Appendix A Air Quality, Greenhouse Gas, and Energy

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Air Quality, Greenhouse Gas, and Energy Appendix

Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

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 (South Coast AQMD). However, South Coast AQMD 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, *Ambient Air Quality Standards for Criteria Pollutants*, 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/m³	*	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/m³	150 µg/m³	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m³	12 µg/m³	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/m³	
Lead (Pb)	30-Day Average	1.5 µg/m³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m³	
	Rolling 3-Month Average	*	0.15 µg/m³	
Sulfates (SO_4)[5]	24 hours	25 µg/m³	*	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.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
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 hours	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/m³: 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/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

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/m³ to 12.0 μg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

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:

- CARB Advanced Clean Fleets (ACF)
- CARB Advanced Clean Trucks (ACT)
- 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 and include CO, VOC, NO_2, SO_X, PM_{10}, $PM_{2.5}$, and Pb. 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 (South Coast AQMD 2005, US EPA 2022). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance) under the National AAQS (CARB 2023a).

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), South Coast AQMD has established a significance threshold for this pollutant (South Coast AQMD 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 (South Coast AQMD 2005, US EPA 2022). On February 21, 2019, CARB's Board approved the separation of the area that runs along the State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for state nonattainment designation purposes. The Board designated this corridor as nonattainment.[1] The remainder of the SoCAB remains in attainment for NO_2 (CARB 2023a).

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 chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. 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. Current scientific

[1] CARB is proposing to redesignate SR-60 Near-Road Portion of San Bernardino, Riverside, and Los Angeles Counties in the SoCAB as attainment for NO_2 at the February 24, 2022 Board Hearing (CARB 2023b).

evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (South Coast AQMD 2005; US EPA 2022). The SoCAB is designated as attainment under the California and National AAQS (CARB 2023a).

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 (South Coast AQMD 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 (South Coast AQMD 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 (South Coast AQMD 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,[2] environmental damage,[3] and damage[4] (South Coast AQMD 2005; US EPA 2022). 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 2023a).[5]

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2 $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

3 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.

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

5 CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM10 to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM10 standards from 2004 to 2007. The

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 (South Coast AQMD 2005; US EPA 2022). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2023a).

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 (South Coast AQMD 2005; USEPA 2022). 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.[6] As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2023a). Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the proposed project.

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

EPA approved the State of California's request to redesignate the South Coast PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

6 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 (South Coast AQMD 2012).

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* (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.

Air Quality Management Planning

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is 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, the South Coast AQMD 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[7],
- 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 (South Coast AQMD 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

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

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, South Coast AQMD 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 (South Coast AQMD 2017).

2022 AQMP

On October 1, 2015, the US EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The SoCAB is classified as an "extreme" non-attainment area and the Coachella Valley is classified as a "severe-15" non-attainment area for the 2015 Ozone National AAQS. South Coast AQMD is updating the QMP to address the requirements for meeting this standard (South Coast AQMD 2022).

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. 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.

SOUTH COAST AQMD PM2.5 REDESIGNATION REQUEST AND MAINTENANCE PLAN

In 1997, the EPA adopted the 24-hour fine $PM_{2.5}$ standard of 65 micrograms per cubic meter ($\mu g/m^3$). In 2006, this standard was lowered to a more health-protective level of 35 $\mu g/m^3$. The SoCAB is designated nonattainment for both the 65 and 35 $\mu g/m^3$ 24-hour $PM_{2.5}$ standards (24-hour $PM_{2.5}$ standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour $PM_{2.5}$ standards. The South Coast AQMD has developed the 2021 Redesignation Request and Maintenance Plan for the 1997 and 2006 24-hour $PM_{2.5}$ Standards demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour $PM_{2.5}$ standards (South Coast AQMD 2021b).

AB 617, COMMUNITY AIR PROTECTION PROGRAM

Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017) requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens. In response to AB 617, CARB has established the Community Air Protection Program.

Air districts are required to host workshops to help identify disadvantaged communities disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations have been identified and the communities have been selected, new community monitoring systems would be installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan (Community Air Protection Blueprint), that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks. Under AB 617, the Blueprint is required to be updated every five years.

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

MULTIPLE AIR TOXICS EXPOSURE STUDY V

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In April 2021, South Coast AQMD released the latest update to the MATES study, MATES V. The first MATES analysis, MATES I, began in 1986 but was limited because of the technology available at the time. Conducted in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component. MATES III was conducted in 2004 to 2006, with MATES IV following in 2012 to 2013.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazards Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time.

The MATES V study showed that cancer risk in the SoCAB decreased to 454 in a million from 997 in a million in the MATES IV study. Overall, air toxics cancer risk in the SoCAB decreased by 54 percent since 2012 when MATES IV was conducted. MATES V showed the highest risk locations near the Los Angeles International Airport and the Ports of Long Beach and Los Angeles. Diesel particulate matter continues to be the major contributor to air toxics cancer risk (approximately 72 percent of the total cancer risk). Goods movement and transportation corridors have the highest cancer risk. Transportation sources account for 88 percent of carcinogenic air toxics emissions, and the remainder is from stationary sources, which include large industrial operations such as refineries and power plants as well as smaller businesses such as gas stations and chrome-plating facilities. (South Coast AQMD 2021a).

Existing Conditions

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 (South Coast AQMD 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 average low is reported at 38.6 °F in December, and the average high is 92°F in August (USA.Com 2023).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October 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. Rainfall averages 20.12 inches per year in the vicinity of the area (USA.Com 2023).

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 (South Coast AQMD 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 (South Coast AQMD 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 (South Coast AQMD 2005).

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, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

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
$PM_{2.5}$	Nonattainment	Nonattainment[2]
CO	Attainment	Attainment
NO_2	Nonattainment (SR-60 Near Road only)[1]	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[3]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2023a.

1 On February 21, 2019, CARB's Board approved the separation of the area that runs along State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for State nonattainment designation purposes. The Board designated this corridor as nonattainment. The remainder of the SoCAB remains in attainment for NO_2 (CARB 2023a). CARB is proposing to redesignate SR-60 Near-Road Portion of San Bernardino, Riverside, and Los Angeles Counties in the SoCAB as attainment for NO_2 at the February 24, 2022 Board Hearing (CARB 2023b).

2 The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal $PM_{2.5}$ standards. The 2021 $PM_{2.5}$ Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow US EPA to redesignate the SoCAB to attainment for the 65 $\mu g/m^3$ and 35 $\mu g/m^3$ 24-hour $PM_{2.5}$ standards. CARB will submit the 2021 $PM_{2.5}$ Redesignation Request to the US EPA as a revision to the California SIP (CARB 2021).

3 In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The project site is located within Source Receptor Area (SRA) 23: Metropolitan Riverside. The air quality monitoring station closest to the proposed project is the Mira Loma Van Buren Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.[8] Data from this station includes O_3, $PM_{2.5}$, NO_2 and PM_{10} and is summarized in Table 3, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeds the state and federal one-hour and eight-hour O_3 standards, the state PM_{10} standards, and the federal $PM_{2.5}$ standards.

8 Locations of the SRAs and monitoring stations are shown here: http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf.

Table 3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations[1,2]				
	2017	2018	2019	2020	2021
Ozone (O_3)					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	41	21	26	51	20
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	64	57	64	89	53
Max. 1-Hour Conc. (ppm)	0.144	0.129	0.131	0.140	0.116
Max. 8-Hour Conc. (ppm)	0.111	0.107	0.099	0.117	0.094
Nitrogen Dioxide (NO_2)					
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)	0.0651	0.0545	0.0560	0.0581	0.0533
Coarse Particulates (PM_{10})					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	28	22	14	16	15
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	1	0
Max. 24-Hour Conc. (µg/m^3)	111.6	98.9	118.8	162.5	98.7
Fine Particulates ($PM_{2.5}$)					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	10	6	10	12	13
Max. 24-Hour Conc. (µg/m^3)	62.2	86.0	54.7	60.9	77.6

Source: CARB 2023c.
Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; * = Data not available
[1] Data for O_3, $PM_{2.5}$, NO_2 and PM_{10} obtained from the Mira Loma Van Buren Monitoring Station.
[2] Most recent data available as of March 2023.

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 sensitive receptors to the project site are the Patriot High School buildings to the north, single-family residences along Corte Entrada to the east, and single-family residences along Jurupa Road to the south.

Methodology

Projected construction-related air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. 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 proposed project are compared to thresholds of significance for individual projects using the South Coast AQMD'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 South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's website (South Coast AQMD 1993). 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. South Coast AQMD 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

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 4, *South Coast AQMD Significance Thresholds*, lists South Coast AQMD'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, South Coast AQMD has not developed thresholds for them.

Table 4 South Coast AQMD 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: South Coast AQMD 2023.

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 ($PM_{2.5}$) (South Coast AQMD 2011)

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 (South Coast AQMD 2015c).

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. South Coast AQMD 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, South Coast AQMD 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 hotspot analysis conducted for the attainment by the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.[9] As identified in the South Coast AQMD'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 to 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

The South Coast AQMD developed LSTs for emissions of NO_X, 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, *South Coast AQMD Localized Significance Thresholds*.

Table 5 South Coast AQMD 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 (South Coast AQMD)[1]	10.4 $\mu g/m^3$
24-Hour $PM_{2.5}$ Standard – Construction (South Coast AQMD)[1]	10.4 $\mu g/m^3$
24-Hour PM_{10} Standard – Operation (South Coast AQMD)[1]	2.5 $\mu g/m^3$
24-Hour $PM_{2.5}$ Standard – Operation (South Coast AQMD)[1]	2.5 $\mu g/m^3$

Source: South Coast AQMD 2023.
ppm – parts per million; $\mu g/m^3$ – micrograms per cubic meter
1 Threshold is based on South Coast AQMD 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.

To assist lead agencies, South Coast AQMD 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 proposed project to the localized concentrations shown in Table 5.

In accordance with South Coast AQMD'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

9 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.

project site in SRA 23 are shown in Table 6, *South Coast AQMD Screening-Level Localized Significance Thresholds,* for sensitive receptors within 102 feet (31 meters) of the project site.

Table 6 South Coast AQMD Screening-Level Localized Significance Thresholds

Acreage Disturbed	Threshold (lbs/day)[1]			
	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
<1.00 Acres Disturbed Per Day	125	671	5.95	3.24
1.44 Acres Disturbed Per Day	148	804	7.79	3.79
1.65 Acres Disturbed Per Day	159	869	8.69	4.05

Source: South Coast AQMD 2008a and 2011.
[1] LSTs are based on sensitive receptors within 102 feet (31 meters) of the project site in Source Receptor Area (SRA) 23.

Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD 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 South Coast AQMD. Table 7, *Toxic Air Contaminants Incremental Risk Thresholds*, 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 Project on the environment. CEQA does not require CEQA-level environmental document to analyze the environmental effects of attracting development and people to an area (*California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (Case No. S213478)*). However, the environmental document must analyze the impacts of environmental hazards on future users, when a 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 7 South Coast AQMD 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: South Coast AQMD 2023.

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,[10] 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).[11] 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-

[10] 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 rather than a primary cause of change.

