**	**0.3724**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2279					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	0.0107	0.0138	2.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	1.9362	1.9362	1.3000e-004	0.0000	1.9394
Total	**0.2294**	**0.0107**	**0.0138**	**2.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**1.9362**	**1.9362**	**1.3000e-004**	**0.0000**	**1.9394**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.2000e-004	1.3600e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3721	0.3721	1.0000e-005	0.0000	0.3724
Total	**1.6000e-004**	**1.2000e-004**	**1.3600e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3721**	**0.3721**	**1.0000e-005**	**0.0000**	**0.3724**

3.11 Finishing/Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0129	0.1307	0.1746	2.4000e-004		7.0300e-003	7.0300e-003		6.4700e-003	6.4700e-003	0.0000	21.3158	21.3158	6.8900e-003	0.0000	21.4881
Total	**0.0129**	**0.1307**	**0.1746**	**2.4000e-004**	**0.0000**	**7.0300e-003**	**7.0300e-003**	**0.0000**	**6.4700e-003**	**6.4700e-003**	**0.0000**	**21.3158**	**21.3158**	**6.8900e-003**	**0.0000**	**21.4881**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	6.3000e-004	7.2500e-003	2.0000e-005	2.2800e-003	2.0000e-005	2.3000e-003	6.1000e-004	2.0000e-005	6.2000e-004	0.0000	1.9846	1.9846	5.0000e-005	0.0000	1.9860
Total	**8.4000e-004**	**6.3000e-004**	**7.2500e-003**	**2.0000e-005**	**2.2800e-003**	**2.0000e-005**	**2.3000e-003**	**6.1000e-004**	**2.0000e-005**	**6.2000e-004**	**0.0000**	**1.9846**	**1.9846**	**5.0000e-005**	**0.0000**	**1.9860**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0129	0.1307	0.1746	2.4000e-004		7.0300e-003	7.0300e-003		6.4700e-003	6.4700e-003	0.0000	21.3158	21.3158	6.8900e-003	0.0000	21.4881
Total	**0.0129**	**0.1307**	**0.1746**	**2.4000e-004**	**0.0000**	**7.0300e-003**	**7.0300e-003**	**0.0000**	**6.4700e-003**	**6.4700e-003**	**0.0000**	**21.3158**	**21.3158**	**6.8900e-003**	**0.0000**	**21.4881**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	6.3000e-004	7.2500e-003	2.0000e-005	2.1000e-003	2.0000e-005	2.1200e-003	5.6000e-004	2.0000e-005	5.8000e-004	0.0000	1.9846	1.9846	5.0000e-005	0.0000	1.9860
Total	**8.4000e-004**	**6.3000e-004**	**7.2500e-003**	**2.0000e-005**	**2.1000e-003**	**2.0000e-005**	**2.1200e-003**	**5.6000e-004**	**2.0000e-005**	**5.8000e-004**	**0.0000**	**1.9846**	**1.9846**	**5.0000e-005**	**0.0000**	**1.9860**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2521	0.4861	4.1724	0.0136	1.4242	0.0105	1.4347	0.3784	9.6800e-003	0.3880	0.0000	1,234.3210	1,234.3210	0.0427	0.0000	1,235.3879
Unmitigated	0.2521	0.4861	4.1724	0.0136	1.4242	0.0105	1.4347	0.3784	9.6800e-003	0.3880	0.0000	1,234.3210	1,234.3210	0.0427	0.0000	1,235.3879

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
High School	998.88	0.00	0.00	3,818,905	3,818,905
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	998.88	0.00	0.00	3,818,905	3,818,905

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High School	0.661796	0.054446	0.247057	0.020000	0.002143	0.000844	0.002741	0.004178	0.000000	0.000000	0.006701	0.000094	0.000000
Other Non-Asphalt Surfaces	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	250.9199	250.9199	5.9300e-003	1.2300e-003	251.4334
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	250.9199	250.9199	5.9300e-003	1.2300e-003	251.4334
NaturalGas Mitigated	2.7100e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	26.8196	26.8196	5.1000e-004	4.9000e-004	26.9790
NaturalGas Unmitigated	2.7100e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	26.8196	26.8196	5.1000e-004	4.9000e-004	26.9790

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	502580	2.7100e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	26.8196	26.8196	5.1000e-004	4.9000e-004	26.9790
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.7100e-003**	**0.0246**	**0.0207**	**1.5000e-004**		**1.8700e-003**	**1.8700e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**26.8196**	**26.8196**	**5.1000e-004**	**4.9000e-004**	**26.9790**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	502580	2.7100e-003	0.0246	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	26.8196	26.8196	5.1000e-004	4.9000e-004	26.9790
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.7100e-003**	**0.0246**	**0.0207**	**1.5000e-004**		**1.8700e-003**	**1.8700e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**26.8196**	**26.8196**	**5.1000e-004**	**4.9000e-004**	**26.9790**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	164432	91.5821	2.1600e-003	4.5000e-004	91.7695
High School	286084	159.3378	3.7600e-003	7.8000e-004	159.6639
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**250.9199**	**5.9200e-003**	**1.2300e-003**	**251.4334**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	164432	91.5821	2.1600e-003	4.5000e-004	91.7695
High School	286084	159.3378	3.7600e-003	7.8000e-004	159.6639
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**250.9199**	**5.9200e-003**	**1.2300e-003**	**251.4334**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1993	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1900e-003	2.1900e-003	1.0000e-005	0.0000	2.3400e-003
Unmitigated	0.1993	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1900e-003	2.1900e-003	1.0000e-005	0.0000	2.3400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1900e-003	2.1900e-003	1.0000e-005	0.0000	2.3400e-003
Total	**0.1993**	**1.0000e-005**	**1.1300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.1900e-003**	**2.1900e-003**	**1.0000e-005**	**0.0000**	**2.3400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1900e-003	2.1900e-003	1.0000e-005	0.0000	2.3400e-003
Total	**0.1993**	**1.0000e-005**	**1.1300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.1900e-003**	**2.1900e-003**	**1.0000e-005**	**0.0000**	**2.3400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.9072	5.0000e-005	1.0000e-005	1.9111
Unmitigated	2.0311	5.0000e-005	1.0000e-005	2.0352

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High School	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0.328232	2.0311	5.0000e-005	1.0000e-005	2.0352

Total		**2.0311**	**5.0000e-005**	**1.0000e-005**	**2.0352**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High School	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0.30821	1.9072	5.0000e-005	1.0000e-005	1.9111
Total		**1.9072**	**5.0000e-005**	**1.0000e-005**	**1.9111**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High School	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High School	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bright Star Charter School - Construction & Operation

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	48.33	1000sqft	1.11	48,325.00	0
Enclosed Parking with Elevator	28.06	1000sqft	0.64	28,060.00	0
Other Non-Asphalt Surfaces	12.00	1000sqft	0.28	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Zero out building sqft for turf area.

Construction Phase - Refer to CalEEMod inputs of a 24 month construction schedule.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Trenching equipment based on past projects.

Trips and VMT - Added additional vendor trips for concrete or water trucks. Added hauling trips based on CalEEMod inputs.

Demolition -

Grading - Refer to CalEEMod inputs.

Architectural Coating - Refer to CalEEMod inputs.

Vehicle Trips - Refer to CalEEMod inputs.

Area Coating - Refer to CalEEMod inputs.

Water And Wastewater - No additional water usage by students and staff.

Solid Waste - No additional solid waste generated by students and staff.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186. LAUSD Standard Conditions applied.

Water Mitigation -

Fleet Mix - Refer to CalEEMod inputs Fleet Mix 2022.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	24,150.00	24,163.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	72,450.00	72,488.00
tblAreaCoating	Area_Nonresidential_Exterior	24150	24163
tblAreaCoating	Area_Nonresidential_Interior	72450	72488
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	220.00	261.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	6.00	38.00
tblConstructionPhase	NumDays	6.00	38.00

tblConstructionPhase	NumDays	6.00	39.00
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	3.00	52.00
tblFleetMix	HHD	0.03	4.1780e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.20	0.25
tblFleetMix	LHD1	0.02	2.1430e-003
tblFleetMix	LHD2	6.1960e-003	8.4400e-004
tblFleetMix	MCY	5.1420e-003	6.7010e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	2.7410e-003
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	9.4000e-005
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	8,700.00
tblGrading	MaterialImported	0.00	900.00
tblLandUse	LandUseSquareFeet	12,000.00	0.00
tblOffRoadEquipment	HorsePower	97.00	81.00
tblOffRoadEquipment	LoadFactor	0.37	0.73
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Excavation
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Utility Trenching
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	62.79	0.00

tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	13.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	4.37	0.00
tblVehicleTrips	SU_TR	1.79	0.00
tblVehicleTrips	WD_TR	12.89	20.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,603,784.11	0.00
tblWater	OutdoorWaterUseRate	4,124,016.29	0.00
tblWater	OutdoorWaterUseRate	0.00	328,232.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.2538	19.5922	13.0957	0.0465	1.3106	0.5339	2.0259	0.2303	0.4923	0.8886	0.0000	4,810.3264	4,810.3264	0.7843	0.0000	4,829.9328
2021	1.0723	10.5788	8.7955	0.0223	0.4537	0.4061	0.8598	0.1225	0.3891	0.5116	0.0000	2,171.6379	2,171.6379	0.3076	0.0000	2,179.3269
2022	35.3229	9.5517	8.5760	0.0221	0.4537	0.3595	0.8132	0.1225	0.3445	0.4670	0.0000	2,155.3179	2,155.3179	0.3035	0.0000	2,162.9061
Maximum	**35.3229**	**19.5922**	**13.0957**	**0.0465**	**1.3106**	**0.5339**	**2.0259**	**0.2303**	**0.4923**	**0.8886**	**0.0000**	**4,810.3264**	**4,810.3264**	**0.7843**	**0.0000**	**4,829.9328**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.2538	19.5922	13.0957	0.0465	0.6907	0.5339	1.4060	0.1847	0.4923	0.7931	0.0000	4,810.3264	4,810.3264	0.7843	0.0000	4,829.9328
2021	1.0723	10.5788	8.7955	0.0223	0.4196	0.4061	0.8257	0.1141	0.3891	0.5032	0.0000	2,171.6379	2,171.6379	0.3076	0.0000	2,179.3269
2022	35.3229	9.5517	8.5760	0.0221	0.4196	0.3595	0.7791	0.1141	0.3445	0.4586	0.0000	2,155.3179	2,155.3179	0.3035	0.0000	2,162.9061
Maximum	**35.3229**	**19.5922**	**13.0957**	**0.0465**	**0.6907**	**0.5339**	**1.4060**	**0.1847**	**0.4923**	**0.7931**	**0.0000**	**4,810.3264**	**4,810.3264**	**0.7843**	**0.0000**	**4,829.9328**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**31.03**	**0.00**	**18.61**	**13.12**	**0.00**	**6.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Energy	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Mobile	2.0435	3.4015	33.9123	0.1094	11.1746	0.0808	11.2554	2.9643	0.0746	3.0388		10,932.7024	10,932.7024	0.3704		10,941.9611
Total	**3.1508**	**3.5366**	**34.0347**	**0.1102**	**11.1746**	**0.0911**	**11.2657**	**2.9643**	**0.0849**	**3.0491**		**11,094.7137**	**11,094.7137**	**0.3735**	**2.9700e-003**	**11,104.9363**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Energy	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Mobile	2.0435	3.4015	33.9123	0.1094	11.1746	0.0808	11.2554	2.9643	0.0746	3.0388		10,932.7024	10,932.7024	0.3704		10,941.9611
Total	**3.1508**	**3.5366**	**34.0347**	**0.1102**	**11.1746**	**0.0911**	**11.2657**	**2.9643**	**0.0849**	**3.0491**		**11,094.7137**	**11,094.7137**	**0.3735**	**2.9700e-003**	**11,104.9363**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2020	8/3/2020	5	24	
2	Asphalt & Concrete Demolition	Demolition	8/4/2020	9/4/2020	5	24	
3	Rough Grading	Grading	9/7/2020	10/28/2020	5	38	
4	Excavation	Grading	9/7/2020	10/28/2020	5	38	
5	Utility Trenching	Trenching	10/29/2020	1/8/2021	5	52	
6	Fine Grading	Grading	1/11/2021	3/4/2021	5	39	
7	Building Construction	Building Construction	3/5/2021	3/4/2022	5	261	
8	Paving	Paving	3/7/2022	3/23/2022	5	13	
9	Architectural Coating	Architectural Coating	3/24/2022	4/11/2022	5	13	
10	Finishing/Landscaping	Site Preparation	4/12/2022	6/22/2022	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.92

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 72,488; Non-Residential Outdoor: 24,163; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	81	0.73
Asphalt & Concrete Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

Asphalt & Concrete Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt & Concrete Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Rough Grading	Graders	0	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Excavation	Graders	0	8.00	187	0.41
Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Excavation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	8.00	63	0.31
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	0	7.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	8.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	7.00	78	0.48
Finishing/Landscaping	Graders	0	8.00	187	0.41
Finishing/Landscaping	Scrapers	0	8.00	367	0.48
Finishing/Landscaping	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	2	5.00	6.00	85.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt & Concrete Demolition	2	5.00	4.00	31.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	8.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation	1	3.00	0.00	1,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	2	5.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	32.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7686	0.0000	0.7686	0.1164	0.0000	0.1164			0.0000			0.0000
Off-Road	0.6903	6.9366	7.5118	0.0102		0.4386	0.4386		0.4036	0.4036		991.0528	991.0528	0.3205		999.0659
Total	**0.6903**	**6.9366**	**7.5118**	**0.0102**	**0.7686**	**0.4386**	**1.2072**	**0.1164**	**0.4036**	**0.5199**		**991.0528**	**991.0528**	**0.3205**		**999.0659**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0309	1.0184	0.2257	2.8000e-003	0.0619	3.2500e-003	0.0652	0.0170	3.1100e-003	0.0201		303.1071	303.1071	0.0206		303.6229
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0384	3.0000e-003	0.0414	0.0111	2.8700e-003	0.0139		166.2148	166.2148	0.0101		166.4684
Worker	0.0230	0.0164	0.2189	5.9000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8056	58.8056	1.8500e-003		58.8520
Total	**0.0753**	**1.6730**	**0.6118**	**4.9500e-003**	**0.1562**	**6.7200e-003**	**0.1630**	**0.0429**	**6.4100e-003**	**0.0493**		**528.1276**	**528.1276**	**0.0326**		**528.9433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3286	0.0000	0.3286	0.0498	0.0000	0.0498			0.0000			0.0000
Off-Road	0.6903	6.9366	7.5118	0.0102		0.4386	0.4386		0.4036	0.4036	0.0000	991.0528	991.0528	0.3205		999.0659
Total	**0.6903**	**6.9366**	**7.5118**	**0.0102**	**0.3286**	**0.4386**	**0.7672**	**0.0498**	**0.4036**	**0.4533**	**0.0000**	**991.0528**	**991.0528**	**0.3205**		**999.0659**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0309	1.0184	0.2257	2.8000e-003	0.0577	3.2500e-003	0.0610	0.0159	3.1100e-003	0.0191		303.1071	303.1071	0.0206		303.6229
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0360	3.0000e-003	0.0390	0.0105	2.8700e-003	0.0133		166.2148	166.2148	0.0101		166.4684
Worker	0.0230	0.0164	0.2189	5.9000e-004	0.0515	4.7000e-004	0.0520	0.0138	4.3000e-004	0.0142		58.8056	58.8056	1.8500e-003		58.8520
Total	**0.0753**	**1.6730**	**0.6118**	**4.9500e-003**	**0.1452**	**6.7200e-003**	**0.1519**	**0.0401**	**6.4100e-003**	**0.0466**		**528.1276**	**528.1276**	**0.0326**		**528.9433**

3.3 Asphalt & Concrete Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2818	0.0000	0.2818	0.0427	0.0000	0.0427			0.0000			0.0000
Off-Road	0.4190	4.2103	4.5594	6.2100e-003		0.2662	0.2662		0.2449	0.2449		601.5370	601.5370	0.1946		606.4008
Total	**0.4190**	**4.2103**	**4.5594**	**6.2100e-003**	**0.2818**	**0.2662**	**0.5480**	**0.0427**	**0.2449**	**0.2876**		**601.5370**	**601.5370**	**0.1946**		**606.4008**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0113	0.3714	0.0823	1.0200e-003	0.0226	1.1900e-003	0.0238	6.1900e-003	1.1300e-003	7.3200e-003		110.5449	110.5449	7.5200e-003		110.7331
Vendor	0.0142	0.4255	0.1115	1.0400e-003	0.0256	2.0000e-003	0.0276	7.3700e-003	1.9200e-003	9.2900e-003		110.8099	110.8099	6.7600e-003		110.9789
Worker	0.0230	0.0164	0.2189	5.9000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8056	58.8056	1.8500e-003		58.8520
Total	**0.0485**	**0.8133**	**0.4127**	**2.6500e-003**	**0.1041**	**3.6600e-003**	**0.1077**	**0.0284**	**3.4800e-003**	**0.0319**		**280.1605**	**280.1605**	**0.0161**		**280.5640**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1205	0.0000	0.1205	0.0182	0.0000	0.0182			0.0000			0.0000
Off-Road	0.4190	4.2103	4.5594	6.2100e-003		0.2662	0.2662		0.2449	0.2449	0.0000	601.5370	601.5370	0.1946		606.4008
Total	**0.4190**	**4.2103**	**4.5594**	**6.2100e-003**	**0.1205**	**0.2662**	**0.3867**	**0.0182**	**0.2449**	**0.2632**	**0.0000**	**601.5370**	**601.5370**	**0.1946**		**606.4008**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0113	0.3714	0.0823	1.0200e-003	0.0211	1.1900e-003	0.0222	5.8100e-003	1.1300e-003	6.9500e-003		110.5449	110.5449	7.5200e-003		110.7331
Vendor	0.0142	0.4255	0.1115	1.0400e-003	0.0240	2.0000e-003	0.0260	6.9700e-003	1.9200e-003	8.8900e-003		110.8099	110.8099	6.7600e-003		110.9789
Worker	0.0230	0.0164	0.2189	5.9000e-004	0.0515	4.7000e-004	0.0520	0.0138	4.3000e-004	0.0142		58.8056	58.8056	1.8500e-003		58.8520
Total	**0.0485**	**0.8133**	**0.4127**	**2.6500e-003**	**0.0965**	**3.6600e-003**	**0.1002**	**0.0265**	**3.4800e-003**	**0.0300**		**280.1605**	**280.1605**	**0.0161**		**280.5640**

3.4 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6285	6.3154	6.8391	9.3200e-003		0.3994	0.3994		0.3674	0.3674		902.3055	902.3055	0.2918		909.6011
Total	**0.6285**	**6.3154**	**6.8391**	**9.3200e-003**	**0.0000**	**0.3994**	**0.3994**	**0.0000**	**0.3674**	**0.3674**		**902.3055**	**902.3055**	**0.2918**		**909.6011**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0384	3.0000e-003	0.0414	0.0111	2.8700e-003	0.0139		166.2148	166.2148	0.0101		166.4684
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.0582**	**0.6644**	**0.5175**	**2.5000e-003**	**0.1278**	**3.7500e-003**	**0.1316**	**0.0348**	**3.5600e-003**	**0.0383**		**260.3039**	**260.3039**	**0.0131**		**260.6316**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6285	6.3154	6.8391	9.3200e-003		0.3994	0.3994		0.3674	0.3674	0.0000	902.3055	902.3055	0.2918		909.6011
Total	**0.6285**	**6.3154**	**6.8391**	**9.3200e-003**	**0.0000**	**0.3994**	**0.3994**	**0.0000**	**0.3674**	**0.3674**	**0.0000**	**902.3055**	**902.3055**	**0.2918**		**909.6011**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0213	0.6382	0.1672	1.5600e-003	0.0360	3.0000e-003	0.0390	0.0105	2.8700e-003	0.0133		166.2148	166.2148	0.0101		166.4684
Worker	0.0368	0.0262	0.3503	9.4000e-004	0.0824	7.5000e-004	0.0832	0.0220	6.9000e-004	0.0227		94.0890	94.0890	2.9700e-003		94.1632
Total	**0.0582**	**0.6644**	**0.5175**	**2.5000e-003**	**0.1184**	**3.7500e-003**	**0.1221**	**0.0325**	**3.5600e-003**	**0.0360**		**260.3039**	**260.3039**	**0.0131**		**260.6316**

3.5 Excavation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0286	0.0000	0.0286	4.3300e-003	0.0000	4.3300e-003			0.0000			0.0000
Off-Road	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934		909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**	**0.0286**	**0.1015**	**0.1301**	**4.3300e-003**	**0.0934**	**0.0977**		**909.8069**	**909.8069**	**0.2943**		**917.1631**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2758	9.0802	2.0121	0.0249	0.5521	0.0290	0.5811	0.1514	0.0277	0.1791		2,702.6268	2,702.6268	0.1840		2,707.2257
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.2897**	**9.0901**	**2.1434**	**0.0253**	**0.5857**	**0.0293**	**0.6149**	**0.1602**	**0.0280**	**0.1882**		**2,737.9102**	**2,737.9102**	**0.1851**		**2,742.5369**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003			0.0000			0.0000
Off-Road	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934	0.0000	909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**	**0.0122**	**0.1015**	**0.1137**	**1.8500e-003**	**0.0934**	**0.0952**	**0.0000**	**909.8069**	**909.8069**	**0.2943**		**917.1631**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2758	9.0802	2.0121	0.0249	0.5146	0.0290	0.5436	0.1421	0.0277	0.1699		2,702.6268	2,702.6268	0.1840		2,707.2257
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0309	2.8000e-004	0.0312	8.2500e-003	2.6000e-004	8.5100e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.2897**	**9.0901**	**2.1434**	**0.0253**	**0.5455**	**0.0293**	**0.5747**	**0.1504**	**0.0280**	**0.1784**		**2,737.9102**	**2,737.9102**	**0.1851**		**2,742.5369**

3.6 Utility Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	**0.2095**	**2.1052**	**2.2797**	**3.1100e-003**		**0.1331**	**0.1331**		**0.1225**	**0.1225**		**300.7685**	**300.7685**	**0.0973**		**303.2004**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.0138**	**9.8200e-003**	**0.1314**	**3.5000e-004**	**0.0335**	**2.8000e-004**	**0.0338**	**8.8900e-003**	**2.6000e-004**	**9.1500e-003**		**35.2834**	**35.2834**	**1.1100e-003**		**35.3112**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	**0.2095**	**2.1052**	**2.2797**	**3.1100e-003**		**0.1331**	**0.1331**		**0.1225**	**0.1225**	**0.0000**	**300.7685**	**300.7685**	**0.0973**		**303.2004**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0309	2.8000e-004	0.0312	8.2500e-003	2.6000e-004	8.5100e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.0138**	**9.8200e-003**	**0.1314**	**3.5000e-004**	**0.0309**	**2.8000e-004**	**0.0312**	**8.2500e-003**	**2.6000e-004**	**8.5100e-003**		**35.2834**	**35.2834**	**1.1100e-003**		**35.3112**