[11] 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 2017a). 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.

depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

- ***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 (SF_6)*** 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 2023).

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 8, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. 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 Fifth Assessment Report (AR5) GWP values for CH_4, a project that generates 10 MT of CH_4 would be equivalent to 280 MT of CO_2.

Table 8 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report (SAR) Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO_2[1]	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	1	1	1
Methane[2] (CH_4)	21	25	28
Nitrous Oxide (N_2O)	310	298	265

Source: IPCC 1995, 2007, 2013.

Notes: The IPCC published updated GWP values in its Fifth Assessment Report (AR5) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, GWP values identified in AR4 are used by South Coast AQMD to maintain consistency in statewide GHG emissions modeling. In addition, the 2017 Scoping Plan Update was based on the GWP values in AR4.

1 Based on 100-year time horizon of the GWP of the air pollutant compared 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 2021, the statewide GHG emissions inventory was updated for 2000 to 2019 emissions using the GWPs in IPCC's AR4 (IPCC 2013). Based on these GWPs, California produced 418.2 $MMTCO_2e$ GHG emissions in 2019. California's transportation sector was the single largest generator of GHG emissions, producing 39.7 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.1 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (10.5 percent), agriculture and forestry (7.6 percent), high GWP (4.9 percent), and recycling and waste (2.1 percent) (CARB 2021).

Since the peak level in 2004, California's GHG emission shave generally followed a decreasing trend. In 2016, California statewide GHG emissions dropped below the AB 32 target for year 2020 of 431 $MMTCO_2e$ and have remained below this target since then. In 2019, emissions from routine GHG-emitting activities statewide were almost 13 $MMTCO_2e$ lower than the AB 32 target for year 2020. Per-capita GHG emissions in California have dropped from a 2001 peak of 14.0 $MTCO_2e$ per person to 10.5 $MTCO_2e$ per person in 2019, a 25 percent decrease.

Transportation emissions continued to decline in 2019 statewide as they had done in 2018, with even more substantial reductions due to a significant increase in renewable diesel. Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2019, solar power generation continued its rapid growth since 2013. Emissions from high-GWP gases comprised 4.9 percent of California's emissions in 2019. This continues the increasing trend as the gases replace ozone-depleting substances being phased out under the 1987 Montreal Protocol. 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) has declined 45 percent since the 2001 peak, though the state's gross domestic product grew 63 percent during this period (CARB 2021).

Regulatory Settings

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The US 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 proposed project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a proposed 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 (2021 to 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. On March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. However, in response to Executive Order 13990 by President Biden, the National Highway Traffic Safety Administration (NHTSA) announced new proposed fuel standards on August 5, 2021. On December 21, 2021, under the direction of EO 13990, the NHTSA repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. Fuel efficiency under the new standards proposed would increase 8 percent annually for model years 2024 to 2026 and increase estimate fleetwide average by 12 mpg for model year 2026 compared to model year 2021 (NHTSA 2021).

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

Pursuant to its authority under the Clean Air Act, the EPA has developed regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule, which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence EO. It officially rescinded the Clean Power Plan rule issued during the Obama Administration and set emissions guidelines for states in developing plans to limit CO_2 emissions from coal-fired power plants. The Affordable Clean Energy rule was vacated by the United States Court of Appeals for the District of Columbia Circuit on January 19, 2021. The Biden Administration is assessing options on potential future regulations.

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05 and EO B-30-15, Assembly Bill 32 (AB 32), AB 1279, Senate Bill 32 (SB 32), and SB 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)

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 EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

Executive Order B-30-15

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed 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 EO 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.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, set a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

2022 Climate Change Scoping Plan

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State's anthropogenic GHG emissions (CARB 2022c). The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. This plan expands upon earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Sixth Assessment Report (AR6) of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB's 2022 Scoping Plan identifies strategies as shown in Table 10, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State's carbon neutrality goals (see Table 4.8-4, *Priority Strategies for Local Government Climate Action Plans*).

Table 10 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide EV charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: CARB 2022c

For residential and mixed-use development projects, CARB recommends this first approach to demonstrate that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing.

Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

Transportation Electrification

- Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.

VMT Reduction

- Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
- Does not result in the loss or conversion of the State's natural and working lands;
- Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS);
- Reduces parking requirements by:
  - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
  - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or
  - For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
- At least 20 percent of the units are affordable to lower-income residents;
- Result in no net loss of existing affordable units.

Building Decarbonization

- Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net zero GHG emissions, especially for new residential development. The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted (CARB 2022c).

Assembly Bill 1279

On August 31, 2022, the California Legislature passed AB 1279, which requires California to achieve net-zero GHG emissions no later than 2045 and to achieve and maintain negative GHG emissions thereafter.

Additionally, AB 1279 also establishes a GHG emissions reduction goal of 85 percent below 1990 levels by 2045. CARB will be required to update the scoping plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

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 (MPO). 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 is 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. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets became effective in October2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were 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 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), 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" reductions 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 to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan. For the SCAG region, the 2020-2045 RTP/SCS (Connect SoCal) was adopted on September 3, 2020, and is an update to the 2016-2040 RTP/SCS. In general, the SCS outlines a development pattern for the region that, 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.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through horizon year 2045 (SCAG 2020). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. Additionally, Connect SoCal also forecasts that implementation of the plan will reduce VMT per capita in year 2045 by 4.1 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by locating housing, jobs, and transit closer together and increasing investments in transit and complete streets (SCAG 2020).

Transportation Sector Specific Regulations

Advanced Clean Fleets and Advanced Clean Trucks

CARB adopted the Advanced Clean Fleets (ACF) regulation in 2023 to accelerate the transition to zero-emission medium- and heavy-duty vehicles. In conjunction with the Advanced Clean Trucks (ACT) regulation, the ACF regulations helps to ensure that medium- and heavy-duty zero-emission vehicles (ZEV) are brought to the market, by requiring certain fleets to purchase zero emission vehicles (ZEVs). The ACF ZEV phase-in approach which provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs, and creates a catalyst to accelerate development of a heavy-duty public charging infrastructure network.

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 is 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 years 2017 through 2025 light-duty vehicles. (See also the discussion on the update to the Corporate Average Fuel Economy standards at the beginning of this Section 5.5.2 under "Federal.") 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 GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's

Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less 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 CO_2e gram per unit of fuel energy sold in California. The LCFS required 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 uses 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 ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE 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 ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed Executive Order N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The Executive Order's goal for the State is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

Renewables Portfolio: Carbon Neutrality Regulations

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

A major component of California's Renewable Energy Program is the renewables portfolio standard 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, signed in November 2008, 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 September 2015 and establishes tiered increases to the RPS—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.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Energy Efficiency Regulations

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (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 August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

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.[12] The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2019. The 2019

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

CALGreen standards became effective January 1, 2020. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023.

Section 5.408 of 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.

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 Diversion Regulations

AB 939: Integrated Waste Management Act of 1989

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.

AB 341

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. Section 5.408 of 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.

AB 1327

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.

AB 1826

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 and multifamily residential dwellings with 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 with food waste.

Water Efficiency Regulations

SBX7-7

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 required 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.

AB 1881: Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an 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.

Short-Lived Climate Pollutant Reduction Strategy

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 methane. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required 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 reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills, which includes a 50 percent reduction in statewide organic waste disposal from 2014 levels by 2020 and a 75 percent reduction from 2014 levels by 2025. Under SB 1383, jurisdictions are required to implement organic waste collection services for all residents and businesses by January 1, 2022. 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 were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD 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, South Coast AQMD Rule 445 limits installation of new fireplaces in the SoCAB.

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.[13]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD 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, the South Coast AQMD Working Group identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 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, South Coast AQMD requires an assessment of GHG emissions. The South Coast AQMD Working Group identified 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

[13] 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.

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 South Coast AQMD 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 and 6.6 $MTCO_2e$/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.[14] 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.

The bright-line screening-level criterion of 3,000 $MTCO_2e$/yr is used as the significance threshold for this proposed project. Therefore, if the proposed project operation-phase emissions exceed the 3,000 $MTCO_2e$/yr threshold, GHG emissions would be considered potentially significant in the absence of mitigation measures.

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[14] It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

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Assumptions Worksheet

CalEEMod Inputs - Patriot High School Stadium and Varsity Baseball Fields Improvements Project, Construction

Name:	Patriot High School Stadium and Varsity Baseball Fields Improvements Project
Project Number:	JUSD-01
Project Location:	4355 Camino Real Jurupa Valley Riverside, CA 92509
County/Air Basin:	Riverside-South Coast
Climate Zone:	10
Land Use Setting:	Suburban
Gas Utility Company:	Southern California Gas
Electric Utility Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	South Coast AQMD
SRA:	23 - Metropolitan Riverside

Project Site Acreage	50.00
Disturbed Site Acreage	1.65

Project Components				
Asphalt Demolition	**Building SQFT**	**Tons**		
Asphalt Demolition	5000	**74**		
Construction	**Number of Stories**	**SQFT**	**Building Footprint**	**Acres**
Restroom and Concessions Building	1	3,000	3,000	0.07
Pressbox	1	320	320	0.01
Ticket booth	1	320	320	0.01
TOTAL[1]		**3,640**		**0.08**
Onsite Surface Work [1]	**Number of Stalls**			
Landscaping		20,000	NA	0.46
Hardscape		48,450	NA	1.11
			TOTAL ACREAGE	**1.65**

Notes

[1] Includes concrete pad for bleachers of 18,450 square feet and path of travel improvements of 10,000 sqaure feet.

CalEEMod Land Use Inputs

Land Use Type	**Land Use Subtype**	**Unit Amount**	**Size Metric**	**Lot Acreage**	**Building Square Feet**	**Landscape Area Square Feet**	**Special Landscape Area Square Feet**
Educational	High School	3.64	1000 sqft	0.54	3,640	20,000	0
Parking	Other Non-Asphalt Surfaces	48.45	1000 sqft	1.11	48,450	0	0
				1.65			

Demolition Haul [1]

Construction Activities	Amount to be Demolished (Tons)[1]	Haul Truck Capacity (CY)[1]	Haul Distance (miles)[1]	Total Trip Ends	Total Days	Trip Ends/Day
Asphalt Demolition	74	10	25	16	23	5

Notes

[1] Provided by District.

Soil Haul [1]

Construction Activities	Volume (CY)[1]	Haul Truck Capacity (CY)[1]	Haul Distance (miles)[1]	Total Trip Ends	Total Days	Trip Ends/Day
Site Preparation (export)	20	10	25	4	1	4
Grading (export)	440	10	25	88	2	44
						48

Notes

[1] Provided by District.

Architectural Coating

	Percent Painted
Interior Painted:	100%
Exterior Painted:	100%

SCAQMD Rule 1113

Interior Paint VOC content:	100	grams per liter
Exterior Paing VOC content:	100	grams per liter

Structures	Land Use Square Feet	CalEEMod Factor[2]	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
Non-Residential Structures					
High School	3,640	2.0	7,280	5,460	1,820
				5,460	**1,820**
Parking					
Other Non-Asphalt Surfaces	48,450	6%		-	2,907
					2,907

Notes

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Exclude square footage of modular buildings and shipping container storages since these type of structures do not usually require painting.