3.6 Utility Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330
Total	**0.1873**	**1.8958**	**2.2602**	**3.1100e-003**		**0.1118**	**0.1118**		**0.1028**	**0.1028**		**300.9001**	**300.9001**	**0.0973**		**303.3330**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	**0.0129**	**8.8400e-003**	**0.1208**	**3.4000e-004**	**0.0335**	**2.7000e-004**	**0.0338**	**8.8900e-003**	**2.5000e-004**	**9.1400e-003**		**34.1631**	**34.1631**	**1.0100e-003**		**34.1883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028	0.0000	300.9001	300.9001	0.0973		303.3330
Total	**0.1873**	**1.8958**	**2.2602**	**3.1100e-003**		**0.1118**	**0.1118**		**0.1028**	**0.1028**	**0.0000**	**300.9001**	**300.9001**	**0.0973**		**303.3330**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0309	2.7000e-004	0.0312	8.2500e-003	2.5000e-004	8.5000e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	**0.0129**	**8.8400e-003**	**0.1208**	**3.4000e-004**	**0.0309**	**2.7000e-004**	**0.0312**	**8.2500e-003**	**2.5000e-004**	**8.5000e-003**		**34.1631**	**34.1631**	**1.0100e-003**		**34.1883**

3.7 Fine Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3746	3.7916	4.5205	6.2100e-003		0.2236	0.2236		0.2057	0.2057		601.8002	601.8002	0.1946		606.6660
Total	**0.3746**	**3.7916**	**4.5205**	**6.2100e-003**	**0.0000**	**0.2236**	**0.2236**	**0.0000**	**0.2057**	**0.2057**		**601.8002**	**601.8002**	**0.1946**		**606.6660**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0214	0.0147	0.2014	5.7000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		56.9385	56.9385	1.6800e-003		56.9804
Total	**0.0275**	**0.2089**	**0.2522**	**1.0800e-003**	**0.0687**	**8.5000e-004**	**0.0695**	**0.0185**	**8.0000e-004**	**0.0193**		**111.9146**	**111.9146**	**4.9200e-003**		**112.0375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3746	3.7916	4.5205	6.2100e-003		0.2236	0.2236		0.2057	0.2057	0.0000	601.8002	601.8002	0.1946		606.6660
Total	**0.3746**	**3.7916**	**4.5205**	**6.2100e-003**	**0.0000**	**0.2236**	**0.2236**	**0.0000**	**0.2057**	**0.2057**	**0.0000**	**601.8002**	**601.8002**	**0.1946**		**606.6660**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0120	4.0000e-004	0.0124	3.4900e-003	3.8000e-004	3.8600e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0214	0.0147	0.2014	5.7000e-004	0.0515	4.5000e-004	0.0520	0.0138	4.2000e-004	0.0142		56.9385	56.9385	1.6800e-003		56.9804
Total	**0.0275**	**0.2089**	**0.2522**	**1.0800e-003**	**0.0635**	**8.5000e-004**	**0.0644**	**0.0172**	**8.0000e-004**	**0.0180**		**111.9146**	**111.9146**	**4.9200e-003**		**112.0375**

3.8 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8896	9.0281	7.1259	0.0147		0.4003	0.4003		0.3836	0.3836		1,394.9106	1,394.9106	0.2725		1,401.7239
Total	**0.8896**	**9.0281**	**7.1259**	**0.0147**		**0.4003**	**0.4003**		**0.3836**	**0.3836**		**1,394.9106**	**1,394.9106**	**0.2725**		**1,401.7239**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0456	1.4563	0.3807	3.8600e-003	0.0960	2.9800e-003	0.0990	0.0277	2.8500e-003	0.0305		412.3210	412.3210	0.0243		412.9282
Worker	0.1372	0.0943	1.2889	3.6600e-003	0.3577	2.8900e-003	0.3606	0.0949	2.6600e-003	0.0975		364.4064	364.4064	0.0107		364.6748
Total	**0.1828**	**1.5506**	**1.6696**	**7.5200e-003**	**0.4537**	**5.8700e-003**	**0.4596**	**0.1225**	**5.5100e-003**	**0.1280**		**776.7273**	**776.7273**	**0.0350**		**777.6030**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8896	9.0281	7.1259	0.0147		0.4003	0.4003		0.3836	0.3836	0.0000	1,394.9106	1,394.9106	0.2725		1,401.7239
Total	**0.8896**	**9.0281**	**7.1259**	**0.0147**		**0.4003**	**0.4003**		**0.3836**	**0.3836**	**0.0000**	**1,394.9106**	**1,394.9106**	**0.2725**		**1,401.7239**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0456	1.4563	0.3807	3.8600e-003	0.0899	2.9800e-003	0.0929	0.0261	2.8500e-003	0.0290		412.3210	412.3210	0.0243		412.9282
Worker	0.1372	0.0943	1.2889	3.6600e-003	0.3297	2.8900e-003	0.3326	0.0880	2.6600e-003	0.0907		364.4064	364.4064	0.0107		364.6748
Total	**0.1828**	**1.5506**	**1.6696**	**7.5200e-003**	**0.4196**	**5.8700e-003**	**0.4254**	**0.1141**	**5.5100e-003**	**0.1196**		**776.7273**	**776.7273**	**0.0350**		**777.6030**

3.8 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	8.0816	7.0266	0.0147		0.3541	0.3541		0.3394	0.3394		1,395.0011	1,395.0011	0.2704		1,401.7603
Total	**0.8197**	**8.0816**	**7.0266**	**0.0147**		**0.3541**	**0.3541**		**0.3394**	**0.3394**		**1,395.0011**	**1,395.0011**	**0.2704**		**1,401.7603**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0428	1.3850	0.3602	3.8200e-003	0.0960	2.6000e-003	0.0986	0.0277	2.4900e-003	0.0301		408.7288	408.7288	0.0235		409.3152
Worker	0.1285	0.0852	1.1891	3.5300e-003	0.3577	2.8000e-003	0.3605	0.0949	2.5800e-003	0.0974		351.5879	351.5879	9.7000e-003		351.8305
Total	**0.1713**	**1.4701**	**1.5494**	**7.3500e-003**	**0.4537**	**5.4000e-003**	**0.4591**	**0.1225**	**5.0700e-003**	**0.1276**		**760.3168**	**760.3168**	**0.0332**		**761.1458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	8.0816	7.0266	0.0147		0.3541	0.3541		0.3394	0.3394	0.0000	1,395.0011	1,395.0011	0.2704		1,401.7603
Total	**0.8197**	**8.0816**	**7.0266**	**0.0147**		**0.3541**	**0.3541**		**0.3394**	**0.3394**	**0.0000**	**1,395.0011**	**1,395.0011**	**0.2704**		**1,401.7603**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0428	1.3850	0.3602	3.8200e-003	0.0899	2.6000e-003	0.0925	0.0261	2.4900e-003	0.0286		408.7288	408.7288	0.0235		409.3152
Worker	0.1285	0.0852	1.1891	3.5300e-003	0.3297	2.8000e-003	0.3325	0.0880	2.5800e-003	0.0906		351.5879	351.5879	9.7000e-003		351.8305
Total	**0.1713**	**1.4701**	**1.5494**	**7.3500e-003**	**0.4196**	**5.4000e-003**	**0.4250**	**0.1141**	**5.0700e-003**	**0.1192**		**760.3168**	**760.3168**	**0.0332**		**761.1458**

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3429	3.4133	4.7839	7.1900e-003		0.1749	0.1749		0.1609	0.1609		695.7073	695.7073	0.2250		701.3325
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3429**	**3.4133**	**4.7839**	**7.1900e-003**		**0.1749**	**0.1749**		**0.1609**	**0.1609**		**695.7073**	**695.7073**	**0.2250**		**701.3325**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0384	1.0400e-003	0.0395	0.0111	1.0000e-003	0.0121		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735
Total	**0.0372**	**0.5673**	**0.3299**	**2.0800e-003**	**0.0943**	**1.4800e-003**	**0.0958**	**0.0259**	**1.4000e-003**	**0.0273**		**218.4272**	**218.4272**	**0.0109**		**218.6996**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3429	3.4133	4.7839	7.1900e-003		0.1749	0.1749		0.1609	0.1609	0.0000	695.7073	695.7073	0.2250		701.3325
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3429**	**3.4133**	**4.7839**	**7.1900e-003**		**0.1749**	**0.1749**		**0.1609**	**0.1609**	**0.0000**	**695.7073**	**695.7073**	**0.2250**		**701.3325**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0171	0.5540	0.1441	1.5300e-003	0.0360	1.0400e-003	0.0370	0.0105	1.0000e-003	0.0115		163.4915	163.4915	9.3800e-003		163.7261
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0515	4.4000e-004	0.0520	0.0138	4.0000e-004	0.0142		54.9356	54.9356	1.5200e-003		54.9735
Total	**0.0372**	**0.5673**	**0.3299**	**2.0800e-003**	**0.0875**	**1.4800e-003**	**0.0889**	**0.0242**	**1.4000e-003**	**0.0256**		**218.4272**	**218.4272**	**0.0109**		**218.6996**

3.10 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	35.0602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2386	1.6432	2.1159	3.4700e-003		0.0953	0.0953		0.0953	0.0953		328.3561	328.3561	0.0214		328.8905
Total	**35.2988**	**1.6432**	**2.1159**	**3.4700e-003**		**0.0953**	**0.0953**		**0.0953**	**0.0953**		**328.3561**	**328.3561**	**0.0214**		**328.8905**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0241	0.0160	0.2230	6.6000e-004	0.0671	5.2000e-004	0.0676	0.0178	4.8000e-004	0.0183		65.9227	65.9227	1.8200e-003		65.9682
Total	**0.0241**	**0.0160**	**0.2230**	**6.6000e-004**	**0.0671**	**5.2000e-004**	**0.0676**	**0.0178**	**4.8000e-004**	**0.0183**		**65.9227**	**65.9227**	**1.8200e-003**		**65.9682**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	35.0602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2386	1.6432	2.1159	3.4700e-003		0.0953	0.0953		0.0953	0.0953	0.0000	328.3561	328.3561	0.0214		328.8905
Total	**35.2988**	**1.6432**	**2.1159**	**3.4700e-003**		**0.0953**	**0.0953**		**0.0953**	**0.0953**	**0.0000**	**328.3561**	**328.3561**	**0.0214**		**328.8905**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0241	0.0160	0.2230	6.6000e-004	0.0618	5.2000e-004	0.0623	0.0165	4.8000e-004	0.0170		65.9227	65.9227	1.8200e-003		65.9682
Total	**0.0241**	**0.0160**	**0.2230**	**6.6000e-004**	**0.0618**	**5.2000e-004**	**0.0623**	**0.0165**	**4.8000e-004**	**0.0170**		**65.9227**	**65.9227**	**1.8200e-003**		**65.9682**

3.11 Finishing/Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4941	5.0269	6.7138	9.3300e-003		0.2704	0.2704		0.2487	0.2487		903.7168	903.7168	0.2923		911.0239
Total	**0.4941**	**5.0269**	**6.7138**	**9.3300e-003**	**0.0000**	**0.2704**	**0.2704**	**0.0000**	**0.2487**	**0.2487**		**903.7168**	**903.7168**	**0.2923**		**911.0239**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0213	0.2973	8.8000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		87.8970	87.8970	2.4300e-003		87.9576
Total	**0.0321**	**0.0213**	**0.2973**	**8.8000e-004**	**0.0894**	**7.0000e-004**	**0.0901**	**0.0237**	**6.4000e-004**	**0.0244**		**87.8970**	**87.8970**	**2.4300e-003**		**87.9576**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4941	5.0269	6.7138	9.3300e-003		0.2704	0.2704		0.2487	0.2487	0.0000	903.7168	903.7168	0.2923		911.0239
Total	**0.4941**	**5.0269**	**6.7138**	**9.3300e-003**	**0.0000**	**0.2704**	**0.2704**	**0.0000**	**0.2487**	**0.2487**	**0.0000**	**903.7168**	**903.7168**	**0.2923**		**911.0239**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0321	0.0213	0.2973	8.8000e-004	0.0824	7.0000e-004	0.0831	0.0220	6.4000e-004	0.0226		87.8970	87.8970	2.4300e-003		87.9576
Total	**0.0321**	**0.0213**	**0.2973**	**8.8000e-004**	**0.0824**	**7.0000e-004**	**0.0831**	**0.0220**	**6.4000e-004**	**0.0226**		**87.8970**	**87.8970**	**2.4300e-003**		**87.9576**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0435	3.4015	33.9123	0.1094	11.1746	0.0808	11.2554	2.9643	0.0746	3.0388		10,932.7024	10,932.7024	0.3704		10,941.9611
Unmitigated	2.0435	3.4015	33.9123	0.1094	11.1746	0.0808	11.2554	2.9643	0.0746	3.0388		10,932.7024	10,932.7024	0.3704		10,941.9611

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
High School	998.88	0.00	0.00	3,818,905	3,818,905
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	998.88	0.00	0.00	3,818,905	3,818,905

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High School	0.661796	0.054446	0.247057	0.020000	0.002143	0.000844	0.002741	0.004178	0.000000	0.000000	0.006701	0.000094	0.000000
Other Non-Asphalt Surfaces	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
NaturalGas Unmitigated	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1376.93	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0149**	**0.1350**	**0.1134**	**8.1000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**		**161.9919**	**161.9919**	**3.1000e-003**	**2.9700e-003**	**162.9546**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.37693	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0149**	**0.1350**	**0.1134**	**8.1000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**		**161.9919**	**161.9919**	**3.1000e-003**	**2.9700e-003**	**162.9546**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Unmitigated	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Total	**1.0925**	**8.0000e-005**	**9.0400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0193**	**0.0193**	**5.0000e-005**		**0.0206**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Total	**1.0925**	**8.0000e-005**	**9.0400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0193**	**0.0193**	**5.0000e-005**		**0.0206**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bright Star Charter School - Construction & Operation

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	48.33	1000sqft	1.11	48,325.00	0
Enclosed Parking with Elevator	28.06	1000sqft	0.64	28,060.00	0
Other Non-Asphalt Surfaces	12.00	1000sqft	0.28	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Zero out building sqft for turf area.