[2] The program assumes the total surface for painting equals 2 times the floor square footage for nonresidential square footage defined by the user.

[3] Assume CalEEMod default for 6% striping of non-asphalt surfaces.

CalEEMod Construction Measures

Water Exposed Surfaces	Frequency per day:	2	
	PM10:	55	% Reduction
	PM2.5:	55	% Reduction
Water Demolished Area	Frequency per day:	2	
	PM10:	36	% Reduction
	PM2.5:	36	% Reduction
Limit Vehicle Speeds on Unpaved Roads	Miles per hour speed limit:	25	
	PM10:	44	% Reduction
	PM25:	44	% Reduction
Sweep Paved Roads	PM10:	9	% Reduction
SCAQMD Rule 1186	PM25:	9	% Reduction

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 Demolition	5,000	0.333	1,667	89	148,148	74.07
Total	5,000					74

[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 Connecticut Cooperative Extension System, 1999.

[3] CalRecycle. 2019. Solid Waste Cleanup Program Weights and Volumes for Project Estimates. https://www.delmar.ca.us/DocumentCenter/View/5668/CalRecycle-Conversion-Table

Construction Activities and Schedule Assumptions

Construction Schedule				
Construction Activities	**Phase Type**	**Start Date**	**End Date**	**CalEEMod Duration (Workday)**
Site Preparation	Site Preparation	6/1/2023	6/2/2023	2
Installation of Field Lighting and Score Board	Building Construction	6/1/2023	6/30/2024	282
Utility Trenching	Trenching	6/1/2023	6/30/2024	282
Grading	Grading	6/27/2025	6/30/2025	2
Asphalt Demolition and Removal of Existing Bleachers	Demolition	7/1/2025	7/31/2025	23
Installation of Bleachers	Building Construction	7/1/2025	7/31/2025	23
Restroom/Concession Building, Pressbox, and Ticketbooth	Building Construction	7/1/2025	6/30/2026	261
Architectural Coating	Architectural Coating	7/1/2025	6/30/2026	261
Finishing and Landscaping	Trenching	7/1/2025	6/30/2026	261
Paving	Paving	6/17/2026	6/30/2026	10

Overlapping Construction Schedule			
Construction Activities	**Start Date**	**End Date**	**CalEEMod Duration (Workday)**
Site Preparation, Installation of Field Lighting and Score Board, and Utility Trenching	6/1/2023	6/2/2023	2
Installation of Field Lighting and Score Board, and Utility Trenching	6/3/2023	6/30/2024	280
Grading	6/27/2025	6/30/2025	2
Asphalt Demolition and Removal of Existing Bleachers, Installation of Bleachers, Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping	7/1/2025	7/31/2025	23
Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping	8/1/2025	6/16/2026	228
Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping, and Paving	6/17/2026	6/30/2026	10

CalEEMod Inputs - Patriot High School Stadium and Varsity Baseball Fields Improvements Project, Constru

Name: Patriot High School Stadium and Varsity Baseball Fields Improvements Project
Project Number: JUSD-01
Project Location: 4355 Camino Real Jurupa Valley Riverside, CA 92509
County/Air Basin: Riverside-South Coast
Climate Zone: 10
Land Use Setting: Suburban
Gas Utility Company: Southern California Gas
Electric Utility Company: Southern California Edison
Air Basin: South Coast Air Basin
Air District: South Coast AQMD
SRA: 23 - Metropolitan Riverside

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet	Landscape Area Square Feet	Special Landscape Area Square
Educational	High School	3.64	1000 sqft	0.54	3,640	20,000	0
Parking	Other Non-Asphalt Surfaces	48	1000 sqft	1	48,450	0	0
				1.65			

Net Increase in Weekday Net Trips for AQ[1]

Source: Garland & Associates, 2023. Patriot High School Stadium Improvements Traffic Impact Analysis.

Land Use Type	Net Increase - Average Daily Trips[2]	CalEEMod Max Daily Trip Rate
High School	2,380	**653.85**

Notes Based on the net increase in vehicle trips

[1] No trips on weekend as the majority of events would occur during weekdays.

[2] Used traffic generated from maximum capacity event at stadium as conservative average daily trips estimate.

Net Annual Trips Calculation for GHG [1]

Source: Garland & Associates, 2023. Patriot High School Stadium Improvements Traffic Impact Analysis.

Maximum Capacity Seats	Number of Trips for Max Capacity Event	Rate of Trips per Seat
3,530	**2,380**	0.67

Event[3]	Maximum Existing Spectators/Event	Maximum Proposed Specators/Event	Net increase in Spectators	Net Increase Events	Net Increase in number of Trips per Year
Football Games[2]	1,150	3,530	2,380	10	16,046
Boys Soccer	250	350	100	10	674
Girls Soccer	200	300	100	10	674
Baseball Games	35	135	100	15	1,011
Graduation Ceremony	0	3,000	3,000	1	2,023
Other Additional Events	0	1,000	1,000	14	9,439
TOTAL		8,315		60	**29,868**

	CalEEMod Average Daily Trip Rate
Trip Rate for Annual GHG Emissions (Average Daily):	22.54

Notes

[1] Cross country, track, band, color guard, and other activities are not projected to have an increase in activity levels or traffic volumes on a daily basis.

[2] For this analysis. existing football games are played offsite. The maximum existing spectators is currently 1,150.

[3] Based on Section 1.3.6, Use and Scheduling,for existing and proposed spectators, anticipated 20 more events per season total.

[4] Based on the traffic study

Water Use [1,2]

	Indoor (gpy)	Outdoor (gpy)	Total
High School	120,865	317,114	437,979

Notes

[1] CalEEMod defaults used.

[2] Assumes 100% aerobic treatment.

Solid Waste[1]

Land Use	Total Solid Waste (tons/yr)	Total Solid Waste (tons/unit/yr)
High School	4.73	1.30

Notes

[1] CalEEMod defaults used.

Electricity (Buildings)

Default CalEEMod Energy Use

Land Use Subtype	Total Annual Electricity Consumption (kWh/year)	Total Annual Natural Gas Consumption (kBTU/year)	Title-24 Electricity Energy Intensity (kWhr/size/year)*	Title-24 Natural Gas Energy Intensity (KBTU/size/year)*	Nontitle-24 Electricity Energy Intensity (kWhr/size/year)	Nontitle-24 Natural Gas Energy Intensity (KBTU/size/year)
High School	23,689.40	87,143.19	**20,475.89**	**50,294.39**	3,213.51	36,848.80
Parking Lot	0.00	0.00	**0.00**	**0.00**	0.00	0.00

Architectural Coating

	Percent Painted		SCAQMD Rule 1113	g/L
Interior Painted:	100%		*Interior Paint VOC content:*	100
Exterior Painted:	100%		*Exterior Paing VOC content:*	100

Structures	Land Use Square Feet	CalEEMod Factor[2]	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
Non-Residential Structures					
High School	3,640	2.0	7,280	5,460	1,820
			7,280	**5,460**	**1,820**
Parking					
Other Non-Asphalt Surfaces	48,450	6%		-	2,907
					2,907

Notes

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Exclude square footage of modular buildings and shipping container storages since these type of structures do not usually require painting.

[2] The program assumes the total surface for painting equals 2 times the floor square footage for nonresidential square footage defined by the user.

[3] Assume CalEEMod default for 6% striping of non-asphalt surfaces.

Field Lighting (Electricity Use)

	Total Average kW/Event [1]	Events/Year	Hours/Event	kWh (Annual)
Practices	74.64	339	1.24	31,323
Baseball Practices	59.18	70	1.00	4,119
Games	74.64	45	2.88	9,689
Baseball Games	59.18	15	3.50	3,107
		Total	521.40	48,238

Scoreboard (Electricity Use)

	Energy use per scoreboard (kW/hr)[3]	Events/Year	Hours	kWh (Annual)
Scoreboard	5	60	2.88	779

Calculation of GHGs from Field Lighting & Scoreboard

Source: CalEEMod Defaults

CO_2	CH_4	N_2O	CO_2e	CO_2e
lbs/Mwh	lbs/Mwh	lbs/Mwh	lbs/Mwh	MT/kWh
348.64	0.033	0.004	348.67	0.0002
			CO_2e from Energy (MT/Year)	**7.75**

Notes

[1] Based on Musco Lighting Plans for the proposed field lighting as provided by the District.

[2] Based on the practice schedule from District and assuming 4 days of use per week.

[4]

Based on assumption that scoreboard would require maximum of 5 kWh. Electro-Mech Scoreboard Co., MP-326 Football Scoreboard Owner's Handbook. https://www.electro-mech.com/wp-content/uploads/manuals/MP-326.pdf.

CalEEMod Operation Measures

W-4 Require Low-Flow Water Fixtures

High School:

Toilet:	51	Fixture % of Total Indoor Water Use
	13	% Reduction in Flow
Urinal	12	Fixture % of Total Indoor Water Use
	12	% Reduction in Flow
Showerhead	5	Fixture % of Total Indoor Water Use
	11	% Reduction in Flow
Bathroom Faucet	3	Fixture % of Total Indoor Water Use
	30	% Reduction in Flow
Kitchen Faucet	4	Fixture % of Total Indoor Water Use
	11	% Reduction in Flow
Dishwashers	2	Fixture % of Total Indoor Water Use
	20	% Reduction in Flow

Type of games and practices	Time Start (PM)	Time End (PM)	Lighting in use (hrs)[1,2]	# Practice Months	Avg. Total weeks in a month	Games / Practices per Year[3]	Total Light Use per Year
Sports Practice							
Football Practices	3:30	6:00	1.5	3	4.35	52.2	78
Soccer Practices	3:15	5:45	1.25	4	4.35	69.6	87
Track and field Practice	3:30	6:00	1.5	4	4.35	69.6	104.4
Cross Country Practice	3:00	5:30	1	4	4.35	69.6	69.6
Baseball Practices	3:00	5:30	1	4	4.35	69.6	69.6
						331	409
						Hrs/Event	**1.2**
Games/Events							
Football Games[2]	7:00	9:30	2.5	NA	NA	10	25
Baseball Games	7:00	9:30	3.5	NA	NA	15	52.5
Other Additional Events[3]	NA	NA	2.5	NA	NA	14	35
						39	113
						Hrs/Event	**2.9**
						TOTAL	521

Notes:

[1] Assume lighting in use past 4:30pm.

[2] Assume net increase in events would occur with use of lights as conservative estimate.

[3] Assumes 4 practices per week.