Construction Phase - Refer to CalEEMod inputs of a 24 month construction schedule.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Refer to CalEEMod inputs Construction Equipment list.

Off-road Equipment - Trenching equipment based on past projects.

Trips and VMT - Added additional vendor trips for concrete or water trucks. Added hauling trips based on CalEEMod inputs.

Demolition -

Grading - Refer to CalEEMod inputs.

Architectural Coating - Refer to CalEEMod inputs.

Vehicle Trips - Refer to CalEEMod inputs.

Area Coating - Refer to CalEEMod inputs.

Water And Wastewater - No additional water usage by students and staff.

Solid Waste - No additional solid waste generated by students and staff.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186. LAUSD Standard Conditions applied.

Water Mitigation -

Fleet Mix - Refer to CalEEMod inputs Fleet Mix 2022.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	24,150.00	24,163.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	72,450.00	72,488.00
tblAreaCoating	Area_Nonresidential_Exterior	24150	24163
tblAreaCoating	Area_Nonresidential_Interior	72450	72488
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	220.00	261.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	20.00	24.00
tblConstructionPhase	NumDays	6.00	38.00
tblConstructionPhase	NumDays	6.00	38.00

tblConstructionPhase	NumDays	6.00	39.00
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	3.00	52.00
tblFleetMix	HHD	0.03	4.1780e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.20	0.25
tblFleetMix	LHD1	0.02	2.1430e-003
tblFleetMix	LHD2	6.1960e-003	8.4400e-004
tblFleetMix	MCY	5.1420e-003	6.7010e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	2.7410e-003
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	9.4000e-005
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	MaterialExported	0.00	8,700.00
tblGrading	MaterialImported	0.00	900.00
tblLandUse	LandUseSquareFeet	12,000.00	0.00
tblOffRoadEquipment	HorsePower	97.00	81.00
tblOffRoadEquipment	LoadFactor	0.37	0.73
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Excavation
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Utility Trenching
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	62.79	0.00

tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	13.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	4.37	0.00
tblVehicleTrips	SU_TR	1.79	0.00
tblVehicleTrips	WD_TR	12.89	20.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	1,603,784.11	0.00
tblWater	OutdoorWaterUseRate	4,124,016.29	0.00
tblWater	OutdoorWaterUseRate	0.00	328,232.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.2671	19.7134	13.1069	0.0460	1.3106	0.5344	2.0260	0.2303	0.4928	0.8888	0.0000	4,751.6846	4,751.6846	0.7914	0.0000	4,771.4689
2021	1.0900	10.5858	8.7255	0.0219	0.4537	0.4062	0.8599	0.1225	0.3892	0.5117	0.0000	2,139.0492	2,139.0492	0.3085	0.0000	2,146.7622
2022	35.3257	9.5570	8.5106	0.0218	0.4537	0.3596	0.8133	0.1225	0.3445	0.4671	0.0000	2,123.5187	2,123.5187	0.3045	0.0000	2,131.1303
Maximum	**35.3257**	**19.7134**	**13.1069**	**0.0460**	**1.3106**	**0.5344**	**2.0260**	**0.2303**	**0.4928**	**0.8888**	**0.0000**	**4,751.6846**	**4,751.6846**	**0.7914**	**0.0000**	**4,771.4689**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.2671	19.7134	13.1069	0.0460	0.6907	0.5344	1.4061	0.1847	0.4928	0.7932	0.0000	4,751.6846	4,751.6846	0.7914	0.0000	4,771.4689
2021	1.0900	10.5858	8.7255	0.0219	0.4196	0.4062	0.8258	0.1141	0.3892	0.5033	0.0000	2,139.0492	2,139.0492	0.3085	0.0000	2,146.7622
2022	35.3257	9.5570	8.5106	0.0218	0.4196	0.3596	0.7792	0.1141	0.3445	0.4587	0.0000	2,123.5187	2,123.5187	0.3045	0.0000	2,131.1303
Maximum	**35.3257**	**19.7134**	**13.1069**	**0.0460**	**0.6907**	**0.5344**	**1.4061**	**0.1847**	**0.4928**	**0.7932**	**0.0000**	**4,751.6846**	**4,751.6846**	**0.7914**	**0.0000**	**4,771.4689**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**31.03**	**0.00**	**18.60**	**13.12**	**0.00**	**6.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Energy	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Mobile	1.9737	3.6542	31.3974	0.1032	11.1746	0.0809	11.2555	2.9643	0.0746	3.0389		10,309.6581	10,309.6581	0.3594		10,318.6437
Total	**3.0810**	**3.7893**	**31.5199**	**0.1040**	**11.1746**	**0.0911**	**11.2658**	**2.9643**	**0.0849**	**3.0492**		**10,471.6694**	**10,471.6694**	**0.3626**	**2.9700e-003**	**10,481.6189**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Energy	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Mobile	1.9737	3.6542	31.3974	0.1032	11.1746	0.0809	11.2555	2.9643	0.0746	3.0389		10,309.6581	10,309.6581	0.3594		10,318.6437
Total	**3.0810**	**3.7893**	**31.5199**	**0.1040**	**11.1746**	**0.0911**	**11.2658**	**2.9643**	**0.0849**	**3.0492**		**10,471.6694**	**10,471.6694**	**0.3626**	**2.9700e-003**	**10,481.6189**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2020	8/3/2020	5	24	
2	Asphalt & Concrete Demolition	Demolition	8/4/2020	9/4/2020	5	24	
3	Rough Grading	Grading	9/7/2020	10/28/2020	5	38	
4	Excavation	Grading	9/7/2020	10/28/2020	5	38	
5	Utility Trenching	Trenching	10/29/2020	1/8/2021	5	52	
6	Fine Grading	Grading	1/11/2021	3/4/2021	5	39	
7	Building Construction	Building Construction	3/5/2021	3/4/2022	5	261	
8	Paving	Paving	3/7/2022	3/23/2022	5	13	
9	Architectural Coating	Architectural Coating	3/24/2022	4/11/2022	5	13	
10	Finishing/Landscaping	Site Preparation	4/12/2022	6/22/2022	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.92

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 72,488; Non-Residential Outdoor: 24,163; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	81	0.73
Asphalt & Concrete Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

Asphalt & Concrete Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt & Concrete Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Rough Grading	Graders	0	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	0	8.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Excavation	Bore/Drill Rigs	1	8.00	221	0.50
Excavation	Graders	0	8.00	187	0.41
Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Excavation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Utility Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Fine Grading	Graders	0	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	0	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	1	8.00	63	0.31
Building Construction	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	0	7.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	8.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	0	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	7.00	78	0.48
Finishing/Landscaping	Graders	0	8.00	187	0.41
Finishing/Landscaping	Scrapers	0	8.00	367	0.48
Finishing/Landscaping	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	2	5.00	6.00	85.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt & Concrete Demolition	2	5.00	4.00	31.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	8.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation	1	3.00	0.00	1,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	2	5.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	32.00	15.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7686	0.0000	0.7686	0.1164	0.0000	0.1164			0.0000			0.0000
Off-Road	0.6903	6.9366	7.5118	0.0102		0.4386	0.4386		0.4036	0.4036		991.0528	991.0528	0.3205		999.0659
Total	**0.6903**	**6.9366**	**7.5118**	**0.0102**	**0.7686**	**0.4386**	**1.2072**	**0.1164**	**0.4036**	**0.5199**		**991.0528**	**991.0528**	**0.3205**		**999.0659**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0317	1.0316	0.2398	2.7500e-003	0.0619	3.3000e-003	0.0652	0.0170	3.1600e-003	0.0201		297.8875	297.8875	0.0214		298.4220
Vendor	0.0223	0.6381	0.1844	1.5100e-003	0.0384	3.0500e-003	0.0415	0.0111	2.9200e-003	0.0140		161.6694	161.6694	0.0108		161.9397
Worker	0.0256	0.0181	0.2005	5.6000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		55.3710	55.3710	1.7500e-003		55.4147
Total	**0.0796**	**1.6878**	**0.6248**	**4.8200e-003**	**0.1562**	**6.8200e-003**	**0.1630**	**0.0429**	**6.5100e-003**	**0.0494**		**514.9279**	**514.9279**	**0.0339**		**515.7764**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3286	0.0000	0.3286	0.0498	0.0000	0.0498			0.0000			0.0000
Off-Road	0.6903	6.9366	7.5118	0.0102		0.4386	0.4386		0.4036	0.4036	0.0000	991.0528	991.0528	0.3205		999.0659
Total	**0.6903**	**6.9366**	**7.5118**	**0.0102**	**0.3286**	**0.4386**	**0.7672**	**0.0498**	**0.4036**	**0.4533**	**0.0000**	**991.0528**	**991.0528**	**0.3205**		**999.0659**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0317	1.0316	0.2398	2.7500e-003	0.0577	3.3000e-003	0.0610	0.0159	3.1600e-003	0.0191		297.8875	297.8875	0.0214		298.4220
Vendor	0.0223	0.6381	0.1844	1.5100e-003	0.0360	3.0500e-003	0.0390	0.0105	2.9200e-003	0.0134		161.6694	161.6694	0.0108		161.9397
Worker	0.0256	0.0181	0.2005	5.6000e-004	0.0515	4.7000e-004	0.0520	0.0138	4.3000e-004	0.0142		55.3710	55.3710	1.7500e-003		55.4147
Total	**0.0796**	**1.6878**	**0.6248**	**4.8200e-003**	**0.1452**	**6.8200e-003**	**0.1520**	**0.0401**	**6.5100e-003**	**0.0467**		**514.9279**	**514.9279**	**0.0339**		**515.7764**

3.3 Asphalt & Concrete Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2818	0.0000	0.2818	0.0427	0.0000	0.0427			0.0000			0.0000
Off-Road	0.4190	4.2103	4.5594	6.2100e-003		0.2662	0.2662		0.2449	0.2449		601.5370	601.5370	0.1946		606.4008
Total	**0.4190**	**4.2103**	**4.5594**	**6.2100e-003**	**0.2818**	**0.2662**	**0.5480**	**0.0427**	**0.2449**	**0.2876**		**601.5370**	**601.5370**	**0.1946**		**606.4008**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0116	0.3762	0.0875	1.0000e-003	0.0226	1.2000e-003	0.0238	6.1900e-003	1.1500e-003	7.3400e-003		108.6413	108.6413	7.8000e-003		108.8363
Vendor	0.0149	0.4254	0.1230	1.0100e-003	0.0256	2.0300e-003	0.0276	7.3700e-003	1.9500e-003	9.3200e-003		107.7796	107.7796	7.2100e-003		107.9598
Worker	0.0256	0.0181	0.2005	5.6000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		55.3710	55.3710	1.7500e-003		55.4147
Total	**0.0520**	**0.8197**	**0.4109**	**2.5700e-003**	**0.1041**	**3.7000e-003**	**0.1078**	**0.0284**	**3.5300e-003**	**0.0319**		**271.7920**	**271.7920**	**0.0168**		**272.2107**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1205	0.0000	0.1205	0.0182	0.0000	0.0182			0.0000			0.0000
Off-Road	0.4190	4.2103	4.5594	6.2100e-003		0.2662	0.2662		0.2449	0.2449	0.0000	601.5370	601.5370	0.1946		606.4008
Total	**0.4190**	**4.2103**	**4.5594**	**6.2100e-003**	**0.1205**	**0.2662**	**0.3867**	**0.0182**	**0.2449**	**0.2632**	**0.0000**	**601.5370**	**601.5370**	**0.1946**		**606.4008**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0116	0.3762	0.0875	1.0000e-003	0.0211	1.2000e-003	0.0223	5.8100e-003	1.1500e-003	6.9600e-003		108.6413	108.6413	7.8000e-003		108.8363
Vendor	0.0149	0.4254	0.1230	1.0100e-003	0.0240	2.0300e-003	0.0260	6.9700e-003	1.9500e-003	8.9200e-003		107.7796	107.7796	7.2100e-003		107.9598
Worker	0.0256	0.0181	0.2005	5.6000e-004	0.0515	4.7000e-004	0.0520	0.0138	4.3000e-004	0.0142		55.3710	55.3710	1.7500e-003		55.4147
Total	**0.0520**	**0.8197**	**0.4109**	**2.5700e-003**	**0.0965**	**3.7000e-003**	**0.1002**	**0.0265**	**3.5300e-003**	**0.0301**		**271.7920**	**271.7920**	**0.0168**		**272.2107**

3.4 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6285	6.3154	6.8391	9.3200e-003		0.3994	0.3994		0.3674	0.3674		902.3055	902.3055	0.2918		909.6011
Total	**0.6285**	**6.3154**	**6.8391**	**9.3200e-003**	**0.0000**	**0.3994**	**0.3994**	**0.0000**	**0.3674**	**0.3674**		**902.3055**	**902.3055**	**0.2918**		**909.6011**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6381	0.1844	1.5100e-003	0.0384	3.0500e-003	0.0415	0.0111	2.9200e-003	0.0140		161.6694	161.6694	0.0108		161.9397
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0632**	**0.6671**	**0.5052**	**2.4000e-003**	**0.1278**	**3.8000e-003**	**0.1316**	**0.0348**	**3.6100e-003**	**0.0384**		**250.2631**	**250.2631**	**0.0136**		**250.6032**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.6285	6.3154	6.8391	9.3200e-003		0.3994	0.3994		0.3674	0.3674	0.0000	902.3055	902.3055	0.2918		909.6011
Total	**0.6285**	**6.3154**	**6.8391**	**9.3200e-003**	**0.0000**	**0.3994**	**0.3994**	**0.0000**	**0.3674**	**0.3674**	**0.0000**	**902.3055**	**902.3055**	**0.2918**		**909.6011**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6381	0.1844	1.5100e-003	0.0360	3.0500e-003	0.0390	0.0105	2.9200e-003	0.0134		161.6694	161.6694	0.0108		161.9397
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0824	7.5000e-004	0.0832	0.0220	6.9000e-004	0.0227		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0632**	**0.6671**	**0.5052**	**2.4000e-003**	**0.1184**	**3.8000e-003**	**0.1222**	**0.0325**	**3.6100e-003**	**0.0361**		**250.2631**	**250.2631**	**0.0136**		**250.6032**

3.5 Excavation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0286	0.0000	0.0286	4.3300e-003	0.0000	4.3300e-003			0.0000			0.0000
Off-Road	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934		909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**	**0.0286**	**0.1015**	**0.1301**	**4.3300e-003**	**0.0934**	**0.0977**		**909.8069**	**909.8069**	**0.2943**		**917.1631**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2825	9.1978	2.1384	0.0245	0.5521	0.0294	0.5816	0.1514	0.0282	0.1795		2,656.0865	2,656.0865	0.1907		2,660.8527
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.2979**	**9.2086**	**2.2587**	**0.0248**	**0.5857**	**0.0297**	**0.6154**	**0.1602**	**0.0284**	**0.1887**		**2,689.3091**	**2,689.3091**	**0.1917**		**2,694.1015**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003			0.0000			0.0000
Off-Road	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934	0.0000	909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**	**0.0122**	**0.1015**	**0.1137**	**1.8500e-003**	**0.0934**	**0.0952**	**0.0000**	**909.8069**	**909.8069**	**0.2943**		**917.1631**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2825	9.1978	2.1384	0.0245	0.5146	0.0294	0.5440	0.1421	0.0282	0.1703		2,656.0865	2,656.0865	0.1907		2,660.8527
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0309	2.8000e-004	0.0312	8.2500e-003	2.6000e-004	8.5100e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.2979**	**9.2086**	**2.2587**	**0.0248**	**0.5455**	**0.0297**	**0.5752**	**0.1504**	**0.0284**	**0.1788**		**2,689.3091**	**2,689.3091**	**0.1917**		**2,694.1015**

3.6 Utility Trenching - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225		300.7685	300.7685	0.0973		303.2004
Total	**0.2095**	**2.1052**	**2.2797**	**3.1100e-003**		**0.1331**	**0.1331**		**0.1225**	**0.1225**		**300.7685**	**300.7685**	**0.0973**		**303.2004**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.0153**	**0.0109**	**0.1203**	**3.3000e-004**	**0.0335**	**2.8000e-004**	**0.0338**	**8.8900e-003**	**2.6000e-004**	**9.1500e-003**		**33.2226**	**33.2226**	**1.0500e-003**		**33.2488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2095	2.1052	2.2797	3.1100e-003		0.1331	0.1331		0.1225	0.1225	0.0000	300.7685	300.7685	0.0973		303.2004
Total	**0.2095**	**2.1052**	**2.2797**	**3.1100e-003**		**0.1331**	**0.1331**		**0.1225**	**0.1225**	**0.0000**	**300.7685**	**300.7685**	**0.0973**		**303.2004**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0309	2.8000e-004	0.0312	8.2500e-003	2.6000e-004	8.5100e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.0153**	**0.0109**	**0.1203**	**3.3000e-004**	**0.0309**	**2.8000e-004**	**0.0312**	**8.2500e-003**	**2.6000e-004**	**8.5100e-003**		**33.2226**	**33.2226**	**1.0500e-003**		**33.2488**

3.6 Utility Trenching - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028		300.9001	300.9001	0.0973		303.3330
Total	**0.1873**	**1.8958**	**2.2602**	**3.1100e-003**		**0.1118**	**0.1118**		**0.1028**	**0.1028**		**300.9001**	**300.9001**	**0.0973**		**303.3330**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	**0.0143**	**9.7800e-003**	**0.1105**	**3.2000e-004**	**0.0335**	**2.7000e-004**	**0.0338**	**8.8900e-003**	**2.5000e-004**	**9.1400e-003**		**32.1675**	**32.1675**	**9.5000e-004**		**32.1912**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1873	1.8958	2.2602	3.1100e-003		0.1118	0.1118		0.1028	0.1028	0.0000	300.9001	300.9001	0.0973		303.3330
Total	**0.1873**	**1.8958**	**2.2602**	**3.1100e-003**		**0.1118**	**0.1118**		**0.1028**	**0.1028**	**0.0000**	**300.9001**	**300.9001**	**0.0973**		**303.3330**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0309	2.7000e-004	0.0312	8.2500e-003	2.5000e-004	8.5000e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	**0.0143**	**9.7800e-003**	**0.1105**	**3.2000e-004**	**0.0309**	**2.7000e-004**	**0.0312**	**8.2500e-003**	**2.5000e-004**	**8.5000e-003**		**32.1675**	**32.1675**	**9.5000e-004**		**32.1912**

3.7 Fine Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3746	3.7916	4.5205	6.2100e-003		0.2236	0.2236		0.2057	0.2057		601.8002	601.8002	0.1946		606.6660
Total	**0.3746**	**3.7916**	**4.5205**	**6.2100e-003**	**0.0000**	**0.2236**	**0.2236**	**0.0000**	**0.2057**	**0.2057**		**601.8002**	**601.8002**	**0.1946**		**606.6660**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0302**	**0.2101**	**0.2403**	**1.0400e-003**	**0.0687**	**8.6000e-004**	**0.0696**	**0.0185**	**8.1000e-004**	**0.0193**		**107.0817**	**107.0817**	**5.0300e-003**		**107.2074**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3746	3.7916	4.5205	6.2100e-003		0.2236	0.2236		0.2057	0.2057	0.0000	601.8002	601.8002	0.1946		606.6660
Total	**0.3746**	**3.7916**	**4.5205**	**6.2100e-003**	**0.0000**	**0.2236**	**0.2236**	**0.0000**	**0.2057**	**0.2057**	**0.0000**	**601.8002**	**601.8002**	**0.1946**		**606.6660**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0120	4.1000e-004	0.0124	3.4900e-003	3.9000e-004	3.8800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0515	4.5000e-004	0.0520	0.0138	4.2000e-004	0.0142		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0302**	**0.2101**	**0.2403**	**1.0400e-003**	**0.0635**	**8.6000e-004**	**0.0644**	**0.0172**	**8.1000e-004**	**0.0180**		**107.0817**	**107.0817**	**5.0300e-003**		**107.2074**

3.8 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8896	9.0281	7.1259	0.0147		0.4003	0.4003		0.3836	0.3836		1,394.9106	1,394.9106	0.2725		1,401.7239
Total	**0.8896**	**9.0281**	**7.1259**	**0.0147**		**0.4003**	**0.4003**		**0.3836**	**0.3836**		**1,394.9106**	**1,394.9106**	**0.2725**		**1,401.7239**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.4533	0.4212	3.7500e-003	0.0960	3.0700e-003	0.0991	0.0277	2.9400e-003	0.0306		401.0183	401.0183	0.0259		401.6655
Worker	0.1526	0.1044	1.1784	3.4400e-003	0.3577	2.8900e-003	0.3606	0.0949	2.6600e-003	0.0975		343.1204	343.1204	0.0101		343.3728
Total	**0.2004**	**1.5577**	**1.5996**	**7.1900e-003**	**0.4537**	**5.9600e-003**	**0.4597**	**0.1225**	**5.6000e-003**	**0.1281**		**744.1386**	**744.1386**	**0.0360**		**745.0383**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8896	9.0281	7.1259	0.0147		0.4003	0.4003		0.3836	0.3836	0.0000	1,394.9106	1,394.9106	0.2725		1,401.7239
Total	**0.8896**	**9.0281**	**7.1259**	**0.0147**		**0.4003**	**0.4003**		**0.3836**	**0.3836**	**0.0000**	**1,394.9106**	**1,394.9106**	**0.2725**		**1,401.7239**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0479	1.4533	0.4212	3.7500e-003	0.0899	3.0700e-003	0.0930	0.0261	2.9400e-003	0.0291		401.0183	401.0183	0.0259		401.6655
Worker	0.1526	0.1044	1.1784	3.4400e-003	0.3297	2.8900e-003	0.3326	0.0880	2.6600e-003	0.0907		343.1204	343.1204	0.0101		343.3728
Total	**0.2004**	**1.5577**	**1.5996**	**7.1900e-003**	**0.4196**	**5.9600e-003**	**0.4255**	**0.1141**	**5.6000e-003**	**0.1197**		**744.1386**	**744.1386**	**0.0360**		**745.0383**