Changes to the CalEEMod Defaults - Fleet Mix 2024

Trips 2,380

Default	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	
FleetMix (Model Default)	1.612636819	49.6159941	3.79820019	20.49195766	3.144086525	0.89635672	2.311907336	15.82858562	0.601941394	1.465692371	0.060220301	0.133753498	0.0386678	
FleetMix (Model Default) adjusted	0.016126368	0.496159941	0.037982002	0.204919577	0.031440865	0.008963567	0.023119073	0.158285856	0.006019414	0.014656924	0.000602203	0.001337535	0.000386678	100%
Trips	38	1,181	90	488	75	21	55	377	14	35	1	3	1	2,380
Percent		76%			8%			16%						100%
without buses/MH	0.016126	0.496160	0.037982	0.204920	0.031441	0.008964	0.023119	0.158286	0.006019	0.014657	0	0.001338	0	100%
Percent		76%			8%			16%						100%
Adjusted without buses/MH	0.016329	0.496160	0.037982	0.204920	0.031837	0.009076	0.023410	0.158286	0.006095	0.014841	0.000000	0.001354	0.000000	
Percent adjusted		76%			8%			16%						100%
Assumed Mix		97.0%			1.00%			2.00%						100%
	0.002053	0.631204	0.048320	0.260694	0.004003	0.001141	0.029782	0.020000	0.000766	0.001866	0.000000	0.000170	0.000000	100%
adjusted with Assumed	**0.205315**	**63.120397**	**4.831988**	**26.069426**	**0.400293**	**0.114121**	**2.978188**	**2.000000**	**0.076637**	**0.186606**	**0.000000**	**0.017029**	**0.000000**	
Percent Check:		97%			1%			2%						
Trips	5	1,502	115	620	10	3	71	48	2	4	0	0	0	2,375

CalEEMod Construction and Operation Model

JUSD-01 Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	JUSD-01
Construction Start Date	6/1/2023
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	6.80
Location	4355 Camino Real, Riverside, CA 92509, USA
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5431
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.12

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

High School	3.64	1000sqft	0.54	3,640	20,000	0.00	—	—
Other Non-Asphalt Surfaces	48.5	1000sqft	1.11	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.27	2.85	24.8	26.2	0.05	1.11	3.71	4.41	1.02	1.59	2.26	—	5,689	5,689	0.19	0.51	7.16	5,853
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.54	1.42	10.5	11.9	0.02	0.44	0.11	0.55	0.40	0.03	0.43	—	2,090	2,090	0.08	0.03	0.02	2,098
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.66	0.61	4.60	5.28	0.01	0.19	0.06	0.25	0.17	0.02	0.19	—	959	959	0.04	0.02	0.12	965
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.11	0.84	0.96	< 0.005	0.03	0.01	0.05	0.03	< 0.005	0.03	—	159	159	0.01	< 0.005	0.02	160

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.27	2.74	24.8	23.9	0.04	1.11	2.71	3.81	1.02	1.24	2.26	—	4,282	4,282	0.16	0.10	1.72	4,319
2024	1.46	1.22	10.1	11.4	0.02	0.40	0.11	0.50	0.37	0.03	0.39	—	2,086	2,086	0.08	0.03	0.60	2,098
2025	3.20	2.85	23.5	26.2	0.05	0.90	3.71	4.41	0.83	1.59	2.25	—	5,689	5,689	0.19	0.51	7.16	5,853
2026	1.91	1.77	13.1	17.2	0.03	0.47	0.20	0.67	0.44	0.05	0.48	—	2,932	2,932	0.12	0.03	0.75	2,945
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	1.54	1.28	10.5	11.4	0.02	0.44	0.11	0.55	0.40	0.03	0.43	—	2,081	2,081	0.08	0.03	0.02	2,093
2024	1.46	1.22	10.1	11.3	0.02	0.40	0.11	0.50	0.37	0.03	0.39	—	2,079	2,079	0.08	0.03	0.02	2,090
2025	1.49	1.42	10.1	11.9	0.02	0.37	0.07	0.44	0.34	0.02	0.35	—	2,090	2,090	0.08	0.02	0.01	2,098
2026	1.42	1.36	9.73	11.8	0.02	0.32	0.07	0.39	0.30	0.02	0.32	—	2,088	2,088	0.08	0.02	0.01	2,096
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.65	0.54	4.47	4.85	0.01	0.19	0.06	0.25	0.17	0.02	0.19	—	884	884	0.04	0.01	0.12	889
2024	0.52	0.43	3.59	4.03	0.01	0.14	0.04	0.18	0.13	0.01	0.14	—	741	741	0.03	0.01	0.09	745
2025	0.66	0.61	4.60	5.28	0.01	0.17	0.06	0.23	0.16	0.02	0.18	—	959	959	0.04	0.02	0.11	965
2026	0.52	0.49	3.54	4.34	0.01	0.12	0.03	0.15	0.11	0.01	0.12	—	762	762	0.03	0.01	0.05	766
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.12	0.10	0.82	0.89	< 0.005	0.03	0.01	0.05	0.03	< 0.005	0.03	—	146	146	0.01	< 0.005	0.02	147
2024	0.09	0.08	0.65	0.73	< 0.005	0.03	0.01	0.03	0.02	< 0.005	0.03	—	123	123	< 0.005	< 0.005	0.02	123
2025	0.12	0.11	0.84	0.96	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	159	159	0.01	< 0.005	0.02	160
2026	0.09	0.09	0.65	0.79	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	126	126	< 0.005	< 0.005	0.01	127

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.71	8.28	3.42	60.0	0.11	0.06	4.35	4.42	0.06	0.74	0.80	2.81	11,437	11,440	0.84	0.38	39.0	11,612
Mit.	8.71	8.28	3.42	60.0	0.11	0.06	4.35	4.42	0.06	0.74	0.80	2.78	11,437	11,440	0.84	0.38	39.0	11,612
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	—	—	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.26	7.82	3.73	52.1	0.10	0.06	4.35	4.42	0.06	0.74	0.80	2.81	10,567	10,570	0.87	0.40	1.03	10,711
Mit.	8.26	7.82	3.73	52.1	0.10	0.06	4.35	4.42	0.06	0.74	0.80	2.78	10,567	10,570	0.87	0.40	1.03	10,711
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	—	—	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.85	5.55	2.74	38.5	0.08	0.04	3.11	3.15	0.04	0.53	0.57	2.81	7,653	7,656	0.70	0.29	12.1	7,772
Mit.	5.85	5.55	2.74	38.5	0.08	0.04	3.11	3.15	0.04	0.53	0.57	2.78	7,653	7,656	0.70	0.29	12.1	7,772
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	—	—	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.07	1.01	0.50	7.02	0.01	0.01	0.57	0.58	0.01	0.10	0.10	0.46	1,267	1,268	0.12	0.05	2.00	1,287
Mit.	1.07	1.01	0.50	7.02	0.01	0.01	0.57	0.58	0.01	0.10	0.10	0.46	1,267	1,268	0.12	0.05	2.00	1,287
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.71	8.18	3.40	60.0	0.11	0.06	4.35	4.41	0.06	0.74	0.80	—	11,384	11,384	0.58	0.38	39.0	11,550
Area	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.4	50.4	< 0.005	< 0.005	—	50.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Waste	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	8.71	8.28	3.42	60.0	0.11	0.06	4.35	4.42	0.06	0.74	0.80	2.78	11,437	11,440	0.84	0.38	39.0	11,612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.26	7.73	3.71	52.1	0.10	0.06	4.35	4.41	0.06	0.74	0.80	—	10,514	10,514	0.61	0.40	1.01	10,649
Area	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.4	50.4	< 0.005	< 0.005	—	50.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Waste	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	8.26	7.82	3.73	52.1	0.10	0.06	4.35	4.42	0.06	0.74	0.80	2.78	10,567	10,570	0.87	0.40	1.03	10,711
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.84	5.46	2.71	38.5	0.08	0.04	3.11	3.15	0.04	0.53	0.57	—	7,601	7,601	0.44	0.29	12.0	7,709
Area	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.4	50.4	< 0.005	< 0.005	—	50.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71

Waste	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	5.85	5.55	2.74	38.5	0.08	0.04	3.11	3.15	0.04	0.53	0.57	2.78	7,653	7,656	0.70	0.29	12.1	7,772
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.07	1.00	0.50	7.02	0.01	0.01	0.57	0.58	0.01	0.10	0.10	—	1,258	1,258	0.07	0.05	1.99	1,276
Area	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.34	8.34	< 0.005	< 0.005	—	8.38
Water	—	—	—	—	—	—	—	—	—	—	—	0.04	0.38	0.42	< 0.005	< 0.005	—	0.45
Waste	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	1.07	1.01	0.50	7.02	0.01	0.01	0.57	0.58	0.01	0.10	0.10	0.46	1,267	1,268	0.12	0.05	2.00	1,287

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	13.2	0.02	0.53	—	0.53	0.48	—	0.48	—	2,203	2,203	0.09	0.02	—	2,211
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.81	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	139	139	0.01	< 0.005	—	139
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.0	23.0	< 0.005	< 0.005	—	23.1
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.2	61.2	< 0.005	0.01	0.17	64.2
Hauling	0.01	0.01	0.38	0.09	< 0.005	0.01	0.09	0.10	0.01	0.03	0.03	—	345	345	0.01	0.05	0.73	362
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.27	8.27	< 0.005	< 0.005	0.01	8.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.86	3.86	< 0.005	< 0.005	< 0.005	4.04
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.7	21.7	< 0.005	< 0.005	0.02	22.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.37	1.37	< 0.005	< 0.005	< 0.005	1.39

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.60	3.60	< 0.005	< 0.005	< 0.005	3.77

3.3. Site Preparation (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.69	1.42	13.9	11.8	0.02	0.66	—	0.66	0.61	—	0.61	—	1,773	1,773	0.07	0.01	—	1,779
Dust From Material Movement	—	—	—	—	—	—	2.44	2.44	—	1.17	1.17	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.71	9.71	< 0.005	< 0.005	—	9.75
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.61	1.61	< 0.005	< 0.005	—	1.61
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	73.5	73.5	< 0.005	< 0.005	0.31	74.6
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.17	65.8
Hauling	0.01	< 0.005	0.33	0.08	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	284	284	0.01	0.05	0.60	298
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.36
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.63
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27

3.5. Grading (2025) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.5	13.5	< 0.005	< 0.005	—	13.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.23	2.23	< 0.005	< 0.005	—	2.23
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.2	61.2	< 0.005	0.01	0.17	64.2
Hauling	0.13	0.05	3.36	0.82	0.02	0.06	0.80	0.85	0.06	0.22	0.28	—	3,032	3,032	0.06	0.48	6.46	3,182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.73
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.35
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.6	16.6	< 0.005	< 0.005	0.02	17.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.12
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.88

3.7. Building Construction (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.03	8.21	7.96	0.02	0.32	—	0.32	0.30	—	0.30	—	1,469	1,469	0.06	0.01	—	1,474
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.24	1.03	8.21	7.96	0.02	0.32	—	0.32	0.30	—	0.30	—	1,469	1,469	0.06	0.01	—	1,474
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.43	3.44	3.33	0.01	0.14	—	0.14	0.13	—	0.13	—	615	615	0.02	< 0.005	—	617
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.63	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	102	102	< 0.005	< 0.005	—	102
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.5	22.5	< 0.005	< 0.005	0.10	22.8
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.7	18.7	< 0.005	< 0.005	0.05	19.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	20.6	20.6	< 0.005	< 0.005	< 0.005	20.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.8	18.8	< 0.005	< 0.005	< 0.005	19.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.75	8.75	< 0.005	< 0.005	0.02	8.88
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.85	7.85	< 0.005	< 0.005	0.01	8.21
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.45	1.45	< 0.005	< 0.005	< 0.005	1.47
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.36
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.98	7.94	7.88	0.02	0.30	—	0.30	0.27	—	0.27	—	1,469	1,469	0.06	0.01	—	1,474
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.98	7.94	7.88	0.02	0.30	—	0.30	0.27	—	0.27	—	1,469	1,469	0.06	0.01	—	1,474
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.83	2.81	0.01	0.11	—	0.11	0.10	—	0.10	—	523	523	0.02	< 0.005	—	525

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.52	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	86.6	86.6	< 0.005	< 0.005	—	86.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	0.09	22.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.5	18.5	< 0.005	< 0.005	0.05	19.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	20.2	20.2	< 0.005	< 0.005	< 0.005	20.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.5	18.5	< 0.005	< 0.005	< 0.005	19.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.29	7.29	< 0.005	< 0.005	0.01	7.40
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.60	6.60	< 0.005	< 0.005	0.01	6.91
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.21	1.21	< 0.005	< 0.005	< 0.005	1.22
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	0.08	21.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.05	19.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.28

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.15	1.15	< 0.005	< 0.005	< 0.005	1.20
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	0.20
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.19	0.99	8.12	8.60	0.02	0.30	—	0.30	0.27	—	0.27	—	1,583	1,583	0.06	0.01	—	1,589
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.19	0.99	8.12	8.60	0.02	0.30	—	0.30	0.27	—	0.27	—	1,583	1,583	0.06	0.01	—	1,589
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.35	2.92	3.10	0.01	0.11	—	0.11	0.10	—	0.10	—	570	570	0.02	< 0.005	—	572
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.53	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	94.4	94.4	< 0.005	< 0.005	—	94.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	0.08	21.9
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.05	19.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	< 0.005	20.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	< 0.005	19.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	0.01	7.33
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.57	6.57	< 0.005	< 0.005	0.01	6.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	0.94	7.79	8.52	0.02	0.27	—	0.27	0.25	—	0.25	—	1,583	1,583	0.06	0.01	—	1,589
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	0.94	7.79	8.52	0.02	0.27	—	0.27	0.25	—	0.25	—	1,583	1,583	0.06	0.01	—	1,589
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.33	2.76	3.02	0.01	0.09	—	0.09	0.09	—	0.09	—	561	561	0.02	< 0.005	—	563
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.50	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	92.8	92.8	< 0.005	< 0.005	—	93.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.07	21.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	0.05	18.8

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.4	19.4	< 0.005	< 0.005	< 0.005	19.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.0	18.0	< 0.005	< 0.005	< 0.005	18.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.95	6.95	< 0.005	< 0.005	0.01	7.05
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.67
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.15	1.15	< 0.005	< 0.005	< 0.005	1.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.05	1.05	< 0.005	< 0.005	< 0.005	1.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.38	4.57	0.01	0.15	—	0.15	0.14	—	0.14	—	701	701	0.03	0.01	—	703
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.2	19.2	< 0.005	< 0.005	—	19.3
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.18	3.18	< 0.005	< 0.005	—	3.19
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.72	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	138	138	0.01	< 0.005	0.47	140
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	0.01	3.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.32	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.2

Architect Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.96	7.96	< 0.005	< 0.005	—	7.99
Architect ural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.05	13.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	< 0.005	12.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.33	4.33	< 0.005	< 0.005	0.01	4.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.73

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

3.21. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.30	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.3	47.3	< 0.005	< 0.005	—	47.5

Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.83	7.83	< 0.005	< 0.005	—	7.86
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.7	12.7	< 0.005	< 0.005	0.04	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	< 0.005	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.17	4.17	< 0.005	< 0.005	0.01	4.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Trenching (2023) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	2.13	2.96	< 0.005	0.11	—	0.11	0.10	—	0.10	—	443	443	0.02	< 0.005	—	444
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	2.13	2.96	< 0.005	0.11	—	0.11	0.10	—	0.10	—	443	443	0.02	< 0.005	—	444
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.89	1.24	< 0.005	0.05	—	0.05	0.04	—	0.04	—	185	185	0.01	< 0.005	—	186
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.7	30.7	< 0.005	< 0.005	—	30.8

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.45	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	73.5	73.5	< 0.005	< 0.005	0.31	74.6
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.17	65.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.34	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	67.5	67.5	< 0.005	< 0.005	0.01	68.3
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.9	62.9	< 0.005	0.01	< 0.005	65.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.6	28.6	< 0.005	< 0.005	0.06	29.0
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.3	26.3	< 0.005	< 0.005	0.03	27.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.74	4.74	< 0.005	< 0.005	0.01	4.81
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.36	4.36	< 0.005	< 0.005	0.01	4.56
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Trenching (2024) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	2.00	2.96	< 0.005	0.10	—	0.10	0.09	—	0.09	—	443	443	0.02	< 0.005	—	444
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	2.00	2.96	< 0.005	0.10	—	0.10	0.09	—	0.09	—	443	443	0.02	< 0.005	—	444
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.71	1.05	< 0.005	0.04	—	0.04	0.03	—	0.03	—	158	158	0.01	< 0.005	—	158
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.1	26.1	< 0.005	< 0.005	—	26.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.42	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	72.0	72.0	< 0.005	< 0.005	0.29	73.1
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.1	62.1	< 0.005	0.01	0.17	65.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.1	66.1	< 0.005	< 0.005	0.01	67.0
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.1	62.1	< 0.005	0.01	< 0.005	65.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.9	23.9	< 0.005	< 0.005	0.04	24.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.1	22.1	< 0.005	< 0.005	0.03	23.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.95	3.95	< 0.005	< 0.005	0.01	4.01
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.66	3.66	< 0.005	< 0.005	< 0.005	3.83
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Trenching (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.10	1.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.11	1.10	1.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.69	< 0.005	0.02	—	0.02	0.01	—	0.01	—	105	105	< 0.005	< 0.005	—	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.19	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	35.2	35.2	< 0.005	< 0.005	0.13	35.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.4	32.4	< 0.005	< 0.005	< 0.005	32.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.8	11.8	< 0.005	< 0.005	0.02	12.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.96	1.96	< 0.005	< 0.005	< 0.005	1.98
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Trenching (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.03	1.91	< 0.005	0.03	—	0.03	0.03	—	0.03	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.03	1.91	< 0.005	0.03	—	0.03	0.03	—	0.03	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.37	0.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	103	103	< 0.005	< 0.005	—	103
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.07	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.0	17.0	< 0.005	< 0.005	—	17.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.12	35.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.7	31.7	< 0.005	< 0.005	< 0.005	32.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.4	11.4	< 0.005	< 0.005	0.02	11.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	8.71	8.18	3.40	60.0	0.11	0.06	4.35	4.41	0.06	0.74	0.80	—	11,384	11,384	0.58	0.38	39.0	11,550
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	8.71	8.18	3.40	60.0	0.11	0.06	4.35	4.41	0.06	0.74	0.80	—	11,384	11,384	0.58	0.38	39.0	11,550
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	8.26	7.73	3.71	52.1	0.10	0.06	4.35	4.41	0.06	0.74	0.80	—	10,514	10,514	0.61	0.40	1.01	10,649
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	8.26	7.73	3.71	52.1	0.10	0.06	4.35	4.41	0.06	0.74	0.80	—	10,514	10,514	0.61	0.40	1.01	10,649
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	1.07	1.00	0.50	7.02	0.01	0.01	0.57	0.58	0.01	0.10	0.10	—	1,258	1,258	0.07	0.05	1.99	1,276
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.07	1.00	0.50	7.02	0.01	0.01	0.57	0.58	0.01	0.10	0.10	—	1,258	1,258	0.07	0.05	1.99	1,276

4.2. Energy

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	3.72	3.72	< 0.005	< 0.005	—	3.74
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.72	3.72	< 0.005	< 0.005	—	3.74

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.62	4.62	< 0.005	< 0.005	—	4.64
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.62	4.62	< 0.005	< 0.005	—	4.64

4.3. Area Emissions by Source

4.3.1. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4. Water Emissions by Land Use

4.4.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.04	0.38	0.42	< 0.005	< 0.005	—	0.45
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.04	0.38	0.42	< 0.005	< 0.005	—	0.45

4.5. Waste Emissions by Land Use

4.5.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48

4.6. Refrigerant Emissions by Land Use

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.2. Mitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.2. Mitigated

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Asphalt Demolition and Removal of Existing Bleachers	Demolition	7/1/2025	7/31/2025	5.00	23.0	e
Site Preparation	Site Preparation	6/1/2023	6/2/2023	5.00	2.00	a

Grading	Grading	6/27/2025	6/30/2025	5.00	2.00	d
Installation of Field Lighting and Score Board	Building Construction	6/1/2023	6/30/2024	5.00	282	b
Installation of Bleachers	Building Construction	7/1/2025	7/31/2025	5.00	23.0	f
Restroom/Concession Building, Pressbox, and Ticketbooth	Building Construction	7/1/2025	6/30/2026	5.00	261	g
Paving	Paving	6/17/2026	6/30/2026	5.00	10.0	j
Architectural Coating	Architectural Coating	7/1/2025	6/30/2026	5.00	261	h
Utility Trenching	Trenching	6/1/2023	6/30/2024	5.00	282	c
Finishing and Landscaping	Trenching	7/1/2025	6/30/2026	5.00	261	i

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Asphalt Demolition and Removal of Existing Bleachers	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Asphalt Demolition and Removal of Existing Bleachers	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Asphalt Demolition and Removal of Existing Bleachers	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37

Installation of Field Lighting and Score Board	Cranes	Diesel	Average	1.00	6.00	367	0.29
Installation of Field Lighting and Score Board	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Installation of Field Lighting and Score Board	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Restroom/Concession Building, Pressbox, and Ticketbooth	Cranes	Diesel	Average	1.00	6.00	367	0.29
Restroom/Concession Building, Pressbox, and Ticketbooth	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Restroom/Concession Building, Pressbox, and Ticketbooth	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Restroom/Concession Building, Pressbox, and Ticketbooth	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Utility Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Utility Trenching	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Finishing and Landscaping	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Asphalt Demolition and Removal of Existing Bleachers	—	—	—	—
Asphalt Demolition and Removal of Existing Bleachers	Worker	10.0	18.5	LDA,LDT1,LDT2
Asphalt Demolition and Removal of Existing Bleachers	Vendor	2.00	10.2	HHDT,MHDT
Asphalt Demolition and Removal of Existing Bleachers	Hauling	5.00	20.0	HHDT
Asphalt Demolition and Removal of Existing Bleachers	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	10.2	HHDT,MHDT
Site Preparation	Hauling	4.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	2.00	10.2	HHDT,MHDT
Grading	Hauling	44.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Installation of Field Lighting and Score Board	—	—	—	—
Installation of Field Lighting and Score Board	Worker	1.53	18.5	LDA,LDT1,LDT2
Installation of Field Lighting and Score Board	Vendor	0.60	10.2	HHDT,MHDT