3.8 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	8.0816	7.0266	0.0147		0.3541	0.3541		0.3394	0.3394		1,395.0011	1,395.0011	0.2704		1,401.7603
Total	**0.8197**	**8.0816**	**7.0266**	**0.0147**		**0.3541**	**0.3541**		**0.3394**	**0.3394**		**1,395.0011**	**1,395.0011**	**0.2704**		**1,401.7603**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0449	1.3812	0.3987	3.7200e-003	0.0960	2.6900e-003	0.0987	0.0277	2.5700e-003	0.0302		397.4554	397.4554	0.0250		398.0799
Worker	0.1433	0.0943	1.0854	3.3200e-003	0.3577	2.8000e-003	0.3605	0.0949	2.5800e-003	0.0974		331.0622	331.0622	9.1200e-003		331.2901
Total	**0.1882**	**1.4754**	**1.4840**	**7.0400e-003**	**0.4537**	**5.4900e-003**	**0.4592**	**0.1225**	**5.1500e-003**	**0.1277**		**728.5177**	**728.5177**	**0.0341**		**729.3700**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	8.0816	7.0266	0.0147		0.3541	0.3541		0.3394	0.3394	0.0000	1,395.0011	1,395.0011	0.2704		1,401.7603
Total	**0.8197**	**8.0816**	**7.0266**	**0.0147**		**0.3541**	**0.3541**		**0.3394**	**0.3394**	**0.0000**	**1,395.0011**	**1,395.0011**	**0.2704**		**1,401.7603**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0449	1.3812	0.3987	3.7200e-003	0.0899	2.6900e-003	0.0926	0.0261	2.5700e-003	0.0287		397.4554	397.4554	0.0250		398.0799
Worker	0.1433	0.0943	1.0854	3.3200e-003	0.3297	2.8000e-003	0.3325	0.0880	2.5800e-003	0.0906		331.0622	331.0622	9.1200e-003		331.2901
Total	**0.1882**	**1.4754**	**1.4840**	**7.0400e-003**	**0.4196**	**5.4900e-003**	**0.4251**	**0.1141**	**5.1500e-003**	**0.1193**		**728.5177**	**728.5177**	**0.0341**		**729.3700**

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3429	3.4133	4.7839	7.1900e-003		0.1749	0.1749		0.1609	0.1609		695.7073	695.7073	0.2250		701.3325
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3429**	**3.4133**	**4.7839**	**7.1900e-003**		**0.1749**	**0.1749**		**0.1609**	**0.1609**		**695.7073**	**695.7073**	**0.2250**		**701.3325**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0384	1.0800e-003	0.0395	0.0111	1.0300e-003	0.0121		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.0404**	**0.5672**	**0.3291**	**2.0100e-003**	**0.0943**	**1.5200e-003**	**0.0958**	**0.0259**	**1.4300e-003**	**0.0273**		**210.7106**	**210.7106**	**0.0114**		**210.9960**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3429	3.4133	4.7839	7.1900e-003		0.1749	0.1749		0.1609	0.1609	0.0000	695.7073	695.7073	0.2250		701.3325
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3429**	**3.4133**	**4.7839**	**7.1900e-003**		**0.1749**	**0.1749**		**0.1609**	**0.1609**	**0.0000**	**695.7073**	**695.7073**	**0.2250**		**701.3325**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0180	0.5525	0.1595	1.4900e-003	0.0360	1.0800e-003	0.0370	0.0105	1.0300e-003	0.0115		158.9822	158.9822	9.9900e-003		159.2320
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0515	4.4000e-004	0.0520	0.0138	4.0000e-004	0.0142		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.0404**	**0.5672**	**0.3291**	**2.0100e-003**	**0.0875**	**1.5200e-003**	**0.0890**	**0.0242**	**1.4300e-003**	**0.0256**		**210.7106**	**210.7106**	**0.0114**		**210.9960**

3.10 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	35.0602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2386	1.6432	2.1159	3.4700e-003		0.0953	0.0953		0.0953	0.0953		328.3561	328.3561	0.0214		328.8905
Total	**35.2988**	**1.6432**	**2.1159**	**3.4700e-003**		**0.0953**	**0.0953**		**0.0953**	**0.0953**		**328.3561**	**328.3561**	**0.0214**		**328.8905**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0269	0.0177	0.2035	6.2000e-004	0.0671	5.2000e-004	0.0676	0.0178	4.8000e-004	0.0183		62.0742	62.0742	1.7100e-003		62.1169
Total	**0.0269**	**0.0177**	**0.2035**	**6.2000e-004**	**0.0671**	**5.2000e-004**	**0.0676**	**0.0178**	**4.8000e-004**	**0.0183**		**62.0742**	**62.0742**	**1.7100e-003**		**62.1169**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	35.0602					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2386	1.6432	2.1159	3.4700e-003		0.0953	0.0953		0.0953	0.0953	0.0000	328.3561	328.3561	0.0214		328.8905
Total	**35.2988**	**1.6432**	**2.1159**	**3.4700e-003**		**0.0953**	**0.0953**		**0.0953**	**0.0953**	**0.0000**	**328.3561**	**328.3561**	**0.0214**		**328.8905**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0269	0.0177	0.2035	6.2000e-004	0.0618	5.2000e-004	0.0623	0.0165	4.8000e-004	0.0170		62.0742	62.0742	1.7100e-003		62.1169
Total	**0.0269**	**0.0177**	**0.2035**	**6.2000e-004**	**0.0618**	**5.2000e-004**	**0.0623**	**0.0165**	**4.8000e-004**	**0.0170**		**62.0742**	**62.0742**	**1.7100e-003**		**62.1169**

3.11 Finishing/Landscaping - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4941	5.0269	6.7138	9.3300e-003		0.2704	0.2704		0.2487	0.2487		903.7168	903.7168	0.2923		911.0239
Total	**0.4941**	**5.0269**	**6.7138**	**9.3300e-003**	**0.0000**	**0.2704**	**0.2704**	**0.0000**	**0.2487**	**0.2487**		**903.7168**	**903.7168**	**0.2923**		**911.0239**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0236	0.2713	8.3000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		82.7656	82.7656	2.2800e-003		82.8225
Total	**0.0358**	**0.0236**	**0.2713**	**8.3000e-004**	**0.0894**	**7.0000e-004**	**0.0901**	**0.0237**	**6.4000e-004**	**0.0244**		**82.7656**	**82.7656**	**2.2800e-003**		**82.8225**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4941	5.0269	6.7138	9.3300e-003		0.2704	0.2704		0.2487	0.2487	0.0000	903.7168	903.7168	0.2923		911.0239
Total	**0.4941**	**5.0269**	**6.7138**	**9.3300e-003**	**0.0000**	**0.2704**	**0.2704**	**0.0000**	**0.2487**	**0.2487**	**0.0000**	**903.7168**	**903.7168**	**0.2923**		**911.0239**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0236	0.2713	8.3000e-004	0.0824	7.0000e-004	0.0831	0.0220	6.4000e-004	0.0226		82.7656	82.7656	2.2800e-003		82.8225
Total	**0.0358**	**0.0236**	**0.2713**	**8.3000e-004**	**0.0824**	**7.0000e-004**	**0.0831**	**0.0220**	**6.4000e-004**	**0.0226**		**82.7656**	**82.7656**	**2.2800e-003**		**82.8225**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9737	3.6542	31.3974	0.1032	11.1746	0.0809	11.2555	2.9643	0.0746	3.0389		10,309.6581	10,309.6581	0.3594		10,318.6437
Unmitigated	1.9737	3.6542	31.3974	0.1032	11.1746	0.0809	11.2555	2.9643	0.0746	3.0389		10,309.6581	10,309.6581	0.3594		10,318.6437

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
High School	998.88	0.00	0.00	3,818,905	3,818,905
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	998.88	0.00	0.00	3,818,905	3,818,905

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
High School	0.661796	0.054446	0.247057	0.020000	0.002143	0.000844	0.002741	0.004178	0.000000	0.000000	0.006701	0.000094	0.000000
Other Non-Asphalt Surfaces	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
NaturalGas Unmitigated	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1376.93	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0149**	**0.1350**	**0.1134**	**8.1000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**		**161.9919**	**161.9919**	**3.1000e-003**	**2.9700e-003**	**162.9546**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.37693	0.0149	0.1350	0.1134	8.1000e-004		0.0103	0.0103		0.0103	0.0103		161.9919	161.9919	3.1000e-003	2.9700e-003	162.9546
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0149**	**0.1350**	**0.1134**	**8.1000e-004**		**0.0103**	**0.0103**		**0.0103**	**0.0103**		**161.9919**	**161.9919**	**3.1000e-003**	**2.9700e-003**	**162.9546**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Unmitigated	1.0925	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Total	**1.0925**	**8.0000e-005**	**9.0400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0193**	**0.0193**	**5.0000e-005**		**0.0206**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1249					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0193	0.0193	5.0000e-005		0.0206
Total	**1.0925**	**8.0000e-005**	**9.0400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0193**	**0.0193**	**5.0000e-005**		**0.0206**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Construction Localized Significance Thresholds: Demolition

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	1.00	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	2	1
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

1.00 Acres	**25**	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Demolition

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	1.00	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	2	1
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

1.00 Acres	**25**	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Rough Grading + Excavation

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	1.15	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	3	1.5
NOx	**79**	Graders	0.5	0.0625	0	0	0
CO	**735**	Dozers	0.5	0.0625	0	0	0
PM10	**5.45**	Scrapers	1	0.125	0	0	0
PM2.5	**3.30**					**Acres**	1.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	2	108	106	110	126	179
		79	79	86	109	170
CO	1	680	882	1259	2406	7911
	2	1048	1368	1799	3016	8637
		735	955	1340	2498	8020
PM10	1	5	15	33	70	179
	2	8	25	43	80	190
		5	17	35	72	181
PM2.5	1	3	5	10	24	102
	2	5	7	12	28	110
		3	5	10	25	103

Central LA

1.15 Acres

	25	**50**	**100**	**200**	**500**
NOx	79	79	86	109	170
CO	735	955	1340	2498	8020
PM10	5	17	35	72	181
PM2.5	3	5	10	25	103

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Utility Trenching

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	0.50	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

0.50 Acres	**25**	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Fine Grading

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	1.00	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	2	1
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	0.00	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	0	0	0
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	0.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

0.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Paving

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	0.50	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Architectural Coating

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	0.00	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	0	0	0
NOx	**74**	Graders	0.5	0.0625	0	0	0
CO	**680**	Dozers	0.5	0.0625	0	0	0
PM10	**5.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	0.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	1	74	74	82	106	168
		74	74	82	106	168
CO	1	680	882	1259	2406	7911
	1	680	882	1259	2406	7911
		680	882	1259	2406	7911
PM10	1	5	15	33	70	179
	1	5	15	33	70	179
		5	15	33	70	179
PM2.5	1	3	5	10	24	102
	1	3	5	10	24	102
		3	5	10	24	102

Central LA

0.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	74	74	82	106	168
CO	680	882	1259	2406	7911
PM10	5	15	33	70	179
PM2.5	3	5	10	24	102

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Finishing/Landscaping

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
1	1.15	25	82	1.15

Source Receptor	Central LA	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	3	1.5
NOx	**79**	Graders	0.5	0.0625	0	0	0
CO	**735**	Dozers	0.5	0.0625	0	0	0
PM10	**5.45**	Scrapers	1	0.125	0	0	0
PM2.5	**3.30**					**Acres**	1.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	2	108	106	110	126	179
		79	79	86	109	170
CO	1	680	882	1259	2406	7911
	2	1048	1368	1799	3016	8637
		735	955	1340	2498	8020
PM10	1	5	15	33	70	179
	2	8	25	43	80	190
		5	17	35	72	181
PM2.5	1	3	5	10	24	102
	2	5	7	12	28	110
		3	5	10	25	103