Installation of Field Lighting and Score Board	Hauling	0.00	20.0	HHDT
Installation of Field Lighting and Score Board	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	10.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.92	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Installation of Bleachers	—	—	—	—
Installation of Bleachers	Worker	1.53	18.5	LDA,LDT1,LDT2
Installation of Bleachers	Vendor	0.60	10.2	HHDT,MHDT
Installation of Bleachers	Hauling	0.00	20.0	HHDT
Installation of Bleachers	Onsite truck	—	—	HHDT
Restroom/Concession Building, Pressbox, and Ticketbooth	—	—	—	—
Restroom/Concession Building, Pressbox, and Ticketbooth	Worker	1.53	18.5	LDA,LDT1,LDT2
Restroom/Concession Building, Pressbox, and Ticketbooth	Vendor	0.60	10.2	HHDT,MHDT
Restroom/Concession Building, Pressbox, and Ticketbooth	Hauling	0.00	20.0	HHDT
Restroom/Concession Building, Pressbox, and Ticketbooth	Onsite truck	—	—	HHDT
Utility Trenching	—	—	—	—

Utility Trenching	Worker	5.00	18.5	LDA,LDT1,LDT2
Utility Trenching	Vendor	2.00	10.2	HHDT,MHDT
Utility Trenching	Hauling	0.00	20.0	HHDT
Utility Trenching	Onsite truck	—	—	HHDT
Finishing and Landscaping	—	—	—	—
Finishing and Landscaping	Worker	2.50	18.5	LDA,LDT1,LDT2
Finishing and Landscaping	Vendor	—	10.2	HHDT,MHDT
Finishing and Landscaping	Hauling	0.00	20.0	HHDT
Finishing and Landscaping	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	5,460	1,820	2,907

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Asphalt Demolition and Removal of Existing Bleachers	0.00	0.00	0.00	74.0	—
Site Preparation	—	20.0	1.88	0.00	—
Grading	—	440	2.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.11

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
High School	0.00	0%
Other Non-Asphalt Surfaces	1.11	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	349	0.03	< 0.005
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
High School	2,380	0.00	0.00	620,504	16,302	0.00	0.00	4,250,216
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
High School	23,689	346	0.0330	0.0040	87,143
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.2. Mitigated

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

High School	108,343	317,114
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High School	4.73	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.2. Mitigated

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

8. User Changes to Default Data

Screen	Justification
Land Use	Based on District info., see assumptions file
Construction: Construction Phases	Based on District info., see assumptions file
Construction: Off-Road Equipment	For utilities trenching and finishing/landscaping phases equipment mix based on similar school development projects were used, see assumptions file
Construction: Trips and VMT	Included calculated water truck trips as vendor trips, calculated haul trips based on District info., see assumptions file
Operations: Water and Waste Water	Assume 100% aerobic treatment
Operations: Vehicle Data	Used traffic generated from the maximum capacity event as conservative estimate, see assumptions file
Operations: Fleet Mix	Adjusted fleet mix, see assumptions file

CalEEMod Annual Operation Model

JUSD-01 Annual Operation Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	JUSD-01 Annual Operation
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	6.80
Location	4355 Camino Real, Riverside, CA 92509, USA
County	Riverside-South Coast
City	Jurupa Valley
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5431
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
High School	3.64	1000sqft	0.54	3,640	20,000	0.00	—	—

Other Non-Asphalt Surfaces	48.5	1000sqft	1.11	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-4	Require Low-Flow Water Fixtures

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.33	0.40	0.14	2.25	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.81	446	449	0.28	0.01	1.36	461
Mit.	0.33	0.40	0.14	2.25	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.78	446	449	0.28	0.01	1.36	461
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	—	—	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.29	0.36	0.15	1.82	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.81	415	418	0.28	0.01	0.05	429
Mit.	0.29	0.36	0.15	1.82	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.78	415	418	0.28	0.01	0.05	429
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	—	—	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.38	0.16	1.98	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.81	420	423	0.28	0.01	0.60	435

Mit.	0.30	0.38	0.16	1.98	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.78	420	423	0.28	0.01	0.60	435
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	—	—	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.07	0.03	0.36	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	0.46	69.5	70.0	0.05	< 0.005	0.10	72.0
Mit.	0.06	0.07	0.03	0.36	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	0.46	69.5	70.0	0.05	< 0.005	0.10	72.0
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.28	0.12	2.07	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	392	392	0.02	0.01	1.35	398
Area	0.03	0.12	< 0.005	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.4	50.4	< 0.005	< 0.005	—	50.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Waste	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.33	0.40	0.14	2.25	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.78	446	449	0.28	0.01	1.36	461
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.28	0.27	0.13	1.80	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	362	362	0.02	0.01	0.03	367
Area	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.4	50.4	< 0.005	< 0.005	—	50.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71

Waste	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.29	0.36	0.15	1.82	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.78	415	418	0.28	0.01	0.05	429
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.28	0.26	0.13	1.86	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	367	367	0.02	0.01	0.58	372
Area	0.02	0.11	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.45	0.45	< 0.005	< 0.005	—	0.45
Energy	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.4	50.4	< 0.005	< 0.005	—	50.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Waste	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.30	0.38	0.16	1.98	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	2.78	420	423	0.28	0.01	0.60	435
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.05	0.02	0.34	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	—	60.7	60.7	< 0.005	< 0.005	0.10	61.6
Area	< 0.005	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.34	8.34	< 0.005	< 0.005	—	8.38
Water	—	—	—	—	—	—	—	—	—	—	—	0.04	0.38	0.42	< 0.005	< 0.005	—	0.45
Waste	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.06	0.07	0.03	0.36	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	0.46	69.5	70.0	0.05	< 0.005	0.10	72.0

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.30	0.28	0.12	2.07	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	392	392	0.02	0.01	1.35	398
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.30	0.28	0.12	2.07	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	392	392	0.02	0.01	1.35	398
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.28	0.27	0.13	1.80	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	362	362	0.02	0.01	0.03	367
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.28	0.27	0.13	1.80	< 0.005	< 0.005	0.15	0.15	< 0.005	0.03	0.03	—	362	362	0.02	0.01	0.03	367
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	0.05	0.05	0.02	0.34	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	—	60.7	60.7	< 0.005	< 0.005	0.10	61.6
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.05	0.05	0.02	0.34	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	—	60.7	60.7	< 0.005	< 0.005	0.10	61.6

4.2. Energy

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	22.5	22.5	< 0.005	< 0.005	—	22.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	3.72	3.72	< 0.005	< 0.005	—	3.74
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3.72	3.72	< 0.005	< 0.005	—	3.74

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.9	27.9	< 0.005	< 0.005	—	28.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.62	4.62	< 0.005	< 0.005	—	4.64
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.62	4.62	< 0.005	< 0.005	—	4.64

4.3. Area Emissions by Source

4.3.1. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.03	< 0.005	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Total	0.03	0.12	< 0.005	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.65	0.65	< 0.005	< 0.005	—	0.65
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07
Total	< 0.005	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.07	0.07	< 0.005	< 0.005	—	0.07

4.4. Water Emissions by Land Use

4.4.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.23	2.30	2.53	< 0.005	< 0.005	—	2.71
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.04	0.38	0.42	< 0.005	< 0.005	—	0.45
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.04	0.38	0.42	< 0.005	< 0.005	—	0.45

4.5. Waste Emissions by Land Use

4.5.1. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	0.00	2.55	0.25	0.00	—	8.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.42	0.00	0.42	0.04	0.00	—	1.48

4.6. Refrigerant Emissions by Land Use

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.2. Mitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.2. Mitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.2. Mitigated

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
High School	82.0	82.0	82.0	29,947	562	562	562	205,123
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	5,460	1,820	2,907

5.10.4. Landscape Equipment - Mitigated

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

5.11. Operational Energy Consumption

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
High School	23,689	346	0.0330	0.0040	87,143
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
High School	108,343	317,114
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High School	4.73	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.2. Mitigated

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

8. User Changes to Default Data

Screen	Justification
Land Use	Based on District info., see assumptions file
Construction: Construction Phases	Based on District info., see assumptions file
Construction: Off-Road Equipment	For utilities trenching and finishing/landscaping phases equipment mix based on similar school development projects were used, see assumptions file
Construction: Trips and VMT	Included calculated water truck trips as vendor trips, calculated haul trips based on District info., see assumptions file
Operations: Water and Waste Water	Assume 100% aerobic treatment
Operations: Vehicle Data	Calculated average daily trip rate, see assumptions file
Operations: Fleet Mix	Adjusted fleet mix, see assumptions file

Emissions Worksheet

Regional Construction Emissions Worksheet - Unmitigated:

3.1 Demolition (2025)						
	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	1.36	12.80	13.20	0.02	0.53	0.48
Demolition					0.04	0.01
Total	**1.36**	**12.80**	**13.20**	**0.02**	**0.57**	**0.49**
Offsite						
Worker	0.04	0.04	0.77	0.00	0.13	0.03
Vendor	0.01	0.07	0.02	0.01	0.02	0.01
Hauling	0.01	0.38	0.09	0.01	0.10	0.03
Total	**0.06**	**0.49**	**0.88**	**0.01**	**0.25**	**0.07**
TOTAL	***1.42***	***13.29***	***14.08***	***0.03***	***0.82***	***0.56***

3.3 Site Preparation (2023)						
	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	1.42	13.90	11.80	0.02	0.66	0.61
Dust From Material Movement					2.44	1.17
Total	**1.42**	**13.90**	**11.80**	**0.02**	**3.10**	**1.78**
Offsite						
Worker	0.03	0.03	0.45	0.00	0.07	0.02
Vendor	0.01	0.07	0.02	0.01	0.02	0.01
Hauling	0.01	0.33	0.08	0.01	0.08	0.03
Total	**0.04**	**0.43**	**0.55**	**0.01**	**0.17**	**0.06**
TOTAL	***1.46***	***14.33***	***12.35***	***0.03***	***3.27***	***1.84***

3.5 Grading (2025)						
	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	1.51	14.10	14.50	0.02	0.64	0.59
Dust From Material Movement					2.77	1.34
Total	**1.51**	**14.10**	**14.50**	**0.02**	**3.41**	**1.93**
Offsite						
Worker	0.04	0.04	0.77	0.00	0.13	0.03
Vendor	0.01	0.07	0.02	0.01	0.02	0.01
Hauling	0.05	3.36	0.82	0.02	0.85	0.28
Total	**0.10**	**3.47**	**1.61**	**0.03**	**1.00**	**0.32**
TOTAL	***1.61***	***17.57***	***16.11***	***0.05***	***4.41***	***2.25***

3.7 Building Construction (2023) - Installation of Field Lighting and Score Board

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	1.03	8.21	7.96	0.02	0.32	0.30
	Total	**1.03**	**8.21**	**7.96**	**0.02**	**0.32**	**0.30**
Offsite							
	Worker	0.01	0.01	0.14	0.00	0.02	0.01
	Vendor	0.01	0.02	0.01	0.01	0.01	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.02**	**0.03**	**0.15**	**0.01**	**0.03**	**0.01**
TOTAL		***1.05***	***8.24***	***8.11***	***0.03***	***0.35***	***0.31***

3.9 Building Construction (2024) - Installation of Field Lighting and Score Board

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.98	7.94	7.88	0.02	0.30	0.27
	Total	**0.98**	**7.94**	**7.88**	**0.02**	**0.30**	**0.27**
Offsite							
	Worker	0.01	0.01	0.13	0.00	0.02	0.01
	Vendor	0.01	0.02	0.01	0.01	0.01	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.02**	**0.03**	**0.14**	**0.01**	**0.03**	**0.01**
TOTAL		***1.00***	***7.97***	***8.02***	***0.03***	***0.33***	***0.28***

3.11 Building Construction (2025) - Installation of Bleachers

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Offsite							
	Worker	0.01	0.01	0.12	0.00	0.02	0.01
	Vendor	0.01	0.02	0.01	0.01	0.01	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.02**	**0.03**	**0.13**	**0.01**	**0.03**	**0.01**
TOTAL		***0.02***	***0.03***	***0.13***	***0.01***	***0.03***	***0.01***

3.13 Building Construction (2025) - Restroom/Concession Building, Pressbox, and Ticketbooth

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.99	8.12	8.60	0.02	0.30	0.27
	Total	**0.99**	**8.12**	**8.60**	**0.02**	**0.30**	**0.27**
Offsite							
	Worker	0.01	0.01	0.12	0.00	0.02	0.01
	Vendor	0.01	0.02	0.01	0.01	0.01	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.02**	**0.03**	**0.13**	**0.01**	**0.03**	**0.01**
TOTAL		***1.01***	***8.15***	***8.73***	***0.03***	***0.33***	***0.28***

3.15 Building Construction (2026) - Restroom/Concession Building, Pressbox, and Ticketbooth

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.94	7.79	8.52	0.02	0.27	0.25
	Total	**0.94**	**7.79**	**8.52**	**0.02**	**0.27**	**0.25**
Offsite							
	Worker	0.01	0.01	0.11	0.00	0.02	0.01
	Vendor	0.01	0.02	0.01	0.01	0.01	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.02**	**0.03**	**0.12**	**0.01**	**0.03**	**0.01**
TOTAL		***0.96***	***7.82***	***8.64***	***0.03***	***0.30***	***0.26***

3.17 Paving (2026)

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.37	3.38	4.57	0.01	0.15	0.14
Paving	0.00					
Total	**0.37**	**3.38**	**4.57**	**0.01**	**0.15**	**0.14**
Offsite						
Worker	0.04	0.04	0.72	0.00	0.13	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.04**	**0.72**	**0.00**	**0.13**	**0.03**
TOTAL	***0.41***	***3.42***	***5.29***	***0.01***	***0.28***	***0.17***

3.19 Architectural Coating (2025)

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.13	0.88	1.14	0.01	0.03	0.03
Architectural Coating	0.18					
Total	**0.31**	**0.88**	**1.14**	**0.01**	**0.03**	**0.03**
Offsite						
Worker	0.01	0.01	0.07	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.01**
TOTAL	***0.32***	***0.89***	***1.21***	***0.01***	***0.04***	***0.04***

3.21 Architectural Coating (2026)

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.12	0.86	1.13	0.01	0.02	0.02
Architectural Coating	0.18					
Total	**0.30**	**0.86**	**1.13**	**0.01**	**0.02**	**0.02**
Offsite						
Worker	0.01	0.01	0.07	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.01**	**0.01**	**0.07**	**0.00**	**0.01**	**0.01**
TOTAL	***0.31***	***0.87***	***1.20***	***0.01***	***0.03***	***0.03***

3.23 Trenching (2023) - Utilities Trenching

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.21	2.13	2.96	0.01	0.11	0.10
Total	**0.21**	**2.13**	**2.96**	**0.01**	**0.11**	**0.10**
Offsite						
Worker	0.03	0.03	0.45	0.00	0.07	0.02
Vendor	0.01	0.07	0.02	0.01	0.02	0.01
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.10**	**0.47**	**0.01**	**0.09**	**0.03**
TOTAL	***0.25***	***2.23***	***3.43***	***0.01***	***0.20***	***0.13***

3.25 Trenching (2024) - Utilities Trenching

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.20	2.00	2.96	0.01	0.10	0.09
Total	**0.20**	**2.00**	**2.96**	**0.01**	**0.10**	**0.09**
Offsite						
Worker	0.03	0.02	0.42	0.00	0.07	0.02
Vendor	0.01	0.07	0.02	0.01	0.02	0.01
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.09**	**0.44**	**0.01**	**0.09**	**0.03**
TOTAL	***0.24***	***2.09***	***3.40***	***0.01***	***0.19***	***0.12***

3.27 Trenching (2025) - Finishing and Landscaping

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.11	1.10	1.91	0.01	0.04	0.04
Total	**0.11**	**1.10**	**1.91**	**0.01**	**0.04**	**0.04**
Offsite						
Worker	0.01	0.01	0.19	0.00	0.03	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.01**	**0.01**	**0.19**	**0.00**	**0.03**	**0.01**
TOTAL	***0.12***	***1.11***	***2.10***	***0.01***	***0.07***	***0.05***

3.29 Trenching (2026) - Finishing and Landscaping

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite						
Off-Road Equipment	0.10	1.03	1.91	0.01	0.03	0.03
Total	**0.10**	**1.03**	**1.91**	**0.01**	**0.03**	**0.03**
Offsite						
Worker	0.01	0.01	0.18	0.00	0.03	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.01**	**0.01**	**0.18**	**0.00**	**0.03**	**0.01**
TOTAL	***0.11***	***1.04***	***2.09***	***0.01***	***0.06***	***0.04***

	ROG	**NOx**	**CO**	**SO2**	**PM10 Total**	**PM2.5 Total**
Site Preparation, Installation of Field Lighting and Score Board, and Utility Trenching - YEAR 2023	***3***	***25***	***24***	***0.07***	***3.82***	***2.28***
Installation of Field Lighting and Score Board and Utility Trenching - YEAR 2023	***1***	***10***	***12***	***0.04***	***0.55***	***0.44***
Installation of Field Lighting and Score Board and Utility Trenching - YEAR 2024	***1***	***10***	***11***	***0.04***	***0.52***	***0.40***
Grading	***2***	***18***	***16***	***0.05***	***4.41***	***2.25***
Asphalt Demolition and Removal of Existing Bleachers, Installation of Bleachers, Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping - YEAR 2025	***3***	***23***	***26***	***0.07***	***1.29***	***0.94***
Restroom/Concession Building, Pressbox, and Ticketbooth, Architectural Coating, Finishing and Landscaping - YEAR 2025	***1***	***10***	***12***	***0.04***	***0.44***	***0.37***
Restroom/Concession Building, Pressbox, and Ticketbooth, Architectural Coating, Finishing and Landscaping - YEAR 2026	***1***	***10***	***12***	***0.04***	***0.39***	***0.33***
Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping, and Paving - YEAR 2026	***2***	***13***	***17***	***0.05***	***0.67***	***0.50***
MAX DAILY	**3**	**25**	**26**	**0.07**	**4.41**	**2.28**
Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

Construction LST Worksheet:

3.1 Demolition (2025)	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	12.80	13.20	0.5	0.5
Demolition			0.0	0.0
Total	**12.80**	**13.20**	**0.6**	**0.5**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***12.80***	***13.20***	***0.6***	***0.5***

3.3 Site Preparation (2023)	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	13.90	11.80	0.7	0.6
Dust From Material Movement			2.4	1.2
Total	**13.90**	**11.80**	**3.1**	**1.8**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***13.90***	***11.80***	***3.1***	***1.8***

3.5 Grading (2025)	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	14.10	14.50	0.6	0.6
Dust From Material Movement			2.8	1.3
Total	**14.10**	**14.50**	**3.4**	**1.9**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***14.10***	***14.50***	***3.4***	***1.9***

3.7 Building Construction (2023) - Installation of Field Lighting and Score Board	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	8.21	7.96	0.3	0.3
Total	**8.21**	**7.96**	**0.3**	**0.3**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***8.21***	***7.96***	***0.3***	***0.3***

3.9 Building Construction (2024) - Installation of Field Lighting and Score Board	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	7.94	7.88	0.3	0.3
Total	**7.94**	**7.88**	**0.3**	**0.3**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***7.94***	***7.88***	***0.3***	***0.3***

3.11 Building Construction (2025) - Installation of Bleachers

	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	0.00	0.00	0.0	0.0
Total	**0.00**	**0.00**	**0.0**	**0.0**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***0.00***	***0.00***	***0.0***	***0.0***

3.13 Building Construction (2025) - Restroom/Concession Building, Pressbox, and Ticketbooth

	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	8.12	8.60	0.3	0.3
Total	**8.12**	**8.60**	**0.3**	**0.3**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***8.12***	***8.60***	***0.3***	***0.3***

3.15 Building Construction (2026) - Restroom/Concession Building, Pressbox, and Ticketbooth

	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	7.79	8.52	0.3	0.3
Total	**7.79**	**8.52**	**0.3**	**0.3**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***7.79***	***8.52***	***0.3***	***0.3***

3.17 Paving (2026)

	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	3.38	4.57	0.2	0.1
Paving				
Total	**3.38**	**4.57**	**0.2**	**0.1**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***3.38***	***4.57***	***0.2***	***0.1***

3.19 Architectural Coating (2025)

	NOx	CO	PM10 Total	PM2.5 Total
Onsite				
Off-Road Equipment	0.88	1.14	0.0	0.0
Architectural Coating				
Total	**0.88**	**1.14**	**0.0**	**0.0**
Offsite				
Worker				
Vendor				
Hauling				
Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL	***0.88***	***1.14***	***0.0***	***0.0***

3.21 Architectural Coating (2026)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	0.86	1.13	0.0	0.0
	Architectural Coating				
	Total	**0.86**	**1.13**	**0.0**	**0.0**
Offsite					
	Worker				
	Vendor				
	Hauling				
	Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL		***0.86***	***1.13***	***0.0***	***0.0***

3.23 Trenching (2023) - Utilities Trenching

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	2.13	2.96	0.1	0.1
	Total	**2.13**	**2.96**	**0.1**	**0.1**
Offsite					
	Worker				
	Vendor				
	Hauling				
	Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL		***2.13***	***2.96***	***0.1***	***0.1***

3.25 Trenching (2024) - Utilities Trenching

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	2.00	2.96	0.1	0.1
	Total	**2.00**	**2.96**	**0.1**	**0.1**
Offsite					
	Worker				
	Vendor				
	Hauling				
	Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL		***2.00***	***2.96***	***0.1***	***0.1***

3.27 Trenching (2025) - Finishing and Landscaping

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	1.10	1.91	0.0	0.0
	Total	**1.10**	**1.91**	**0.0**	**0.0**
Offsite					
	Worker				
	Vendor				
	Hauling				
	Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL		***1.10***	***1.91***	***0.0***	***0.0***

3.29 Trenching (2026) - Finishing and Landscaping

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	1.03	1.91	0.0	0.0
	Total	**1.03**	**1.91**	**0.0**	**0.0**
Offsite					
	Worker				
	Vendor				
	Hauling				
	Total	**0.00**	**0.00**	**0.0**	**0.0**
TOTAL		***1.03***	***1.91***	***0.0***	***0.0***