Central LA

1.15 Acres

	25	**50**	**100**	**200**	**500**
NOx	79	79	86	109	170
CO	735	955	1340	2498	8020
PM10	5	17	35	72	181
PM2.5	3	5	10	25	103

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Operation Localized Significance Thresholds - Sesitive Receptor

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
1	1.15	25	82

Source Receptor **Central LA**
Distance (meters) 25
NOx **79**
CO **735**
PM10 **2.00**
PM2.5 **1.15**

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	74	74	82	106	168
	2	108	106	110	126	179
		79	79	86	109	170
CO	1	680	882	1259	2406	7911
	2	1048	1368	1799	3016	8637
		735	955	1340	2498	8020
PM10	1	2	4	8	17	43
	2	2	6	11	20	46
		2	4	8	17	43
PM2.5	1	1	2	3	6	25
	2	2	2	3	7	27
		1	2	3	6	25

Central LA

1.15 Acres

	25	**50**	**100**	**200**	**500**
NOx	79	79	86	109	170
CO	735	955	1340	2498	8020
PM10	2	4	8	17	43
PM2.5	1	2	3	6	25

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
1	1	1	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2010 - Table C-1. 2006 – 2008

Regional Construction Emissions Worksheet - Unmitigated

*CalEEMod, Version 2016.3.2

Demolition

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Fugitive Dust		0.0000	0.0000	0.0000	0.0000	0.3286	0.0498
	Off-Road		0.6903	6.9366	7.5118	0.0102	0.4386	0.4036
	Total		**0.6903**	**6.9366**	**7.5118**	**0.0102**	**0.7672**	**0.4533**
Offsite								
	Hauling		0.0317	1.0316	0.2398	0.0028	0.0610	0.0191
	Vendor		0.0223	0.6382	0.1844	0.0016	0.0390	0.0134
	Worker		0.0256	0.0181	0.2189	0.0006	0.0520	0.0142
	Total		**0.0796**	**1.6878**	**0.6248**	**0.0050**	**0.1520**	**0.0466**
TOTAL			***0.7699***	***8.6244***	***8.1366***	***0.0152***	***0.9192***	***0.4999***

Asphalt & Concrete Demolition

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Fugitive Dust		0.0000	0.0000	0.0000	0.0000	0.1205	0.0182
	Off-Road		0.4190	4.2103	4.5594	0.0062	0.2662	0.2449
	Total		**0.4190**	**4.2103**	**4.5594**	**0.0062**	**0.3867**	**0.2632**
Offsite								
	Hauling		0.0116	0.3762	0.0875	0.0010	0.0223	0.0070
	Vendor		0.0149	0.4255	0.1230	0.0010	0.0260	0.0089
	Worker		0.0256	0.0181	0.2189	0.0006	0.0520	0.0142
	Total		**0.0520**	**0.8197**	**0.4127**	**0.0027**	**0.1002**	**0.0301**
TOTAL			***0.4710***	***5.0300***	***4.9721***	***0.0089***	***0.4869***	***0.2933***

Rough Grading							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2020**						
	Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Off-Road	0.6285	6.3154	6.8391	0.0093	0.3994	0.3674
	Total	**0.6285**	**6.3154**	**6.8391**	**0.0093**	**0.3994**	**0.3674**
Offsite							
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Vendor	0.0223	0.6382	0.1844	0.0016	0.0390	0.0134
	Worker	0.0409	0.0290	0.3503	0.0009	0.0832	0.0227
	Total	**0.0632**	**0.6671**	**0.5175**	**0.0025**	**0.1222**	**0.0361**
TOTAL		***0.6917***	***6.9825***	***7.3566***	***0.0118***	***0.5216***	***0.4035***

Excavation							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019**						
	Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0122	0.0019
	Off-Road	0.2775	3.5223	2.0808	0.0094	0.1015	0.0934
	Total	**0.2775**	**3.5223**	**2.0808**	**0.0094**	**0.1137**	**0.0952**
Offsite							
	Hauling	0.2825	9.1978	2.1384	0.0249	0.5440	0.1703
	Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Worker	0.0153	0.0109	0.1314	0.0004	0.0312	0.0085
	Total	**0.2979**	**9.2086**	**2.2587**	**0.0253**	**0.5752**	**0.1784**
TOTAL		***0.5754***	***12.7309***	***4.3395***	***0.0347***	***0.6889***	***0.2736***

Rough Grading + Excavation		***1.2671***	***19.7134***	***11.6961***	***0.0465***	***1.2105***	***0.6771***

Utility Trenching

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2020-2021**						
	Off-Road	0.2095	2.1052	2.2797	0.0031	0.1331	0.1225
	Total	**0.2095**	**2.1052**	**2.2797**	**0.0031**	**0.1331**	**0.1225**
Offsite							
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Worker	0.0153	0.0109	0.1314	0.0004	0.0312	0.0085
	Total	**0.0153**	**0.0109**	**0.1314**	**0.0004**	**0.0312**	**0.0085**
TOTAL		***0.2248***	***2.1161***	***2.4111***	***0.0035***	***0.1643***	***0.1310***

Fine Grading

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021**						
	Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Off-Road	0.3746	3.7916	4.5205	0.0062	0.2236	0.2057
	Total	0.3746	3.7916	4.5205	0.0062	0.2236	0.2057
Offsite							
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Vendor	0.0064	0.1942	0.0562	0.0005	0.0124	0.0039
	Worker	0.0238	0.0163	0.2014	0.0006	0.0520	0.0142
	Total	0.0302	0.2101	0.2522	0.0011	0.0644	0.0180
TOTAL		***0.4048***	***4.0017***	***4.7727***	***0.0073***	***0.2880***	***0.2237***

Building Construction

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021-2022**						
	Off-Road	0.8896	9.0281	7.1259	0.0147	0.4003	0.3836
	Total	**0.8896**	**9.0281**	**7.1259**	**0.0147**	**0.4003**	**0.3836**
Offsite							
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Vendor	0.0479	1.4563	0.4212	0.0039	0.0930	0.0291
	Worker	0.1526	0.1044	1.2889	0.0037	0.3326	0.0907
	Total	**0.2004**	**1.5577**	**1.6696**	**0.0075**	**0.4255**	**0.1197**
TOTAL		***1.0900***	***10.5858***	***8.7955***	***0.0222***	***0.8258***	***0.5033***

Paving

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022**						
Off-Road		0.3429	3.4133	4.7839	0.0072	0.1749	0.1609
Paving		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.3429**	**3.4133**	**4.7839**	**0.0072**	**0.1749**	**0.1609**
Offsite							
Hauling		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor		0.0180	0.5540	0.1595	0.0015	0.0370	0.0115
Worker		0.0224	0.0147	0.1858	0.0006	0.0520	0.0142
Total		**0.0404**	**0.5673**	**0.3299**	**0.0021**	**0.0890**	**0.0256**
TOTAL		***0.3833***	***3.9806***	***5.1138***	***0.0093***	***0.2639***	***0.1865***

Architectural Coating

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022**						
Architectural Coating		35.0602	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road		0.2386	1.6432	2.1159	0.0035	0.0953	0.0953
Total		**35.2988**	**1.6432**	**2.1159**	**0.0035**	**0.0953**	**0.0953**
Offsite							
Hauling		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker		0.0269	0.0177	0.2230	0.0007	0.0623	0.0170
Total		**0.0269**	**0.0177**	**0.2230**	**0.0007**	**0.0623**	**0.0170**
TOTAL		***35.3257***	***1.6609***	***2.3389***	***0.0041***	***0.1576***	***0.1123***

Finishing/Landscaping							
		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021**						
	Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Off-Road	0.4941	5.0269	6.7138	0.0093	0.2704	0.2487
	Total	**0.4941**	**5.0269**	**6.7138**	**0.0093**	**0.2704**	**0.2487**
Offsite							
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Worker	0.0358	0.0236	0.2973	0.0009	0.0831	0.0226
	Total	**0.0358**	**0.0236**	**0.2973**	**0.0009**	**0.0831**	**0.0226**
TOTAL		***0.5299***	***5.0505***	***7.0111***	***0.0102***	***0.3535***	***0.2713***
MAX DAILY		**35.3257**	**19.7134**	**11.6961**	**0.0465**	**1.2105**	**0.6771**
Regional Thresholds		**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?		No	No	No	No	No	No

Localized Construction Emissions Worksheet - Unmitigated

*CalEEMod, Version 2016.3.2

Demolition					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Fugitive Dust	0.00	0.00	0.33	0.05
	Off-Road	6.94	7.51	0.44	0.40
	Total	**6.94**	**7.51**	**0.77**	**0.45**
1.00-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Asphalt & Concrete Demolition					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Fugitive Dust	0.00	0.00	0.12	0.02
	Off-Road	4.21	4.56	0.27	0.24
	Total	**4.21**	**4.56**	**0.39**	**0.26**
1.00-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Rough Grading					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Fugitive Dust	0.00	0.00	0.00	0.00
	Off-Road	6.32	6.84	0.40	0.37
	Total	**6.32**	**6.84**	**0.40**	**0.37**

Excavation					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2019**				
	Fugitive Dust	0.00	0.00	0.01	0.00
	Off-Road	3.52	2.08	0.10	0.09
	Total	**3.52**	**2.08**	**0.11**	**0.10**
Rough Grading + Excavation		***9.84***	***8.92***	***0.51***	***0.46***
1.15-acres LST		**79**	**735**	**5.45**	**3.30**
Exceed Threshold?		No	No	No	No

Utility Trenching

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020-2021**				
	Off-Road	2.11	2.28	0.13	0.12
	Total	**2.11**	**2.28**	**0.13**	**0.12**
0.50-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Fine Grading					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Fugitive Dust	0.00	0.00	0.00	0.00
	Off-Road	3.79	4.52	0.22	0.21
	Total	3.79	4.52	0.22	0.21
1.00-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Building Construction					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021-2022**				
	Off-Road	9.03	7.13	0.40	0.38
	Total	**9.03**	**7.13**	**0.40**	**0.38**
0.00-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Paving					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2022**				
	Off-Road	3.41	4.78	0.17	0.16
	Paving	0.00	0.00	0.00	0.00
	Total	**3.41**	**4.78**	**0.17**	**0.16**
0.50-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Architectural Coating					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2022**				
	Architectural Coating	0.00	0.00	0.00	0.00
	Off-Road	1.64	2.12	0.10	0.10
	Total	**1.64**	**2.12**	**0.10**	**0.10**

0.00-acres LST		**74**	**680**	**5.00**	**3.00**
Exceed Threshold?		No	No	No	No

Finishing/Landscaping					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2022**				
	Fugitive Dust	0.00	0.00	0.00	0.00
	Off-Road	5.03	6.71	0.27	0.25
	Total	**5.03**	**6.71**	**0.27**	**0.25**
1.15-acres LST		**79**	**735**	**5.45**	**3.30**
Exceed Threshold?		No	No	No	No

Regional Operation Emissions Worksheet - Unmitigated

*CalEEMod, Version 2016.3.2 and EMFAC2017, Version 1.0.2

Existing - 2022

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.43	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.08	0.00	0.01	0.01
Mobile	0.20	0.29	2.64	0.01	0.83	0.22
Total	**0.64**	**0.38**	**2.73**	**0.01**	**0.84**	**0.23**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.43	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.08	0.00	0.01	0.01
Mobile	0.19	0.30	2.49	0.01	0.83	0.22
Total	**0.63**	**0.40**	**2.58**	**0.01**	**0.84**	**0.23**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.43	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.08	0.00	0.01	0.01
Mobile	0.20	0.30	2.64	0.01	0.83	0.22
Total	**0.64**	**0.40**	**2.73**	**0.01**	**0.84**	**0.23**

Buildout Year - 2022

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.09	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.14	0.11	0.00	0.01	0.01
Mobile	2.04	3.40	33.91	0.11	11.26	3.04
Total	**3.15**	**3.54**	**34.03**	**0.11**	**11.27**	**3.05**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.09	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.14	0.11	0.00	0.01	0.01
Mobile	1.97	3.65	31.40	0.10	11.26	3.04
Total	**3.08**	**3.79**	**31.52**	**0.10**	**11.27**	**3.05**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	1.09	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.14	0.11	0.00	0.01	0.01
Mobile	2.04	3.65	33.91	0.11	11.26	3.04
Total	**3.15**	**3.79**	**34.03**	**0.11**	**11.27**	**3.05**