	NOx	CO	PM10 Total	PM2.5 Total
Site Preparation, Installation of Field Lighting and Score Board, and Utility Trenching - YEAR 2023	*24*	*23*	*3.5*	*2.2*
1.44 Acre LST	*148*	*804*	*7.8*	*3.8*
Exceeds LST?	*no*	*no*	*no*	*no*
Installation of Field Lighting and Score Board and Utility Trenching - YEAR 2023	*10*	*11*	*0.4*	*0.4*
≤1.00 Acre LST	*125*	*671*	*5.9*	*3.2*
Exceeds LST?	*no*	*no*	*no*	*no*
Installation of Field Lighting and Score Board and Utility Trenching - YEAR 2024	*10*	*11*	*0.4*	*0.4*
≤1.00 Acre LST	*125*	*671*	*5.9*	*3.2*
Exceeds LST?	*no*	*no*	*no*	*no*
Grading	*14*	*15*	*3.4*	*1.9*
1.65 Acre LST	*159*	*869*	*8.7*	*4.1*
Exceeds LST?	*no*	*no*	*no*	*no*
Asphalt Demolition and Removal of Existing Bleachers, Installation of Bleachers, Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping - YEAR 2025	*23*	*25*	*0.9*	*0.8*
1.65 Acre LST	*159*	*869*	*8.7*	*4.1*
Exceeds LST?	*no*	*no*	*no*	*no*
Restroom/Concession Building, Pressbox, and Ticketbooth, Architectural Coating, Finishing and Landscaping - YEAR 2025	*10*	*12*	*0.4*	*0.3*
≤1.00 Acre LST	*125*	*671*	*5.9*	*3.2*
Exceeds LST?	*no*	*no*	*no*	*no*
Restroom/Concession Building, Pressbox, and Ticketbooth, Architectural Coating, Finishing and Landscaping - YEAR 2026	*10*	*12*	*0.3*	*0.3*
≤1.00 Acre LST	*125*	*671*	*5.9*	*3.2*
Exceeds LST?	*no*	*no*	*no*	*no*
Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping, and Paving - YEAR 2026	*13*	*16*	*0.5*	*0.4*
≤1.00 Acre LST	*125*	*671*	*5.9*	*3.2*
Exceeds LST?	*no*	*no*	*no*	*no*

Regional Net Operation Emissions Worksheet - Mitigated:

[1] CalEEMod, Version 2022.1.1.12

Proposed Project

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Mobile	8.2	3.4	60.0	0.1	4.4	0.8
Area	0.1					
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Total	**8.3**	**3.4**	**60.0**	**0.1**	**4.4**	**0.8**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Mobile	7.7	3.7	52.1	0.1	4.4	0.8
Area	0.1					
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Total	**7.8**	**3.7**	**52.1**	**0.1**	**4.4**	**0.8**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Mobile	8.2	3.7	60.0	0.1	4.4	0.8
Area	0.1	0.0	0.0	0.0	0.0	0.0
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Total	**8.3**	**3.7**	**60.0**	**0.1**	**4.4**	**0.8**
Regional Thresholds (lb/day)	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

GHG Emissions Inventory

Proposed Project Buildout

Construction[1]

	$MTCO_2e$
2023	147
2024	123
2025	160
2026	127
Total Construction	**557**
30-Year Amortization[2]	**19**

[1] CalEEMod, Version 2022.1.1.12

[2] Total construction emissions are amortized over 30 years per South Coast AQMD methodology; South Coast AQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2.

Net Operations[1]

	$MTCO_2e$/Year[2] Operations	%
Mobile	62	63%
Area	0	0%
Energy	8	9%
Water	0	0%
Solid Waste	1	2%
Refrigerants	0	0%
School Lightings and Scoreboard[3]	8	8%
30-Year Construction Amortization	19	19%
	98	100%
South Coast AQMD Working Group Bright-Line Screening Threshold	**3,000**	
Exceed Threshold?	**No**	

[1] CalEEMod, Version 2022.1.1.12

[2] MTCO2e=metric tons of carbon dioxide equivalent.

[3] Includes GHG calculations from proposed field lighting and athletic scoreboard.

LST Worksheets

Construction Localized Significance Thresholds: Site Preparation, Installation of Field Lighting and Score Board, and Utility Trenching - YEAR 2023

		NOx & CO		***PM10 & PM2.5***		
SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
23	1.44	31	102	31	102	1.7

Source Receptor	**Metropolitan Riverside County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	31						
NOx	**148**	Tractors	0.5	0.0625	8	1	0.5
CO	**804**	Graders	0.5	0.0625	8	1	0.5
PM10	**7.79**	Dozers	0.5	0.0625	7	1	0.4375
PM2.5	**3.79**	Scrapers	1	0.125			0
						Acres	1.44

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	2	170	200	264	379	684
		141	171	235	354	666
CO	1	602	887	1746	4359	17640
	2	883	1262	2232	5136	18947
		725	1051	1959	4699	18212
PM10	1	4	12	30	67	178
	2	7	20	38	75	186
		5	16	34	71	182
PM2.5	1	3	4	8	20	86
	2	4	6	10	23	91
		3	5	9	21	88

Metropolitan Riverside County

1.44 Acres

	25	**50**	**100**	**200**	**500**
NOx	141	171	235	354	666
CO	725	1051	1959	4699	18212
PM10	5	16	34	71	182
PM2.5	3	5	9	21	88

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
23	1	23	2
Distance Increment Below			
25			
Distance Increment Above			
50			

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

Construction Localized Significance Thresholds: Installation of Field Lighting and Score Board and Utility Trenching - YEAR 2023/24

SRA No.	Acres	*NOx & CO* Source Receptor Distance (meters)	Source Receptor Distance (Feet)	*PM10 & PM2.5* Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
23	0.50	31	102	31	102	1.7

Source Receptor	Metropolitan Riverside County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	31						
NOx	**125**	Tractors	0.5	0.0625	8	1	0.5
CO	**671**	Graders	0.5	0.0625			0
PM10	**5.95**	Dozers	0.5	0.0625			0
PM2.5	**3.24**	Scrapers	1	0.125			0
						Acres	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
		118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
		602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
		4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
		3	4	8	20	86

Metropolitan Riverside County

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	118	148	212	335	652
CO	602	887	1746	4359	17640
PM10	4	12	30	67	178
PM2.5	3	4	8	20	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
23	1	23	1
Distance Increment Below			
25			
Distance Increment Above			
50			

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

Construction Localized Significance Thresholds: Grading

SRA No.	Acres	Source Receptor Distance (meters) *(NOx & CO)*	Source Receptor Distance (Feet) *(NOx & CO)*	Source Receptor Distance (meters) *(PM10 & PM2.5)*	Source Receptor Distance (Feet) *(PM10 & PM2.5)*	Construction / Project Site Size (Acres)
23	1.65	31	102	31	102	1.7

Source Receptor	Metropolitan Riverside County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	31						
NOx	**159**	Tractors	0.5	0.0625	7	2	0.875
CO	**869**	Graders	0.5	0.0625	8	1	0.5
PM10	**8.69**	Dozers	0.5	0.0625	8	1	0.5
PM2.5	**4.05**	Scrapers	1	0.125			0
						Acres	1.88

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	2	170	200	264	379	684
		152	182	246	364	673
CO	1	602	887	1746	4359	17640
	2	883	1262	2232	5136	18947
		785	1131	2062	4864	18490
PM10	1	4	12	30	67	178
	2	7	20	38	75	186
		6	17	35	72	183
PM2.5	1	3	4	8	20	86
	2	4	6	10	23	91
		4	5	9	22	89

Metropolitan Riverside County

1.65 Acres

	25	**50**	**100**	**200**	**500**
NOx	152	182	246	364	673
CO	785	1131	2062	4864	18490
PM10	6	17	35	72	183
PM2.5	4	5	9	22	89

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
23	1	23	2
Distance Increment Below			
25			
Distance Increment Above			
50			

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

Construction Localized Significance Thresholds:Asphalt Demolition and Removal of Existing Bleachers, Installation of Bleachers, Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping - YEAR 2025

		NOx & CO		PM10 & PM2.5		
SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
23	1.65	31	102	31	102	1.7

Source Receptor Distance (meters)	**Metropolitan Riverside County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
	31						
NOx	**159**	Tractors	0.5	0.0625	8	3	1.5
CO	**869**	Graders	0.5	0.0625			0
PM10	**8.69**	Dozers	0.5	0.0625	8	1	0.5
PM2.5	**4.05**	Scrapers	1	0.125			0
						Acres	2.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	2	170	200	264	379	684
		152	182	246	364	673
CO	1	602	887	1746	4359	17640
	2	883	1262	2232	5136	18947
		785	1131	2062	4864	18490
PM10	1	4	12	30	67	178
	2	7	20	38	75	186
		6	17	35	72	183
PM2.5	1	3	4	8	20	86
	2	4	6	10	23	91
		4	5	9	22	89

Metropolitan Riverside County

1.65 Acres

	25	**50**	**100**	**200**	**500**
NOx	152	182	246	364	673
CO	785	1131	2062	4864	18490
PM10	6	17	35	72	183
PM2.5	4	5	9	22	89

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
23	1	23	2
Distance Increment Below			
25			
Distance Increment Above			
50			

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

Construction Localized Significance Thresholds: Restroom/Concession Building, Pressbox, and Ticketbooth, Architectural Coating, Finishing and Landscaping - YEAR 2025/26

		NOx & CO		PM10 & PM2.5		
SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
23	0.50	31	102	31	102	1.7

Source Receptor	**Metropolitan Riverside County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	31						
NOx	**125**	Tractors	0.5	0.0625	8	1	0.5
CO	**671**	Graders	0.5	0.0625			0
PM10	**5.95**	Dozers	0.5	0.0625			0
PM2.5	**3.24**	Scrapers	1	0.125			0
						Acres	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
		118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
		602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
		4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
		3	4	8	20	86

Metropolitan Riverside County

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	118	148	212	335	652
CO	602	887	1746	4359	17640
PM10	4	12	30	67	178
PM2.5	3	4	8	20	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
23	1	23	1
Distance Increment Below			
25			
Distance Increment Above			
50			

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

Construction Localized Significance Thresholds: Restroom/Concession Building, Pressbox, and Ticketbooth Architectural Coating, Finishing and Landscaping, and Paving - YEAR 2026

		NOx & CO		PM10 & PM2.5		
SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Construction / Project Site Size (Acres)
23	0.50	31	102	31	102	1.7

Source Receptor	**Metropolitan Riverside County**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	31						
NOx	**125**	Tractors	0.5	0.0625	8	1	0.5
CO	**671**	Graders	0.5	0.0625			0
PM10	**5.95**	Dozers	0.5	0.0625			0
PM2.5	**3.24**	Scrapers	1	0.125			0
						Acres	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
		118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
		602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
		4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
		3	4	8	20	86

Metropolitan Riverside County

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	118	148	212	335	652
CO	602	887	1746	4359	17640
PM10	4	12	30	67	178
PM2.5	3	4	8	20	86

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
23	1	23	1
Distance Increment Below			
25			
Distance Increment Above			
50			

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