Net Difference

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	0.67	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.04	0.03	0.00	0.00	0.00
Mobile	1.84	3.35	31.27	0.10	10.43	2.82
Total	**2.51**	**3.39**	**31.30**	**0.10**	**10.43**	**2.82**
Regional Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

Localized Operation Emissions Worksheet - Unmitigated

*CalEEMod, Version 2016.3.2 and EMFAC2017, Version 1.0.2

Existing - 2022

Summer

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**

Winter

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**

Max Daily

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**

Buildout Year - 2022

Summer

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.01	0.00	0.00
Total	**0.00**	**0.01**	**0.00**	**0.00**

Winter

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.01	0.00	0.00
Total	**0.00**	**0.01**	**0.00**	**0.00**

Max Daily

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.01	0.00	0.00
Total	**0.00**	**0.01**	**0.00**	**0.00**

Net Difference

	NOx	CO	PM10 Total	PM2.5 Total
Area	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**

Site Preparation 1.15-acres LST	**79**	**735**	**2.00**	**1.15**
Exceeds Thresholds?	No	No	No	No

Greenhouse Gas Emissions Summary

Operation 2022

Existing Land Use - 2018

	MT/yr	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area Sources		0	9.90E-04	9.90E-04	0.00E+00	0	0.00106	0%
Energy Use		0	160.82	160.82	3.17E-03	1.05E-03	161	37%
Mobile Sources		0	206.67	206.67	8.62E-03	0	207	48%
Waste Generation		21.6368	0	21.6368	1.2787	0	54	12%
Water/Wastewater		2.07E-01	9.91E+00	1.01E+01	9.50E-04	5.00E-04	10	2%
Total		22	353	375	1	0	432	100%

Proposed Project - 2022

	MT/yr	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area Sources		0	2.19E-03	2.19E-03	1.00E-05	0	0.00234	0%
Energy Use		0	277.74	277.74	6.44E-03	1.72E-03	278	18%
Mobile Sources		0	1,234.32	1,234.32	4.27E-02	0	1,235	82%
Waste Generation		0	0	0	0	0	0	0%
Water/Wastewater		0.00E+00	1.91E+00	1.9072	5.00E-05	1.00E-05	2	0%
Total		0	1514	1514	0	0	1,516	100%

Net Emission Rates from Proposed Project

	MT/yr	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area Sources		0	0.0012	0.0012	0.00001	0	0.00	0%
Energy Use		0	116.9202	116.9202	0.00327	0.00067	117	11%
Mobile Sources		0	1027.651	1027.651	0.03408	0	1,029	94%
Waste Generation		-21.6368	0	-21.6368	-1.2787	0	-54	-5%
Water/Wastewater		-0.207	-7.999	-8.206	-0.0009	-0.00049	-8.4	-1%
Amoritized Construction							14	1%
Total		**-21.80**	**1160.759**	**1138.956**	**-1.2421**	**0.00041**	**1,098**	**100%**

SCAQMD Threshold	**3,000**
Exceeds Threshold	**No**

2030 Efficiency Threshold	**3.2**
Service Population	600
Project GHG Efficiency	**2.5**
Exceeds Threshold	**No**

Construction

Construction

Unmitigated	Const.
2020	116
2021	225
2022	75
Total Construction	416

30-Year Amortization	**14**
SCAQMD Threshold	**3,000**
Exceeds Threshold	**No**

GHG Emissions Target Setting - Forecasting the 2030 Efficiency Target

2020 Scoping Plan Emissions Inventory

Source: CARB 1990 Inventory. California Air Resources Board. 2007, November. California Greenhouse Gas Inventory (millions of metric tonnes of CO2 equivalent) — Summary by Economic Sector. https://www.arb.ca.gov/cc/inventory/1990level/1990data.htm

1990 End Use Sector	MTCO2e	MMTCO2e	Notes
Electricity	94,754,207	94.8	Removed Industrial
Transportation	137,901,182	137.9	On-Road Only
Landfills	7,447,544	7.4	Landfill
Wastewater	3,183,648	3.2	Domestic Wastewater Treatment
Commercial	13,848,597	13.8	Removed National Security
Residential	29,740,487	29.7	Includes all
TOTAL LAND USE	286,875,666	286.9	

2017 Scoping Plan Emissions Inventory

Source: Pathways Main Outputs Final (Dec 2017). California Air Resources Board. 2017, December. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

End Use Sector 2030	MMTCO2e				
	Reference Scenario	Scoping Plan Scenario	Change	Percent Change	Sector Definition
Residential	46.5	41.4	-5.1	-11.0%	Residential final energy consumption
Commercial	36.00	30.1	-5.90	-16.4%	Commercial final energy consumption
Transportation	123.1	105.1	-18	-14.6%	Transportation energy consumption
Industrial*	33.8	30.7	-3.1	-9.2%	Industrial manufacturing final energy consumption,
Oil & Gas Extraction*	19.5	19.4	-0.1	-0.5%	Energy used in the extraction of oil and gas
Petroleum Refining*	32.6	32.5	-0.1	-0.3%	Energy used in petroleum Refining
Agriculture	7.7	6.8	-0.9	-11.7%	Energy use of physical infrastructure of agriculture, like buildings and pumps
Transportation Communications and Utilities	5.5	5.00	-0.5	-9.1%	Transportation Communications and Utilities (TCU) energy supports public infrastructure, like street lighting and waste treatment facilities
Non-Energy GHGs*	84.3	49.4	-34.9	-41.40%	Examples of non-energy GHG emissions include methane and N2O emissions from agriculture and waste, refrigerant F-gases, and emissions from cement production
Solid Waste Non-Energy GHGs	10.7	9.1	-1.6	-14.95%	Isolated the Solid Waste Subsector
Unspecified	0	0	0	n/a	
	389	320.4	-68.6	-17.63%	
Target	260	260			
Gap	-129	-60.4			

CARB 2017 Scoping Plan Assumes GAP from the Scoping Plan Scenario is closed by the Cap-and-Trade

GHG Emissions Target Setting - Forecasting the 2030 Efficiency Target

STATEWIDE SERVICE POPULATION CALCULATIONS

Population	
2020	40,639,392
2021	40,980,939
2022	41,321,565
2023	41,659,526
2024	41,994,283
2025	42,326,397
2026	42,655,695
2027	42,981,484
2028	43,304,691
2029	43,624,393
2030	43,939,250
2031	44,250,503
2032	44,556,617
2033	44,856,079
2034	45,150,800
2035	45,440,735
2036	45,726,459
2037	46,006,009
2038	46,277,743
2039	46,544,307
2040	46,804,202
2050	49,077,801

California Department of Finance. 2018, March 8. Report P-1 (County): State and County Total Population Projections, 2010-2060 (1 -year increments).http://www.dof.ca.gov/Forecasting/Demographics/Projections/

GHG Emissions Target Setting - Forecasting the 2030 Efficiency Target

CALIFORNIA SERVICE POPULATION (ESTIMATE)

Employment

	Total Employment	Farm Employment	Natural Resources and Mining Employment	Manufacturing + Durable Manufacturing Employment	Employment w/o Industrial and Agricultural Sectors
2020	17,630,930	418,171	22,268	2,177,747	15,012,744
2021	17,787,640	417,961	22,388	2,184,418	15,162,873
2022	17,939,780	418,291	22,578	2,190,008	15,308,902
2023	18,083,910	418,582	22,538	2,192,829	15,449,961
2024	18,224,870	418,862	22,398	2,195,081	15,588,529
2025	18,370,230	419,122	22,188	2,204,979	15,723,941
2026	18,511,920	419,372	22,198	2,215,447	15,854,903
2027	18,648,200	419,612	22,408	2,224,416	15,981,764
2028	18,808,150	419,872	22,438	2,229,397	16,136,443
2029	18,971,340	420,142	22,478	2,234,398	16,294,322
2030	19,137,080	420,402	22,508	2,239,408	16,454,761
2031	19,299,670	420,673	22,538	2,244,399	16,612,060
2032	19,458,160	420,933	22,578	2,249,420	16,765,229
2033	19,615,470	421,203	22,608	2,254,441	16,917,218
2034	19,770,890	421,463	22,648	2,259,502	17,067,277
2035	19,924,140	421,733	22,678	2,264,562	17,215,166
2036	20,078,780	421,993	22,718	2,269,643	17,364,425
2037	20,235,200	422,263	22,748	2,274,724	17,515,465
2038	20,395,030	422,523	22,788	2,279,835	17,669,884
2039	20,551,830	422,794	22,818	2,284,955	17,821,263
2040	20,709,630	423,054	22,859	2,290,086	17,973,632
2050	22,371,010	425,715	23,209	2,342,246	19,579,840

California Department of Transportation. 2017. Long-Term Socio-Economic Forecasts by County.
http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic.html

GHG Emissions Target Setting - Forecasting the 2030 Efficiency Target

Service Population (SP)

	Total Employment	Employment w/o Industrial and Agricultural Sectors
2020	58,270,322	55,652,136
2021	58,768,579	56,143,812
2022	59,261,345	56,630,467
2023	59,743,436	57,109,487
2024	60,219,153	57,582,812
2025	60,696,627	58,050,338
2026	61,167,615	58,510,598
2027	61,629,684	58,963,248
2028	62,112,841	59,441,134
2029	62,595,733	59,918,715
2030	63,076,330	60,394,011
2031	63,550,173	60,862,563
2032	64,014,777	61,321,846
2033	64,471,549	61,773,297
2034	64,921,690	62,218,077
2035	65,364,875	62,655,901
2036	65,805,239	63,090,884
2037	66,241,209	63,521,474
2038	66,672,773	63,947,627
2039	67,096,137	64,365,570
2040	67,513,832	64,777,834
2050	71,448,811	68,657,641

Project Horizon Year Estimate	2022
2022 population	41,321,565
2022 employment (w/o industrial & Ag)	15,308,902
2022 SP	56,630,467

GHG Emissions Target Setting - Forecasting the 2030 Efficiency Target

2030 Scoping Plan - Efficiency Metric

Year 2020 Plan-Level			
2020 Target (Plan-Level)	MMTCO2e	431	
2020 Per Capita Target	MTCO2e/pc	10.6	
2020 Per Service Population Target (Plan-Level)	MTCO2e/sp	7.7	
Year 2020 Project-Level			
2020 Target (Project-Level)	MMTCO2e	286.9	
2020 Per Capita Target	MTCO2e/pc	7.1	
2020 Per Service Population Target (Project-Level)	MTCO2e/sp	5.2	
Year 2030 Plan-Level			
2030 Target (Plan-Level)	MMTCO2e	260	
2030 Per Capita Target	MTCO2e/pc	5.9	
2030 Per Service Population Target (Plan-Level)	MTCO2e/sp	4.3	
Year 2030 Project-Level			
Land Use Inventory (Project-Level)	MMTCO2e	190.7	
2030 Per Capita Target	MTCO2e/pc	4.3	
2030 Per Service Population Target (Project-Level)	MTCO2e/sp	3.2	
Year 2050 Plan-Level			
2050 Target estimated (Plan-Level)	MMTCO2e	86	
2050 Per Capita Target	MTCO2e/pc	1.8	
2050 Per Service Population Target (Plan-Level)	MTCO2e/sp	1.3	
Year 2050 Project-Level			
2050 Target estimated (Plan-Level)	MMTCO2e	57	
2050 Per Capita Target	MTCO2e/pc	1.2	
2050 Per Service Population Target (Plan-Level)	MTCO2e/sp	0.8	
Project Horizon Year Estimate	2022		
Land Use Inventory (Plan-Level)	MMTCO2e	267.6	-7%
2022 Per Service Population Target (Project-Level)	MTCO2e/sp	4.73	